BAB V

PENUTUP

A. **Pendahuluan**

Bagian ini membahas kesimpulan, implikasi manajerial serta rekomendasi yang dapat diberikan kepada pihak-pihak terkait dari hasil penelitian. Keterbatasan penelitian juga diuraikan pada bab ini.

B. **Kesimpulan**

1. Profil responden

Responden dalam penelitian ini berjumlah 279 dengan karakteristik usia sebagian besar responden termasuk kelompok remaja yakni sebanyak 58,78% dan sisanya (41,22%) adalah kelompok dewasa awal, profil responden berdasakan karakteristik jenis kelamin menunjukkan bahwa 52% responden adalah perempuan dan 48% adalah responden laki-laki, dan berdasarkan tingkat pendidikan terakhir ditunjukkan bahwa 47,67% responden memiliki pendidikan terakhir SMA/Sederajat, 11,11% responden berpendidikan D1/D3, 39,43% responden berpendidikan terakhir S1 dan sisanya yakni sebanyak 1,79% responden memiliki tingkat pendidikan terakhir S2.

2. Hubungan antara karakter kepribadian, kepribadian merek dan loyalitas merek.

a. Kegembiraan memiliki hubungan positif signifikan dengan ekstraversi dan dengan keterbukaan.

b. Kompetensi memiliki hubungan positif signifikan dengan ekstraversi, dengan keramahan, dengan kesadaran dan dengan keterbukaan.

c. Kedamaian memiliki hubungan positif signifikan dengan stabilitas emosi dan memiliki hubungan negatif signifikan dengan ekstraversi dan dengan kesadaran.

d. Ketulusan memiliki hubungan positif signifikan dengan keterbukaan.

e. Kecanggihan memiliki hubungan positif signifikan dengan ekstraversi, dengan keramahan, dengan kesadaran dan dengan keterbukaan serta memiliki hubungan negatif signifikan dengan stabilitas emosi.

f. Loyalitas merek memiliki hubungan positif signifikan dengan ekstraversi, dengan keramahan, dan dengan kesadaran.

g. Loyalitas merek memiliki hubungan positif signifikan dengan kegembiraan, dengan kompetensi dan dengan kecanggihan.

3. Hubungan antara karakter kepribadian (ekstraversi, keramahan, kesadaran) dengan kepribadian merek (kegembiraan, kompetensi, ketulusan)

a. Ekstraversi, keramahan dan kesadaran memiliki hubungan secara simultan dengan kegembiraan sebesar 18,4% dan sumbangan hubungan positif signifikan terbesar adalah ekstraversi.

b. Ekstraversi, keramahan, kesadaran memiliki hubungan secara simultan dengan kompetensi sebesar 25,8% dan sumbangan hubungan positif signifikan terbesar adalah keramahan.

c. Ekstraversi, keramahan dan kesadaran tidak memiliki hubungan secara simultan dengan ketulusan.

Ekstraversi memiliki hubungan positif signifikan dengan kegembiraan, keramahan tidak memiliki hubungan yang signifikan dengan ketulusan, dan kesadaran tidak memiliki hubungan yang signifikan dengan kompetensi.

Kesimpulan akhir menemukan bahwa hubungan positif signifikan antara karakter kepribadian (ekstraversi, keramahan, kesadaran) dengan kepribadian merek (kegembiraan, kompetensi, ketulusan) tidak sepenuhnya didukung, atau hipotesis pertama tidak sepenuhnya didukung.

4. Pengaruh karakter kepribadian (ekstraversi, keramahan, kesadaran, stabilitas emosi dan keterbukaan) terhadap loyalitas merek

a. Ekstraversi, keramahan, kesadaran, stabilitas emosi dan keterbukaan memiliki kemampuan sebesar 6,6% dalam memprediksi loyalitas merek.

b. Ekstravensi memiliki pengaruh positif dan signifikan terhadap loyalitas merek.

c. Keramahan tidak memiliki pengaruh yang signifikan terhadap loyalitas merek.

d. Kesadaran memiliki pengaruh positif dan signifikan terhadap loyalitas merek.

e. Stabilitas emosi tidak memiliki pengaruh yang signifikan terhadap loyalitas merek.

f. Keterbukaan tidak memiliki pengaruh yang signifikan terhadap loyalitas merek.

Penelitian ini menemukan bahwa hanya dua dimensi dari karakter kepribadian yang memiliki pengaruh positif signifikan terhadap loyalitas merek Blackberry yaitu ekstraversi dan kesadaran atau dengan kata lain bahwa karakter kepribadian berpengaruh positif signifikan terhadap loyalitas merek tidak sepenuhnya didukung.

5. Pengaruh kepribadian merek (kegembiraan, kompetensi, kedamaian, ketulusan, kecanggihan) terhadap loyalitas merek.

a. Kegembiraan, kompetensi, kedamaian, ketulusan dan kecanggihan memiliki kemampuan sebesar 17,4% dalam memprediksi loyalitas merek.

b. Kegembiraan memiliki pengaruh positif dan signifikan terhadap loyalitas merek.

c. Kompetensi tidak memiliki pengaruh yang signifikan terhadap loyalitas merek.

d. Kedamaian tidak memiliki pengaruh yang signifikan terhadap loyalitas merek.

e. Ketulusan tidak memiliki pengaruh yang signifikan terhadap loyalitas merek.

f. Kecanggihan memiliki pengaruh positif dan signifikan terhadap loyalitas merek.

Penelitian ini menemukan bahwa hanya dua dimensi dari kepribadian merek yang memiliki pengaruh positif signifikan terhadap loyalitas merek Blackberry yaitu kegembiraan dan kecanggihan atau dengan kata lain bahwa karakter kepribadian berpengaruh positif signifikan terhadap loyalitas merek tidak sepenuhnya didukung.

C. Implikasi Manajerial

Konsumen dengan karakter kepribadian yang berbeda memiliki perbedaan persepsi terhadap kepribadian merek. Hal ini menyatakan bahwa konsumen dengan karakter kepribadian yang berbeda akan memiliki hubungan positif yang berbeda dengan kepribadian merek. Penelitian ini juga menemukan hal yang sama dengan pernyataan bahwa pengguna Blackberry yang berbeda karakter juga memiliki hubungan positif dengan dimensi yang berbeda pada kepribadian merek Blackberry.

Seperti yang dikutip dalam Lin (2010), merek yang sukses adalah merek yang mampu membangun sebuah kepribadian merek yang berbeda dan harus sangat berbeda dari merek lain untuk membuat konsumen melihat kepribadian merek dan melihat sebuah bentuk hubungan yang kuat dengan merek. Hal ini menunjukkan bahwa sebenarnya Blackberry belum mampu

menciptakan sebuah kepribadian merek yang sukses. Dalam hubungan antara karakter kepribadian dengan kepribadian merek masih terdapat hubungan yang sama yaitu kompetensi dengan ekstraversi dan kompetensi dengan keramahan. Kompetensi bahkan tidak memiliki hubungan signifikan dengan kesadaran dan antara ketulusan dengan keramahan ditunjukkan hubungan yang negatif signifikan.

Penelitian ini juga menemukan bahwa loyalitas merek Blackberry tertinggi dipengaruhi oleh kegembiraan dan kecanggihan dalam kepribadian merek. Hal ini berarti bahwa Blackberry harus memperkuat citra merek yang sudah ada dan menanamkan citra merek tersebut kedalam benak pengguna berupa kegembiraan dan kecanggihan dengan maksud membangun kepribadian merek yang konsisten bagi Blackberry. Dengan demikian Blackberry dapat mengelola para pengguna setia Blackberry serta dapat memanfaatkannya sebagai alternatif cara untuk menarik para pelanggan baru.

Dalam penelitian sebelumnya yang dilakukan oleh Metzler *et al.,* (2006) ditemukan bahwa hanya ekstraversi dan keterbukaan dalam karakter kepribadian yang memiliki pengaruh positif terhadap loyalitas merek. Sedangkan Lin (2010) menemukan bahwa keramahan dan keterbukaan dalam karakter kepribadian memiliki pengaruh positif terhadap loyalitas merek. Temuan dalam penelitian ini menverifikasi kedua penelitian sebelumnya bahwa ekstraversi dan kesadaran juga dapat mempengaruhi loyalitas merek. Hal ini menunjukkan bahwa seseorang dengan tingkat ekstraversi dan kesadaran tinggi juga dapat mempengaruhi dan mengembangkan loyalitas

merek untuk produk-produk *smartphone*. Temuan dalam penelitian ini dapat melengkapi kesenjangan literatur penelitian sebelumnya.

Kepribadian merek tidak hanya memainkan peranan penting tetapi juga memiliki pengaruh besar pada kinerja perusahaan. Dengan pendekatan pemasaran perusahaan dapat menyampaikan kepribadian merek perusahaan kepada konsumen dengan memperkuat citra merek disetiap benak konsumen, menyampaikan kepribadian merek secara intensif dan membuat kepribadian merek dapat dipercaya serta diakui konsumen. Pada akhirnya konsumen dapat mengembangkan hubungan dengan merek dan akan mempengaruhi loyalitas konsumen akan suatu merek. Pembentukan kepribadian merek yang berbeda dapat menambah nilai pada merek perusahaan.

Kepribadian merek yang berbeda dapat meningkatkan loyalitas merek. Kepribadian merek Blackberry sangat berbeda dalam hal kegembiraan dan kecanggihan. Keunggulan dalam dimensi kegembiraan dan kecanggihan harus terus dijaga untuk tetap selalu berbeda dan konsisten untuk menjaga pelanggan lama untuk tetap setia serta menarik pelanggan baru.

Penelitian ini juga menunjukkan bahwa dimensi ekstraversi dan kesadaran dari karakter kepribadian berpengaruh positif signifikan terhadap loyalitas merek Blackberry. Hal ini berarti bahwa strategi pemasaran dapat dirancang perusahaan untuk fokus menargetkan orang-orang yang termasuk dalam dimensi ini sebagai konsumen baru perusahaan serta menjaga loyalitas konsumen lama dengan dimensi yang sama.

Penggunaan kepribadian merek yang menguntungkan perlu terus dilakukan perusahaan untuk mempertahankan berbagai jenis konsumen. Hal ini dapat perusahaan lakukan dengan melakukan studi riset pemasaran untuk memahami karakter kepribadian konsumen dan preferensi konsumen ketika melakukan pembelian. Dengan demikian perusahaan dapat membentuk kepribadian merek sesuai dengan keinginan pelanggan dan dapat menarik loyalitas pelanggan akan merek yang ditawarkan.

D. Keterbatasan Penelitian

Peneliti menyadari bahwa pada penelitian ini memiliki banyak keterbatasan. Keterbatasan itu tentunya berimplikasi pada kelemahan hasil penelitian. Secara teknis, penelitian ini hanya menggunakan sampel yang tergolong kecil (279 responden). Hal ini tentu saja tidak representatif dengan jumlah mahasiswa pengguna Blackberry yang ada di Yogyakarta yang sesungguhnya.

Secara teknis, banyak variabel yang mampu memberikan pengaruh terhadap loyalitas merek pada industri *smartphone*. Pada penelitian ini peneliti hanya menggunakan variabel karakter kepribadian dan kepribadian merek sebagai variabel prediktor untuk loyalitas merek. Berdasarkan hal tersebut peneliti menyarankan pada penelitian berikutnya yang sejenis agar dapat menambahkan atau menggunakan variabel lain dalam memprediksi loyalitas merek seperti variabel jenis produk, kepuasan, gender, pasca pembelian, purna jual, kesadaran dan lain-lain.

Secara teknis pula penelitian memiliki cangkupan sampling yang kecil yaitu hanya terbatas pada wilayah Yogyakarta. Sudut pandang pengguna Blackberry yang diteliti adalah dari wilayah sekitar Yogyakarta, sedangkan wilayah lainnya tidak tercakup.

Penelitian ini juga terbatas pada industri *smartphone* saja. Hal ini berpengaruh pada apakah penelitian ini dapat diterapkan pada industri lainnya. Maka perlu dilakukan penelitian selanjutnya dengan industri yang berbeda seperti otomotif atau sebagainya.

Keterbatasan penelitian lainya adalah pada adanya permasalahan dengan hubungan beberapa dimensi karakter kepribadian pengguna (stabilitas emosi dan keterbukaan) dengan kepribadian merek Blackberry (kedamaian dan kecanggihan) yang tidak kasat mata untuk dianalisis oleh perusahaan *smartphone*.

Dalam prakteknya, variabel karakter kepribadian merupakan variabel yang sulit untuk diukur. Hal ini dikarenakan untuk mengukur karakter kepribadian seseorang diperlukan riset berkala untuk mengetahui secara jelas tentang kepribadian seseorang. Hal ini juga menjadi tantangan bagi perusahaan dalam meningkatkan penjualan dengan menganalisis lebih dalam karakter seseorang dan kebutuhan akan *smartphone* sebelum mengeluarkan produk-produk Blackberry terbaru.

E. Saran

Rekomendasi yang dapat diberikan untuk peneliti selanjutnya yang tertarik dengan bidang ini antara lain:

1. Mengubah merek dan produk *smartphone* dengan merek dan produk sejenis. Hal ini bermaksud untuk membandingkan satu sama lain sehingga pada nantinya akan ditemukan hal-hal baru.

2. Mengubah variabel dalam penelitian ini dengan variabel lain. Dalam menciptakan loyalitas merek, ada banyak variabel lain selain karakter kepribadian dan kepribadian merek. Peneliti selanjutnya dapat meninjau literatur lain dan berbeda dalam variabel yang mempengaruhi loyalitas merek.

3. Dalam penelitian selanjutnya, peneliti dapat mengganti industri dengan industri lain yang tidak sejenis. Peneliti dapat menerapkan model yang sama dengan industri yang berbeda.

4. Bagi peneliti selanjutnya yang tertarik dengan menggunakan model penelitian yang sama diharapkan untuk menggunakan sampel dan populasi yang lain.

DAFTAR PUSTAKA

Aaker, D.A. (1997), "Dimension of brand personality", *Journal of Marketing Research*, Vol. 34, pp. 347-56.

Aaker, J.L., Benet-Martinez, V. and Garolera, J. (2001), "Consumption symbols as carriers of culture: a study of Japanese and Spanish brand personality constructs", *Journal of Personality and Social Psychology*, Vol. 81 No. 3, pp. 492-508.

Baldinger, A.L. and Rubinson, J. (1996), "Brand loyalty: the link between attitude and behavior", *Journal of Advertising Research*, Vol. 36 No. 6, pp. 22-34.

Chaudhuri, A. and Holbrook, M.B. (2001), "The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty", *Journal of Marketing*, Vol. 65 No. 2, pp. 81-93.

Doyle, P. (1990), "Building successful brands: the strategic options", *Journal of Consumer Marketing*, Vol. 7 No. 2, pp. 5-20.

Dyson, P., Farr, A. and Hollis, N.S. (1996), "Understanding, measuring and using brand equity", *Journal of Advertising Research,* Vol. 36, No. 6, pp. 9-22.

Garland, R. and Gendall, P. (2004), "Testing Dick and Basu's customer loyalty model", *Australasian Marketing Journal,* Vol. 12 No.3, pp.81-87

Govers, P.C.M. and Schoormans, J.P.L. (2005), "Product personality and its influence on consumer preference", *Journal of Consumer Marketing*, Vol. 22 No. 4, pp. 189-97.

Groth, J.C. and McDaniel, S.W. (1993), "The exclusive value principle", *Journal of Consumer Marketing*, Vol. 10 No. 1, pp. 10-16

Hair Jr, J.F. Black, W.C. Babin, B.J. and Anderson, R.E. (2010), *Multivariate Data Analysis*, 7ed, Englewood Cliffs, New Jersey: Pearson Prentice-Hall, Inc

John, O.P. and Soto, C.J. (2008), "Ten facet scale for the Big Five Inventory: Convergen with NEO PI-R facets, self-peer agreement, and descriminant validity", *Journal of Research in Personality*, Vol.43, pp.84-90

Keller, K.L. (1993), "Conceptualizing, measuring, and managing customer-based brand equity", *Journal of Marketing*, Vol. 57 No. 1, pp. 1-22.

Kotler, P. and Keller, K.L., (2005), *Marketing Management,* 12th ed., Prentice-Hall, Englewood Cliffs, NJ.

Kumar, R., Luthra, A. and Datta, G. (2006), "Linkages between brand personality and brand loyalty: a qualitative study in an emerging market in the Indian context", *South Asian Journal of Management*, Vol. 13 No. 2, pp. 11-35.

Lin, L.Y., (2010),"The relationship of consumer personality traits, brand personality and brand loyalty: an empirical study of toys and video games buyers", *Journal of Product & Brand Management*, Vol. 19 No. 1, pp. 4-17.

McCrae, R.R., Costa, P.T. Jr and Busch, C.M. (1986), "Evaluating comprehensiveness in personality systems: the California Q-set and the five-factor model", *Journal of Personality*, Vol. 54 No. 2, pp. 430-46.

Matzler, K., Bidmon, S. and Grabner-Krauter, S. (2006) "Individual determinants of brand affect: the role of the personality traits of extroversion and opennes to experience", *Journal of Product & Brand Management,* Vol. 15 No. 7, pp. 27-34

Milewicz, J. and Herbig, P. (1994), "Evaluating the brand extension decision using a model of reputation building", *Journal of Product & Brand Management*, Vol. 3 No. 1, pp. 39-47.

Oliver, R.L. (1999), "Whence consumer loyalty?" *Journal of Marketing*, Vol. 63 No. 4, pp. 33-44.

Phau, I. and Lau, K.C. (2000), "Conceptualising brand personality: a review and research propositions", *Journal of Targeting, Measurement and Analysis for Marketing*, Vol. 9 No. 1, pp. 52-69.

Saifuddin, A.,(2007), *Metode Kualitatif,* Pustaka pelajar, Yogyakarta

Santoso, S.,(2002), *Buku Latihan SPSS Statistik Parametrik,* PT. Elex Media Komputindo, Jakarta.

Santrock, J.W. (2008), *Adolescence: Twelfth edition*, McGraw-Hill Higher Education.

Sugiyono.,(2011), *Metode Penulisan Kuantitatif, Kualitatif, dan R & D,* Alfabeta, Bandung

Schiffman, L.G, Kanuk, L.L., and Wisenblit, J. (2010), *Consumer Behavior,* 10th ed., Prentice-Hall, Inc., One Lake Street, NJ.

Sirgy, M.J. (1982), "Self-concept in consumer behavior: a critical review", *Journal of Consumer Research,* Vol. 9, No. 3, pp. 287-300

Referensi Internet:

http://www.waloetz.com/2012/02/perkembangan-blackberry-di-masa-akan.html, diakses 8 Oktober 2012, 00.33 wib

http://iniopiniku.com/2012/02/mengapa-blackbery-hanya-laris-di-indonesia/, diakses 8 Oktober 2012, 00.33 wib

http://www.statistikolahdata.com/2010/11/korelasi-pearson.html, diakses 13 Oktober 2012, 17.55 wib

LAMPIRAN 1

Dengan hormat,

Dalam rangka penyusunan tesis saya diprogram Magister Manajemen Universitas Atmajaya Yogyakarta, dengan kerendahan hati memohon bantuan kepada Anda untuk meluangkan waktu guna mengisi kuesioner ini sebagai penelitian saya dengan judul: *Pengaruh Karakter Kepribadian dan Kepribadian Merek Terhadap Loyalitas Merek: Studi Empiris Pada Perspektif Pengguna Blakberry*

Ketepatan dan keakuratan pengukuran variable-variabel yang ada dalam penelitian ini akan sangat tergantung pada kebenaran dan kejujuran Anda dalam pengisian jawaban yang didasarkan pada situasi sesungguhnya yang terjadi. Data yang telah diperoleh akan dijaga kerahasiannya serta digunakan semata-mata untuk penelitian ini.

Demikian permohonan ini saya buat, atas partisipasi dan kesediaan Anda dalam mengisi kuesioner ini saya ucapkan terima kasih.

Hormat saya

Aaron Jali Getty

A. Karakteristik Responden

Berilah tanda silang (X) pada setiap jawaban yang anda pilih

1. Nama Responden :......................

2. Nomor mahasiswa/ID :......................

3. Umur : ....

4. Jenis Kelamin:
   a. Laki-laki
   b. Perempuan

5. Tingkat pendidikan Anda saat ini:
   a. *D1/D3*
   b. *S1/ D4*
   c. *S2*
   d. *S3*

6. Jenis Blackberry yang digunakan/sebelumnya pernah dimiliki ....(*silakan diisi*)

B. CONSUMER PERSONALITY TRAIT SCALE

Petunjuk:

Menurut pernyataan mengenai Karakter Kepribadian berikut ini, saya melihat diri saya sebagai seseorang yang.......
(Lingkari angka yang paling sesuai dengan Karakter Kepribadian Anda dari masing-masing pernyataan berikut ini)

No	Pernyataan	Sangat Tidak Setuju					Sangat Setuju	
Extroversion (Ekstraversi)								
1	...banyak bicara	1	2	3	4	5	6	7
2	...sering tercadangkan/sering tersisih*	1	2	3	4	5	6	7
3	...cenderung diam *	1	2	3	4	5	6	7
4	...memiliki kepribadian yang tegas	1	2	3	4	5	6	7
5	...kadang-kadang menjadi pemalu*	1	2	3	4	5	6	7
6	...penuh dengan energy	1	2	3	4	5	6	7
7	...membangkitkan antusias banyak orang	1	2	3	4	5	6	7
Agreeableness (Keramahan)								
8	...sangat membantu dan tidak egois terhadap orang lain	1	2	3	4	5	6	7
9	...secara umum mempercayai segala sesuatu	1	2	3	4	5	6	7
10	...dapat menjadi 'dingin' dan menyendiri*	1	2	3	4	5	6	7
11	... perhatian dan baik untuk hampir semua orang	1	2	3	4	5	6	7
12	...cenderung mencari kesalahan orang lain*	1	2	3	4	5	6	7
13	...memulai pertengkaran dengan orang lain*	1	2	3	4	5	6	7
14	...memiliki sifat pemaaf	1	2	3	4	5	6	7
Conscientiousness (Kesadaran)								
15	...terkadang ceroboh*	1	2	3	4	5	6	7
16	...cenderung tidak teratur*	1	2	3	4	5	6	7
17	...pekerja yang handal	1	2	3	4	5	6	7
18	...cenderung malas*	1	2	3	4	5	6	7
19	...tekun sampai tugas selesai	1	2	3	4	5	6	7
20	...membuat rencana dan menjalankannya	1	2	3	4	5	6	7
21	...mudah terganggu*	1	2	3	4	5	6	7
Neuroticism (Stabilitas Emosi)								
22	...santai, menangani stres dengan baik*	1	2	3	4	5	6	7
23	...sering khawatir, tidak tenang	1	2	3	4	5	6	7
24	...tetap tenang dalam situasi yang tegang*	1	2	3	4	5	6	7
25	...mudah merasa gugup	1	2	3	4	5	6	7
26	...tertekan/depresi	1	2	3	4	5	6	7
27	...mudah murung	1	2	3	4	5	6	7
Openness (Keterbukaan)								
28	...bernilai seni, berpengalaman dalam estetika	1	2	3	4	5	6	7
29	...memiliki sedikit minat pada seni*	1	2	3	4	5	6	7
30	...canggih dalam seni, musik atau sastra	1	2	3	4	5	6	7
31	...ingin tahu tentang berbagai hal	1	2	3	4	5	6	7
32	...cerdik, seorang pemikir yang mendalam	1	2	3	4	5	6	7
33	...inventif/pandai menciptakan atau merancang	1	2	3	4	5	6	7
34	...lebih suka pekerjaan yang sifatnya rutin*	1	2	3	4	5	6	7
35	...suka berrefleksi, merenung, bermain dengan ide-ide	1	2	3	4	5	6	7

Ket: * = reverse item

C. BRAND PERSONALITY SCALE
Petunjuk:

Berdasarkan sifat-sifat dari Kepribadian Merek berikut, Blackberry adalah merek yang....

(Lingkari angka yang paling sesuai dengan penilaian Anda mengenai Kepribadian Merek Blackberry dari masing-masing pernyataan berikut ini)

No	Sifat-sifat	Sangat tidak Mengambarkan						Sangat Mengambarkan
	Excitement (Kegembiraan)							
1	Banyak bicara: menyenangkan, optimis	1	2	3	4	5	6	7
2	Kebebasan: positif, kontemporer, bebas	1	2	3	4	5	6	7
3	Membahagiakan: bersahabat, lucu	1	2	3	4	5	6	7
4	Energik: berjiwa muda, bersemangat	1	2	3	4	5	6	7
	Competence (Kompetensi)							
5	Terpercaya: konsisten, bertanggung jawab, tangguh	1	2	3	4	5	6	7
6	Determinasi: percaya diri, bermartabat	1	2	3	4	5	6	7
7	Telaten: maskulin, gigih	1	2	3	4	5	6	7
	Peachfulness (Kedamaian)							
8	Kelembutan: damai, pemalu, sopan	1	2	3	4	5	6	7
9	Bersahaja: dependen, kekanak-kanakan	1	2	3	4	5	6	7
	Sincerity (Ketulusan)							
10	Kehangatan: ramah, bijaksana	1	2	3	4	5	6	7
	Sophistication (Kecanggihan)							
11	Elegan: kemewahan	1	2	3	4	5	6	7
12	Stylish: bergaya, canggih	1	2	3	4	5	6	7

D. BRAND LOYALTY SCALE
Petunjuk:

Menanggapi pernyataan mengenai loyalitas merek Blackberry berikut ini saya.....

(Lingkari angka yang paling sesuai dengan penilaian Anda terhadap Loyalitas Merek Blackberry dari masing-masing pernyataan berikut ini)

No	Pernyataan	Sangat Tidak Setuju						Sangat Setuju
1	...akan membeli merek Blackberry ketika membeli *smartphone*	1	2	3	4	5	6	7
2	...berniat untuk tetap membeli merek Blackberry	1	2	3	4	5	6	7
3	...akan terus berkomitmen terhadap merek Blackberry	1	2	3	4	5	6	7
4	...bersedia membayar lebih mahal untuk merek Blackberry daripada merek *smartphone* lainnya.	1	2	3	4	5	6	7

LAMPIRAN 2

The relationship of consumer personality trait, brand personality and brand loyalty: an empirical study of toys and video games buyers

Long-Yi Lin

Associate Professor, Graduate School of Management Sciences, Aletheia University, Taipei, Taiwan

Abstract

Purpose – The purpose of this study is to explore the relationship of consumer personality trait, brand personality and brand loyalty.

Design/methodology/approach – The convenience sampling method was used to collect primary data. A total of 400 adult consumers were interviewed who looked round or bought toys and video games in Taipei City Mall, and 387 effective questionnaires were collected; the effective response rate was 96.75 per cent. Regression analysis was adopted to test hypotheses.

Findings – The major findings were: a significantly positive relationship between extroversion personality trait and excitement brand personality; a significantly positive relationship between agreeableness personality trait and excitement brand personality, sincerity brand personality and competence brand personality; competence and sophistication brand personality have a significantly positive influence on affective loyalty; competence, peacefulness and sophistication brand personality have a significantly positive influence on action loyalty; agreeableness and openness personality trait have a significantly positive influence on affective loyalty; agreeableness and openness personality trait have a significantly positive influence on action loyalty.

Research limitations/implications – The restriction on selecting countries and brands, and the restraint of the sampling coverage present limitations. The paper verifies that consumers with different personality traits will have different cognizance towards brand personality, which can also be applied to the toy and video game industries. The paper proves that a distinct brand personality can appeal to more brand loyalty. It shows that agreeableness and openness of personality traits have a positive influence on brand loyalty.

Practical implications – The paper highlights the value of brand personality that benefits a company. It emphasizes the importance of brand loyalty for a company. Consumers who register in agreeableness and openness are the target audience for BANDAI.

Originality/value – The extra value of the paper is to link the theory and practice, and explore the relationship of consumer personality trait, brand personality and brand loyalty.

Keywords Personality, Brand identity, Brand loyalty

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this article.

Introduction

Nowadays in the trend towards fewer children and population aging, the ages of the customer group who play with toys are going to expand upward and downward from 0-100. Many outstanding stylish toys have been designed to attract office workers aged from 30-40, even to the more affluent 50 + age group. It seems that the toy industry will not be able to survive if they do not include these adults as their core targets consumers. Therefore, the toy industry has to keep digging out what adults want then satisfy their innermost desires. The situation is the same as in the video game industry. According to the video game player population distribution in the USA in 2006, the consumer group aged between 18 and 49 was still the majority, taking up to 44 per cent of total sales.

Nevertheless, the players aged below 18 and over 49 have also been increasingly emphasized recently. Toy and video game industries are intimately interrelated. Many toys and video games are the extension from cartoon animation or movies, and Japan is the main representative. Japan exports its toy and video game products in great numbers to Taiwan and the total sales ranked the number two among Taiwan's toy importers in 2006.

Distinct brand personality plays a key role in the success of a brand. It leads customers to perceive the brand personality and develop a strong connection to the brand (Doyle, 1990). A brand personality should be shaped to be long-lasting and consistent. Besides, it should also be different from other brands and meet consumer's demands (Kumar *et al.*, 2006). Hence, the consumers of those toys and video games are like the brand spokespersons and become the basis for suppliers to build brand personality. With the specific brand personality, consumers of varying personality traits will be attracted and their brand preference will then be further developed. In addition, a company can maintain a good relationship with customers through its brand personality (Aaker and Biel, 1993).

Because brands have their own particular personalities, consumers may treat brands as real human beings. In this case, consumers will expect the people's words, attitudes, behavior or thoughts and so on to meet their respective

personality traits (Aaker, 1996). Consumers may likely use the brand and products in line with their own personality traits, in other words, all the marketing activities are aimed at having consumers believe and recognize a brand personality, and reinforcing the communication between the brand and the consumer (Govers and Schoormans, 2005), in order to enhance the brand's loyalty and equity.

Brand personality has become a widely discussed issue in recent years. It has been emphasized in many brands and products, including durables goods, consumables goods, entertainment and luxury goods, and so on (Kumar *et al.*, 2006; Govers and Schoormans, 2005; Mengxia, 2007). However, only a few toy and video game brands are used as the marketing researches target of brand personality. Thus, try to cover the gap of the literature is the first motivation of this study. Consumers may have their own preference for the brand and product in compliance with their brand personality and personality traits or their own concepts (Govers and Schoormans, 2005). However, in fact, brand preference only involves in the affection in brand loyalty, it may not develop any purchase behavior (Dyson *et al.*, 1996). Only a few researchers have simultaneously combined affective loyalty and behavior loyalty into their investigation on the relationship of personality traits and brand personality with brand loyalty. Therefore, the second motivation of the study is formed to fill this gap as well.

This study has three major objectives:

1 Explore the relationship of personality traits and brand personality.
2 Study the influence of brand personality on brand loyalty.
3 Examine the impact of personality traits on brand loyalty.

Literature review

Personality trait

The Trait Theory is the most influential school of thought in personality psychology, many researchers derived similar conclusions in their studies of personalities (Chen and Chang, 1989). Allport is considered the founder of personality psychology. He described the personality as "a real person." He also provided the more specific and well-know definitions of personality. Personality is the dynamic organization of psycho physiological systems that creates a person's characteristic pattern of behavior, thoughts, and feeling (Allport, 1961). A personal disposition is defined as "a generalized neuropsychic structure (peculiar to the individual), with the capacity to render many stimuli functionally equivalent, and to initiate and guide consistent (equivalent) forms of adoptive and stylistic behavior" (Allport, 1937). Some personality trait researchers believe that, for the most part, personality traits are generated by nature and are stable, but some other researchers indicate personality traits will continue to evolve and may even change, even though the natural-born temperament may never change (Sternberg, 2000).

The Trait Theory can be divided into two schools. The first school believes that people have the same set of traits, and why every one is different is because the level of each trait is shown differently. Thus, traits commonly exist in every one of us. However, the other school believes that individual variance comes from the trait combination, which varies from one person to another, so that everyone has his/her own set of specific traits (Sternberg, 2000).

Allport (1961) categorized traits into three types: cardinal trait, central trait and secondary trait. Basically, Cattell (1943) divided traits into two categories: surface trait and source trait. Eysenck (1975) claimed that personality has only three major traits: extroversion, neuroticism and the psychotic. McCrae *et al.* (1986) classified personality traits into five factors:

1 extroversion;
2 agreeableness;
3 conscientiousness;
4 neuroticism; and
5 openness.

The five factors are generally referred to as the Big Five Model, which is extensively used nowadays.

Based on the history of Big Five Model, Galton (1884) first started to use various Lexical Hypoteses to describe and differentiate personality traits according to Roget's *Thesaurus* (synonym dictionary). As estimated, more than 1,000 vocabulary words were found relating to traits. Allport and Odbert (1936) extended Galton's research and theory and collected 17,953 adjective words from *Webster's New International Dictionary*. Cattell (1943) reduced the 17,953 adjective words describing personality traits to 171.

By examining many studies conducted by trait theory researchers, Norman (1963) found five basic factors through factor analysis of the personality traits measured in peers. The five basic factors are: extroversion, agreeableness, conscientiousness, neuroticism and culture. Afterwards, Goldberg (1990) elicited five major traits from a new variable table to support the Big Five Model. There is a slight difference between the Big Five Model at present and the one proposed by Norman. McCrae *et al.* (1986) modified the factor "culture" propounded by Norman to be "openness", because they thought that culture only carried small factor loading in the field of wisdom and culture while originality, creativity, independence and confidence contributed more factor loading. Even if the name is different, the five factors kept emerging in the subsequent studies (Liebert and Liebert, 1994).

McCrae *et al.* (1986) used the "Big Five Model" scale to measure personality traits and the nine-point Likert scale was also applied in measurement. Chow (1993) followed the method used by McCrae *et al.* (1986) to measure personality traits, deleting items with factor loading lower than 0.5 in the original scale, and applied a five-point Likert scale in measurement.

Brand personality

Aaker (1997) defines brand personality as "a set of human characteristics associated to a brand." Brand personality mainly comes from three sources: the first one is the association consumers have with a brand, secondly, the image a company tries hard to create, for example using an advertising spokesperson to create a corporate image, and the third is about the product attributes, for example product categories and distribution channels. Personality is a useful variable in the consumer's choices of brands. The brands selected by consumers are usually in compliance with their own personalities. Hence, brand personality offers the

functions of self-symbolization and self-expression (Keller, 1993).

Levy (1959) indicates that brand personality contains demographic features, such as gender, age and social class, and they may be directly influenced by the image of the brand users, personnel and product spokespersons, and indirectly affected by product attributes as well. For instance, Marlboro is a cigarette brand more likely to be smoked by males because "macho cowboys" are the brand image built up by Marlboro, Mercedes cars tend to be driven by those in higher social classes because Mercedes shows an image of high quality and high efficiency. Kotler and Keller (2005) note that consumers usually select brands having self-concept congruence. However, sometimes, consumers will select a brand according to their ideal self-concept or the social self-concept. Thus, brand personality may have the function of demonstrating and expressing your own personality at the same time.

Karande et al. (1997) believed that product designers and marketing personnel may benefit from the features of brand personality, because they may develop their marketing plans according to the features. In addition, with brand personality, a product can be differentiated from other brands. Furthermore, brand affection can also be developed by brand personality, which can in turn reinforce consumer's brand personality.

Milewicz and Herbig (1994) pointed out that brands have their own personalities, so users may choose the products matching their preferences and personalities according to perceived product images. A successful brand knows how to build its distinct brand personality, which facilitate customers to perceive its unique brand personality, then developing a strong binding relationship with the brand (Doyle, 1990). According to Kumar et al. (2006) the crucial element in constituting brand personality is to have a clear differentiation in conveying brand personality. The personality shall be consistently and persistently cultivated over the long run. When trying to change the way a brand image is conveyed, the original brand personality and value should first be strengthened in order to reduce to the minimum customer's feelings of chaos and inconsistency.

Aaker (1997) used personality psychology to develop a "brand personality scale," identified the five dimensions: sincerity, excitement, competence, sophistication and ruggedness of brand personality, and induce 15 facets and 42 traits. Aaker et al. (2001) also conducted a brand personality study in Japan in 2007, for which they slightly modified the brand personality scale released in 2001 exclusive for Japan, by taking different local and culture backgrounds into account, and established a new brand personality scale befitting the Japan market. Similar to the brand personality scale of the USA, the newly established brand personality scale is also constituted of five dimensions:

1 excitement;
2 competence;
3 peacefulness;
4 sincerity; and
5 sophistication.

In addition, it induces 12 facets and 36 traits.

Phau and Lau (2000) used the 36 traits in the brand personality scale to measure brand personality, in which the respondents were requested to select the degree of their impression on a five-point Likert scale. Han (2004) used the Japanese brand personality scale to measure brand personality, in which the fittest two traits in each dimension were selected as a dimension's facets and a five-point Likert scale was utilized for measurement.

Brand loyalty
The definition of brand loyalty regarded as the most complete one was proposed by Jacoby and Olson (1970). They defined brand loyalty as the result from non-random, long existence behavior response, and it was a mental purchase process formed by some certain decision units who considered more than one brands. In early researches, researchers usually took the act of repurchase as the method of measure brand loyalty. But in recent studies, some researchers indicate that to measure brand loyalty the best way is to measure by affective loyalty (Bennett and Rundle-Thiele, 2000). On the other hand, there are theories like polygamous loyalty theory, which states that customers do not buy only one brand (Dowling and Uncles, 1997). As indicated by Baldinger and Rubinson (1996), brand loyalty covers affective loyalty and action loyalty. Affective loyalty refers to the consumer's preference and affinity for a specific brand but the actual purchase behavior has not yet to be developed while action loyalty is shown by the actual purchase behavior conducted by consumers for a specific brand.

Groth and McDaniel (1993) believed that affective loyalty represents consumer loyalty to a specific brand all the way. Eisman (1990) defined action loyalty as consumers' satisfaction with regular purchases of a specific brand. In view of the above mentioned different types of consumer brand loyalty, Assael (1993) defined brand loyalty as the repeated purchase behavior based on consumers' satisfaction with their accumulated experiences in purchasing the same brand.

According to the study conducted by Oliver (1999), the brand loyalty was classified into four parts: cognitive loyalty, affective loyalty, conation loyalty and action loyalty. Day (1996) added two indicators, action and affection for brand loyalty and divided brand loyalty into true brand loyalty and spurious brand loyalty. The spurious brand loyalty consumers may make repeated purchases only because the brand they purchase is the only one choice in the stores. On the other hand, true brand loyalty consumers should show both psychological and affective commitments in addition to repurchase consistency. As shown in Figure 1, Dick and Basu (1994) classified loyalty into:

1 True loyalty.
2 Spurious loyalty.
3 Latent loyalty.
4 No loyalty.

Figure 1 Model of loyalty

		Repeat Purchase Possibility	
		High	Low
Related Attitude	High	True Loyalty	Latent Loyalty
	Low	Spurious Loyalty	No Loyalty

Source: Dick and Basu (1994, p.101)

Customer loyalty is viewed as the strength of the relationship between an individual's relative attitude and their repeat patronage.

In the market which becomes more and more competitive and market segments gets smaller and smaller, it is getting more difficult to keep old customers and find out new ones. For decades now building brand loyalty has been propounded as the panacea for all organizations to combat the increasing competition in the market place. Kotler and Keller (2005) indicated that "based on a 20-80 principle, the top 20% of customers may create 80% of profit for a company." Thus, the longer relationship between a company and its customers may create more profit and benefit for the company. Studies have shown that small reductions in customer defections can produce significant increase in profits because:

- Loyal customers buy more products.
- Loyal customers are less-price sensitive and pay less attention to competitors' advertising.
- Servicing existing customers, who are familiar with the firm's offerings and processes, is cheaper.
- Loyal customers spread positive word-of-mouth and refer other customers (Reichheld and Sasser, 1990).

Chaudhuri and Holbrook (2001) utilized action loyalty and affective loyalty to measure brand loyalty and applied a seven-point Likert scale for measurement. Huang (2004) adopted Aaker's (1996) brand loyalty measure index to measure brand loyalty, identified the items related to attitude and behavior measurement and used a five-point Likert scale as measure tool.

Relationship of variables

Relationship of personality trait and brand personality

Chow et al. (2004) conducted a study on college students' sports shoes buying behavior in an attempt to find if there is a significant correlation between personality trait and brand personality. By classifying the brands into the ones preferred by college students and the ones actually being purchased recently, the research found that the college students of different personality traits shows significant difference in the preference of brand personality. Chow et al. (2004) also explored if there is a significant difference in the influence of brand personality when the consumers of different personality traits made their purchase decisions. The result shows that the consumers with higher scores in extroversion and openness are more likely to be influenced by brand personality.

Govers and Schoormans (2005) further probed whether consumers' preference would be influenced when their self-concept is in conformity with product personality. The result shows that consumers have preference for the products having a high degree of congruence between their own self-concept and product personality. Guo (2003) investigated if there is a significant correlation between personality trait and brand personality according to the scores of the five dimensions of the Big Five Model. The result shows that all five dimensions of the Big Five Model have significant positive relationship with the cognition of brand personality.

Relationship of brand personality and brand loyalty

Mengxia (2007) investigated the influence of brand personality on consumers' brand preference, affection, loyalty and purchasing intention. The result shows that brand personality has a positive influence on brand preference, affection, loyalty and purchase intention. Guo (2003) also explored if brand personality has significant influence on brand preference. The result shows that the interviewees scored higher scores on the cognition of some brand personalities in the brands they prefer. It might be that consumers like the brands having more distinct brand personality, and it is also likely that consumers are more familiar with the brands they prefer.

Kumar et al. (2006) investigated the connection between brand personality and brand loyalty, and separately used durable goods (cars), and consumer goods (tooth-pastes) to explore the relationship between brand personality and brand loyalty. The result shows that brand personality may influence consumers' brand loyalty to consumable goods.

Relationship of personality trait and brand loyalty

Matzler et al. (2006) investigated the relationships among the personality traits of openness and extroversion, hedonic value, brand affection and brand loyalty. The result shows that openness and extroversion have positive correlation on the loyalty of the brands or products with hedonic value.

Methodology

Conceptual structure

The Big Five Model proposed by Costa and McCrae (1985) is broadly adopted by personality psychologists to measure personality traits, which is composed of extroversion, agreeableness, conscientiousness, neuroticism and openness. This study refers to the big five personality traits proposed by Costa and McCrae (1985) to measure respondents' personality traits. Many marketing researchers widely use brand personality scale with high reliability and validity to measure respondent's brand personality. Given the intention to investigate Japanese brands, this study refers to the Japanese brand personality scale modified by Aaker et al. (2001) based on the US brand personality scale to measure brand personality.

In the aspect of brand loyalty, it is divided into affective loyalty and action loyalty. Affective loyalty measures the consumers' overall feelings about products and brands as well as their purchase intention while action loyalty puts more focus on the response to the stimulation of sales promotions, which represents the purchase intention for a product or brand (Schiffman and Kanuk, 2000). Many researchers emphasize that affective loyalty and action loyalty should be simultaneously measured in order to identify consumers' real brand loyalty (Baldinger and Rubinson, 1996; Chaudhuri and Holbrook, 2001). Thus, by referring to the study of Chaudhuri and Holbrook (2001), this research uses action loyalty and affective loyalty to measure brand loyalty.

This study refers to the literatures mentioned above to develop its conceptual structure as shown in Figure 2.

Hypotheses development

As indicated by Aaker (1997) that there are three dimensions in brand personality is relating to the Big Five Model. The three dimensions are: agreeableness versus sincerity, extroversion versus excitement and conscientiousness versus competence. Agreeableness and sincerity are the thoughts coming from warmth and acceptance. Extroversion and excitement cover social communication, activity and action

Figure 2 Conceptual structure
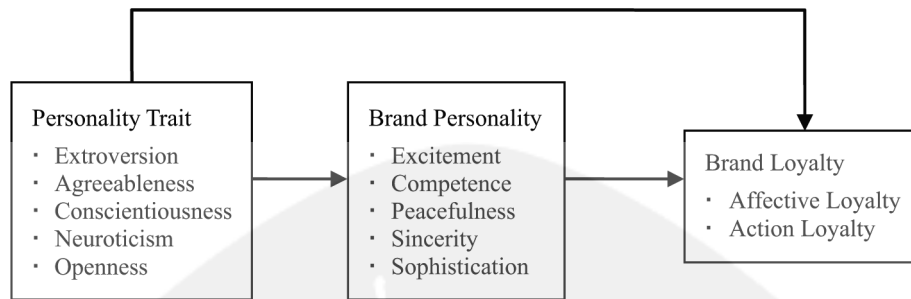
concepts. Conscientiousness and competence include responsibility, reliability and assurance. The research conducted by Chow *et al*. (2004) first found that the college students with different personality traits show significant different from brand personality when purchasing sports shoe; second, it also found significant difference in the influence of different personality trait groups on brand personalities. Sirgy (1982) and Aaker (1999) both believed that consumers brand preference and brand's symbolization are consistent with consumers' self-concept, and in the meantime, consumers may increase their preference for the products having congruence in corporate image and brand personality. Guo (2003) took symbolic (watch), practical (microwave) and comprehensive (car) products to examine whether personality traits have a significant relationship with brand personality cognizance. The research result found the five big personality traits all have significant positive relationships to brand personality cognizance. Hence, the first hypothesis of this study is developed as below:

H1. There is a significant positive relationship between personality trait (extroversion, agreeableness, conscientiousness) and brand personality (excitement, competence, sincerity).

The research conducted by Guo (2003) found that the respondents got higher scores on the cognition of some brand personalities of the brand they prefer. It illustrates that consumers have more preference for the brands having distinct brand personality, but it is also likely that consumers are more familiar with the brands they prefer. Mengxia (2007) reported that brand personality has positive influence on brand preference, affection, loyalty and purchase intension. Chen (1998) also discovered that more distinct brand personality may bring stronger brand loyalty. Thus, the second hypotheses of this study is developed as below:

H2. Brand personality) has a significant positive influence on brand loyalty.

Matzler *et al*. (2006) used hedonic product like sports shoes and mobile phones to investigate the relationships among the personality traits of openness and extraversion, hedonic value, brand affection and brand loyalty. The result shows that openness and extroversion have a positive influence on the loyalty to the brands or products with hedonistic value. According to the study conducted by Schiffman and Kanuk (2000), a person's personality is mainly consisted of his or her behavior, appearance, affections, conviction and personality statistic features. Massad (1996) asserted that young females

have higher risk tendency than young males, but they have lower loyalty. Farley (1964) perceived that high-income has strong correlation with brand loyalty. Thus, the third hypothesis of the study is developed as below.

H3. Personality trait has a significant positive influence on brand loyalty.

Variable definition and measurement
Personality trait
By referring to Costa and McCrae (1985), this study defines personality traits as the degrees that consumers think of themselves in terms of extroversion, agreeableness, conscientiousness, neuroticism and openness. Extraversion assesses an individual's quantity and intensity of interpersonal interaction and activity level. The higher scorers tend to be sociable, active, talkative, person-oriented, optimistic and affectionate. Agreeableness assesses an individual's quality of interpersonal orientation along a continuum from compassion to antagonism in thoughts, feelings, and actions. The higher scorers are likely to be soft-hearted, good-natured, trusting, helpful, forgiving, gullible, and straightforward. Conscientious assesses one's degree of organization, persistence, and motivation in goal-directed behavior. The higher scorers of this dimension tend to be organized, reliable, and hard working. Neuroticism assesses an individual prone to psychological distress, unrealistic ideas, excessive cravings or urges, and maladaptive coping responses. The higher scorers tend to be worried, nervous, emotional, and hypochondriacal. Openness assesses an individual's proactive seeking and appreciation of experience for its own sake, toleration for, and exploration of the unfamiliar. The higher scorers tend to be curious, creative, original, imaginative, and untraditional. The study also refers to the method developed by Chow (2004) for measuring the degree of personality traits in respective dimensions. In addition, a seven-point Likert scale is also used to measure the degree of consumers' agreement, in which consumers are requested to fill in their agreement level from one point to seven points as designed to identify their personality traits.

Brand personality
The target of this study is BANDAI brand Japanese toys and video games. The viewpoints of Aaker *et al*. (2001) are taken into account and brand personality is defined as the degree to which consumers consider "the personality traits" of a specific toy or video game brand in terms of: excitement, competence, peacefulness, sincerity and sophistication. Excitement is defined as the degree of talkativeness, freedom, happiness

and energy shown in a brand's personality trait; Competence is defined as the degree of responsibility, determination and patience in a brand's personality trait; Peacefulness is defined as the degree of mildness and naivety in a brand's personality trait; Sincerity is defined as the degree of warmth in a brand's personality trait; and Sophistication is defined as the degree of elegance and style in a brand's personality trait. This study refers to the method developed by Aaker *et al.* (2001) to measure the degree of brand personality in respective dimensions. In addition, a seven-point Likert scale is also used, in which the respondents are requested to fill in their agreement level, in order to measure brand personality.

Brand loyalty
By referring to Chaudhuri and Holbrook (2001), the study defines brand loyalty as the positive and aggressive degree shown by consumers for their affective loyalty and action loyalty toward a toy or video game brand. Affective loyalty is defined as the degree of preference and affinity consumers have toward a brand. Action loyalty is defined as the degree of actual repeated purchases of a brand made by consumers. This study uses the method developed by Chaudhuri and Holbrook (2001) to measure consumer's affective loyalty and action loyalty. The respondents were requested to fill in their agreement level on a seven-point Likert scale to measure brand loyalty.

Sampling design
Targeting the adult consumers who were visiting or purchasing toys or video games as the research objects, this study conducted a sampling survey at Taipei City Mall of Taipei Main Station. The main reason to choose Taipei City Mall as the survey location is because there are plenty of toys and video game stores in that area, which has brought about great business opportunities and heavy pedestrian traffic. The personality traits in mature adults tend to be highly stable. Hence those mature adults are the most suitable targets to be surveyed.

BANDAI is Japan's No. 1 toy manufacturer and the third largest company in Japan's video game industry. BANDAI has established a branch office in Taiwan since 2003, and all Taiwanese consumers of toys and video games are familiar with the brand and therefore this study uses BANDAI as the research brand.

This study adopted a convenience sampling method to collect primary data, in which the interviewer interviewed the adult consumers who came to the Taipei City Mall of Taipei Main Station to shop for toys or video games. The interviews conducted by the researcher in person and the responded questionnaires were turned in on the spot. This way, when the respondents ran into questions that they had difficulty answering, the researcher would be available on the spot to help them, so that the return rate and accuracy of the questionnaire could be enhanced. In order to increase the effectiveness and representativeness of the questionnaire, the study distributed a total of 400 questionnaires.

Questionnaire design
According to the objectives of this study and research variables, as well as different dimensions in the conceptual structure, the questionnaire was organized into four parts: personality traits, brand personality, brand loyalty and the respondent's basic information. In terms of personality traits,

this study uses the Big Five Model scale: extroversion, agreeableness, conscientiousness, neuroticism and openness, developed by McCrae *et al.* (1986), together with the questionnaire designed by Chow (2004) Regarding brand personality, Aaker *et al.* (2001) divided Japanese brand personality into five dimensions: excitement, competence, peacefulness, sincerity and sophistication. This study uses the Japanese brand personality scale proposed by Aaker *et al.* (2001) and refers to the questionnaire designed by Aaker *et al.* (2001) to design the questionnaire of personality traits.

For brand loyalty, this study refers to the two major dimensions of brand loyalty proposed by Chaudhuri and Holbrook (2001) and the questionnaires designed by Chaudhuri and Holbrook (2001), Parasuraman *et al.* (1996) and Aaker (1996) to measure consumers' brand loyalty toward toy and video game brands, respectively, in terms of affective loyalty and action loyalty. As for respondents' basic information, the respondents are requested to fill in their gender, age, education level, occupation, income and marital status in the questionnaire.

The pre-test of the questionnaire targeted the consumers browsing for or purchasing toys or video games at Taipei City Mall of Taipei Main Station, in order to make sure that the reliability of respective scales would all be in compliance with the research design. A total of 40 samples of the pre-test questionnaire were distributed and 35 validity samples were collected. The pre-test result showed that the Cronbach's α value of the respective variables were all above 0.5 which demonstrated that the questionnaire used in this study meets a qualified level of reliability (2004).

Data collection and analysis method
The consumers who shop for toys or video games may be more aware of the brand BANDAI and would have more experience with and greater preference for toys and video games. This study conducted its questionnaire survey within the vicinity of toy and video game stores. When scouting the toy or video game stores for survey location, it was found that more toys or video games are sold at Taipei City Mall, and the place also has heavy pedestrian traffic. Thus, this study conducted its questionnaire survey at Taipei City Mall. In order to reinforce the coverage of the questionnaire survey, the survey was conducted during three different time period: noon, afternoon and twilight. The data collected in the survey were analyzed and compared using SPSS10.0 version of statistic package software. Descriptive statistics was used to analyze the sample's basic information. Then the reliability as well as the validity of the questionnaire was verified. Also, correlation analysis was used to examine the correlation of the variables of dimensions. Finally the regression analysis was adopted to test the hypotheses.

Data analysis

Sample description
A total of 400 questionnaires were distributed for this study, and 387 valid questionnaires were collected, which represents a valid return rate of 96.75 per cent. As shown by the valid samples, the proportion of male toy and video game consumers (74 per cent) is higher than that of their female counterparts (26 per cent), their ages are mostly in the ranged

between 21-30 years old (60 per cent), followed by the below 20 years old age group (31 per cent). Also 53 per cent of the respondents were college graduates while student made up the vast majority (65 per cent) of interviews in terms of occupation. In addition, 71 per cent of the respondents' monthly income was below $20,000 and 96 per cent of the respondents were single.

Reliability and validity analysis

Reliability is a measuring tool contains a level of variable error. Cronbach's α values are commonly used to measure the degree of consistence of various facets in the same dimension. The questionnaire includes a variety of dimensions, and a higher reliability coefficient represents a higher correlation of respective dimensions, which illustrates higher internal consistence. When Cronbach's α value is greater than 0.7, it is referred to as high reliability; when the value falls between 0.7 and 0.35, it is considered as fair reliability, and the value smaller than 0.35 is taken as low reliability. The results of the questionnaire reliability analysis show that the Cronbach's α value of the personality trait is 0.7662, brand personality is 0.8232 and brand loyalty is 0.7350. Given its variables all reaching a level of high reliability, it illustrates that the overall consistence of the questionnaire of this study is in high reliability.

To show how valid a questionnaire is, it is necessary to measure variable characteristics (Chow, 2004). Since the questionnaire is designed by referring to the research scales developed by the researchers within and without, and modified by reviewing various kinds of literature, it would meet the requirement of content validity. If factor in facet measurement is between 0.5 and 1.0, the values of respective dimensions are all greater than 1, and the accumulated explained variances of respective variables are all greater than 50 per cent, the overall measurement quality of the questionnaire is good and the questions in the questionnaire are appropriate, then the questionnaire has construct validity (Chiou, 2000). According to the factor analysis, the study shows that the values of its respective dimensions are all greater than 1, each facet's factor loading is between 0.500 and 0.861, and accumulated explained variances are all greater than 50 per cent. It illustrates that the questionnaire used in this study meet the requirement of construct validity.

Correlation analysis

This study uses Pearson's correlation analysis to confirm the correlation of two dimensions and the correlation coefficients of respective variables as shown in Table I. As the data shown in Table I, extroversion and excitement, agreeableness and sincerity, conscientiousness and competence, those are significant positive correlation, each dimension of brand personality and brand royalty shows significant positive correlation, extroversion for affective loyalty, agreeableness for brand loyalty, openness for brand loyalty are significant positive correlation, neuroticism for brand royalty shows significant negative correlation.

Hypotheses testing

The relationship of personality trait (extroversion, agreeableness, conscientiousness) and brand personality (excitement, competence, sincerity)

The regression analysis was adopted to test the relationship of personality trait (extroversion, agreeableness, conscientiousness) and brand personality with excitement. The results of the regression analysis were shown as Table II. From data shown in Model 1 of Table II, $\beta = 0.126$, $t = 2.018$, $p = 0.056 < 0.10$, which has a statistical significance, it means extroversion and brand personality with excitement have a significant positive relationship was supported. $\beta = 0.136$, $t = 2.196$, $p = 0.033 < 0.05$, which has a statistical significance, it means agreeableness and brand personality with excitement have a significant positive relationship was supported as well. $\beta = 0.047$, $t = 0.734$, $p = 0.464 > 0.10$, which does not has a statistical significance, it means conscientiousness have a significant positive correlation was not supported.

From data shown in Model 2 of Table II, $\beta = 0.117$, $t = 1.856$, $p = 0.064 < 0.10$, which has a statistical significance, it means agreeableness and brand personality with competence have a significant positive relationship was supported. As for the rest of 2 personality traits, which were not supported for the positive relationship with brand personality with competences.

And as data shown in Model 3 of Table II, $\beta = 0.149$, $t = 2.359$, $p = 0.019 < 0.05$, which has a statistical significance, it means agreeableness and brand personality with sincerity have a significant positive relationship was supported. As for the rest of 2 personality traits, which were not supported for the positive relationship with brand personality with sincerity.

According to the test results, *H1* is partly supported.

The influence of brand personality on affective loyalty

The regression analysis for the influence of brand personality on affective loyalty was shown as Table III. $\beta = 0.112$, $t = 2.042$, $p = 0.042 < 0.05$, which has a statistical significance, it means that brand personality with competence have a significant positive influence on affective loyalty was supported. $\beta = 0.258$, $t = 4.757$, $p = 0.000 < 0.01$, which has a statistical significance, it means brand personality with sophistication have a significant positive influence on affective loyalty was supported. As for the rest of 3 brand personality traits, which were not supported for the positive influence on brand affective loyalty.

The influence of brand personality on action loyalty

The regression analysis for the influence of brand personality on action royalty was shown as Table IV. $\beta = 0.199$, $t = 3.708$, $p = 0.000 < 0.01$, which has reach a statistical significance, it means brand personality with competence have a significant positive influence on action loyalty was supported. $\beta = 0.109$, $t = 1.836$, $p = 0.067 < 0.1$, which has reach a statistical significance, it means brand personality with peacefulness have a significant positive influence on action loyalty was supported. $\beta = 0.096$, $t = 1.816$, $p = 0.070 < 0.1$, which has reach a statistical significance, it means that brand personality with sophistication have a significant positive influence on action loyalty was supported. As for the rest of 2 brands personality,

Table I Pearson correlation analysis

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Extroversion	1.000											
2. Agreeableness	0.516**	1.000										
	(0.000)											
3. Conscientiousness	0.565**	0.546**	1.000									
	(0.000)	(0.000)										
4. Neuroticism	−0.364**	−0.348**	−0.270**	1.000								
	(0.000)	(0.000)	(0.000)									
5. Openness	0.459**	0.393**	0.400**	−0.218**	1.000							
	(0.000)	(0.000)	(0.000)	(0.000								
6. Excitement	0.223**	0.227**	0.193**	−0.106*	0.127*	1.000						
	(0.000)	(0.000)	(0.000)	(0.036)	(0.012)							
7. Competence	0.160**	0.174**	0.136**	−0.113*	0.080	0.428**	1.000					
	(0.002)	(0.001)	(0.000)	(0.026)	(0.115)	(0.000)						
8. Peacefulness	0.096	0.071	0.004	0.048	−0.003	0.384**	0.294**	1.000				
	(0.060)	(0.166)	(0.932)	(0.345)	(0.960)	(0.000)	(0.000)					
9. Sincerity	0.073	0.121*	0.010	−0.038	0.105*	0.481**	0.355**	0.542**	1.000			
	(0.153)	(0.017)	(0.838)	(0.456)	(0.039)	(0.000)	(0.000)	(0.000)				
10. Sophistication	0.095	0.028	0.057	−0.038	−0.045 (0.380)	0.227**	0.293**	0.429**	0.332**	1.000		
	(0.063)	(0.585)	(0.265)	(0.462)	(0.380)	(0.000)	(0.000)	(0.000)	(0.000)			
11. Affective loyalty	0.065	0.153**	0.026	−0.171**	0.123*	0.190**	0.227**	0.140**	0.207**	0.303**	1.000	
	(0.204)	(0.003)	(0.615)	(0.001)	(0.016)	(0.000)	(0.000)	(0.006)	(0.000)	(0.000)		
12. Action loyalty	0.150**	0.200**	0.094	−0.138**	0.184**	0.276**	0.326**	0.287**	0.286**	0.248**	0.458**	1.000
	(0.003)	(0.000)	(0.064)	(0.006)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	

Notes: Figures in parentheses represent p value; $^*p \leq 0.05$; $^{**}p \leq 0.01$

Table II The regression analysis for the relationship of personality traits (extroversion, agreeableness, conscientiousness) and brand personality (excitement, competence, sincerity)

Model/dependent variable		Independent variable	β	t-value	p-value	Model significance
Model 1	Excitement	Extroversion	0.126	2.018	0.056*	$R^2 = 0.068$ $\bar{R}^2 = 0.061$ D-W $= 2.113$ F $= 9.314$ p $= 0.000$***
		Agreeableness	0.136	2.196	0.033**	
		Conscientiousness	0.047	0.734	0.464	
Model 2	Competence	Extroversion	0.087	1.358	0.175	$R^2 = 0.037$ $\bar{R}^2 = 0.030$ D-W $= 2.115$ F $= 4.959$ p $= 0.002$***
		Agreeableness	0.117	1.856	0.064*	
		Conscientiousness	0.024	0.365	0.716	
Model 3	Sincerity	Extroversion	0.053	0.819	0.413	$R^2 = 0.021$ $\bar{R}^2 = 0.013$ D-W $= 1.841$ F $= 2.724$ p $= 0.044$**
		Agreeableness	0.149	2.359	0.019**	
		Conscientiousness	−0.101	−1.535	0.126	

Notes: $^*p \leq 0.10$; $^{**}p \leq 0.05$; $^{***}p \leq 0.01$

Table III The regression analysis for the influence of brand personality on affective loyalty

Dependent variable	Independent variable	β	t-value	p-value
Affective loyalty	Excitement	0.071	1.215	0.225
	Competence	0.112	2.042	0.042**
	Peacefulness	−0.080	−1.315	0.189
	Sincerity	0.091	1.467	0.143
	Sophistication	0.258	4.757	0.000***

Notes: $^*p \leq 0.05$; $^{**}p \leq 0.01$; $^{***}p \leq 0.01$; $R^2 = 0.125$, $\bar{R}^2 = 0.113$, D-W $= 1.793$, $F = 10.861$, $p = 0.000$

Table IV The regression analysis for the influence of brand personality on action royalty

Dependent variable	Independent variable	β	t-value	p-value
Action royalty	Excitement	0.088	1.555	0.121
	Competence	0.199	3.708	0.000**
	Peacefulness	0.109	1.836	0.067*
	Sincerity	0.082	1.361	0.174
	Sophistication	0.096	1.861	0.070*

Notes: $^*p \leq 0.10$; $^{**}p \leq 0.01$; $R^2 = 0.168$; $\bar{R}^2 = 0.157$; D-W $= 1.905$; $F = 15.339$; $p = 0.000$;

which were not supported for the positive influence on brand action loyalty.

Thus, according to the results of above test, *H2* is partly supported.

The relationship of personality trait and affective loyalty
The regression analysis for the relationship of personality trait and affective loyalty was shown as Table V. $\beta = 0.147$, $t = 2.287$, $p = 0.042 < 0.05$, which has reach a statistical significance, it means that agreeableness have a significant positive influence on affective loyalty was supported. $\beta = 0.098$, $t = 1.698$, $p = 0.090 < 0.1$, which has reach a statistical significance, it means openness have a significant positive correlation with affective loyalty was supported. $\beta = -0.145$, $t = -2.655$, $p = 0.008 < 0.01$, though which has reach a statistical significance, but *t*-value is negative, it means neuroticism have a significant positive influence on affective loyalty was not supported. As for the rest of 2 personality traits, which were not supported for the positive influence on brand affective loyalty.

The relationship of personality trait and action loyalty
The regression analysis for the relationship of personality trait and action loyalty was shown as Table VI. $\beta = 0.152$, $t = 2.377$, $p = 0.018 < 0.05$, which has reach a statistical significance, it means that agreeableness have a significant positive influence on action loyalty was supported. $\beta = 0.124$, $t = 2.157$, $p = 0.032 < 0.05$, which has reach a statistical significance, it means that openness have a significant positive influence on action loyalty was supported. As for the rest of 3 personality traits, which were not supported for the positive influence on brand action loyalty.

According to the results of tests, *H3* is partly supported.

Table V The regression analysis for the influence of personality trait on affective loyalty

Dependent variable	Independent variable	β	t-value	p-value
Affective loyalty	Extroversion	−0.050	−0.741	0.225
	Agreeableness	0.147	2.287	0.042**
	Conscientiousness	−0.105	−1.606	0.189
	Neuroticism	−0.145	−2.655	0.008***
	Openness	0.098	1.698	0.090*

Notes: *$p \leq 0.10$; ** $p \leq 0.05$; *** $p \leq 0.01$; $R^2 = 0.053$, $\bar{R}^2 = 0.041$, D-W = 1.763, $F = 4.299$, $p = 0.001$

Table VI The regression analysis for the influence of personality trait on action loyalty

Dependent variable	Independent variable	β	t-value	p-value
Action loyalty	Extroversion	0.033	0.492	0.623
	Agreeableness	0.152	2.377	0.018*
	Conscientiousness	−0.075	−1.156	0.248
	Neuroticism	−0.067	−1.238	0.217
	Openness	0.124	2.157	0.032*

Notes: * $p \leq 0.05$; ** $p \leq 0.01$; $R^2 = 0.060$ $\bar{R}^2 = 0.048$ D-W = 1.891 $F = 4.896$, $p = 0.001$

Discussion
The positive relationship of personality trait (extroversion, agreeableness, conscientiousness) and brand personality (excitement, competence, sincerity) is partly supported
The findings of this study are not exactly in line with Aaker's (1997) viewpoints. The "conscientiousness" personality trait does not have positive relationship with the "competence" dimension of brand personality. However, consumers with different personality traits have different feelings toward BANDAI, for example, consumers tend to extroversion, agreeableness and neuroticism have slightly differences on the cognizance for the brand personality of BANDAI. This finding is consistent with the results found by Guo (2003). Besides, conscientiousness and openness personality traits do not have a positive relationship with brand personality. It is probable that consumers with a higher degree of conscientiousness and openness do not know the brand personality of BANDAI clearly, or probably BANDAI well enough, or maybe BANDAI does not have well-rounded marketing strategies or invest enough in advertisements in Taiwan so that the positive relationship between personality trait and brand personality is not completely supported.

The positive influence of brand personality on affective loyalty is partly supported
A successful brand requires the building of distinct brand personality, and has to be markedly different from other brands to make consumers notice its brand personality and form strong relationship with the brand (Doyle, 1990; Kumar *et al.*, 2006). Dick and Basu (1994) pointed out that only highly related brand loyal attitude and re-purchase behavior could be regarded as brand royalty. The hypothesis that excitement, peacefulness and sincerity brand personality dimensions have a significant positive correlation with affective royalty has not been fully supported. It was probably due to the fact that, in an effort to differentiate from other brands, BANDAI emphasizes competence and sophistication and pay less attentions on excitement, peacefulness and sincerity, which makes consumers consider BANDAI superior in terms of competence and sophistication, and not so in terms of excitement, peacefulness and sincerity, which in turn leads to the result that the positive relationship between brand personality and brand loyalty is not completely supported.

The positive influence of personality trait on brand loyalty is partly supported
The hypothesis that the personality trait of extroversion has a significant positive influence on affective loyalty has not been fully supported. It is probably because consumers who scored higher on extroversion prefer to interact with people and frequently attend outdoor activities and therefore they do not get involved as much with toys or video games and hence the low brand royalty.

And the hypothesis that the personality trait of conscientiousness has a significant positive influence on affective loyalty has not been fully supported. It is probably because consumers who scored higher on conscientiousness pay more attentions to achievements in terms on studies and careers (Costa and McCrae, 1985) and do not get much involved in entertainments. The hypothesis that the personality trait of neuroticism has a significant positive influence on affective loyalty has not been fully supported,

probably because consumers who has higher degree of neuroticism usually have excessive desires and impulses (Costa and McCrae, 1985), therefore, when purchasing toys or video games, their behavior belong to impulsive purchases or only have strong desires for the products without producing loyalty to brand.

As indicated in the research conducted by Matzler *et al.* (2006), only openness and extroversion personality traits have positive correlation with brand or product loyalty in the hedonic product group. Besides, it is difficult to predict brand preference only with personality trait since personality trait is related to purchasing product categories (Schiffman and Kanuk, 2000).

Conclusion and suggestions

Conclusion

The major findings of this study were listed as follows:

- There is a significantly positive relationship between extroversion personality trait and excitement brand personality.
- There is a significantly positive relationship between agreeableness personality trait and excitement brand personality, sincerity brand personality and competence brand personality.
- Competence and sophistication brand personality have a significantly positive influence on affective loyalty.
- Competence, peacefulness and sophistication brand personality have a significantly positive influence on action loyalty.
- Agreeableness and openness personality trait have a significantly positive influence on affective loyalty.
- Agreeableness and openness personality trait have a significantly positive influence on action loyalty.

Managerial implications

Theoretical implications
This study verifies that consumers with different personality traits will have different cognizance towards brand personality, which can also be applied to the toy and video game industries. Consumers with different personality traits have different cognizance towards brand personality, which represents that consumers with different personality traits will have different positive relationships with different BANDAI's brand personality dimensions. And a successful brand requires the building of a distinct brand personality (Doyle, 1990; Kumar *et al.*, 2006). This shows that BANDAI still has not created a distinct brand personality yet so that consumers with different personality traits have different cognizance toward its brand personality.

This study also found out that BANDAI scored high on brand personality of competence, sophistication and on affective loyalty, which means BANDAI should strengthen its existing brand image so that consumers can have a consistent cognizance of its brand personality, and reinforce the consumers to consider themselves as having a certain relationship with this brand. In doing so, BANDAI can cultivate loyal customers, and it is also an effective way to attract new customers.

To prove a distinct brand personality can appeal to more brand loyalty. The finding in this study is consistent with the viewpoints held by other researchers and empirical study results (Doyle, 1990; Kumar *et al.*, 2006), and demonstrates that finding the way to shape brand personality is valuable and crucial for the success of a company.

To show that agreeableness and openness of personality traits have a positive influence on brand loyalty. According to a research conducted by Matzler *et al.* (2006), only openness and extroversion of personality traits have a positive influence on brand or product loyalty with hedonic value. This study verified that agreeableness and openness of personality traits can influence true brand loyalty. It showed that consumers with higher degree of agreeableness and openness will develop brand loyalty for hedonic products like toys or video games. This finding is not exactly the same as the result found by Matzler *et al.* (2006). This finding can supplement the partial gap of the literatures.

Practical implications
To highlight the value of brand personality that benefits a company. Brand personality not only plays an important role, but also has profound influence on a company's performance. By using various marketing approaches, a company may convey their brand personality to consumers and have the consumers of varying personality traits believe and recognize the company's brand personality; thus, consumers may develop some kind of relationship with the brand, which will further influence their brand loyalty. The shaping of distinct brand personality may add value to a company's brand.

Raising the importance of brand loyalty for a company. In fact the brand personality of competence and sophistication can effectively boost customers' true loyalty toward the brand, BANDAI has to emphasize the expressing of excitement, competence and sophistication of the brand personality and keep its brand personality distinct, lasting and consistent to attract customers, and cultivate their preference for the specific brand personality and have them become the company's loyal customers.

Consumers who register in agreeableness and openness are the target audience for BANDAI. This study verified that consumers with higher agreeableness and openness have positive loyalty towards BANDAI, which means BANDAI should take them as the core target audience. All marketing strategies developed should focus on these target consumers' needs. In doing so, BANDAI can keep them and maintain their loyalty.

Research limitations

Even though the study tries to be objective and prudent in its experimental designs and survey methods, it is still restrained by limitations and deviations in its implementation, which results in some imperfections in the end. This study has the following limitations:

- *The restriction on selecting countries and brands.* As opposed to the studies conducted by other researchers using more than two brands for the comparison of brand personalities, this study only investigates one brand, even though it is a major Japanese brand. Thus, it requires further investigation if planning to apply the study results to other toy or video game brands.
- *The restraint of the sampling coverage.* The questionnaire survey was only conducted at Taipei City Mall and targeted the adult consumers who shop and purchase toys and video games in that area. However, the viewpoints

from the consumers in other areas of Taiwan or other countries were not covered.

- *Lack of generalization of the study findings*. This study is limited to the toy and video game industry in its empirical study. It is unknown if the results can be applied to other industries. Thus, further investigation is required if planning to apply the results to other industries.

Suggestions

Suggestions for the enterprises

Based on the findings of the study, the following recommendations are proposed for the enterprises as a reference:

- *To create a distinct, lasting and consistent brand personality*. Creation of a distinct brand personality may draw customers' brand loyalty, so when a company plans its marketing activities, it should specifically highlight its brand personality in order to draw brand loyalty from its target consumers.
- *To give attention to customers' insights*. The study found that the conscientiousness of personality trait does not have a significant positive influence on affective and action loyalty. However, with brand personality, conscientiousness of personality trait may yield true loyalty to brands. It illustrates that "BANDAI" should continue to use its favorable brand personality to retain this type of consumer. In addition, it should also try to understand other types of consumers and use other variables to retain them. Other than literally understanding the uniqueness of its own products, BANDAI should conduct a consumer A&U study to understand consumers' personality traits and preferences when planning its marketing activities. In doing so, it can shape the brand personality according to customers' requirements and draw customers' true loyalty to the brand.

Suggestions for future studies

The following recommendations are brought up for those researchers who are interested in conducting subsequent studies in the related field:

- *Change the brands of toys or video games*. The follow-up researchers may select several brands of toys and video games for comparison and investigate of the differences among varying brand personalities.
- *Change research variables*. There are plenty of variables that can induce consumers of varying personality traits to develop loyalty to brands, and each variable has its respective coverage. Also, according to the study, the correlation among various variables is low, which also results in too low an explanation of variance in the regression model. It illustrates that there are other important variables that could influence consumers regarding their brand loyalty to BANDAI. Thus, the researchers doing follow-up research should review other literature to select different variables and dimensions and provide a more integrated investigation.
- *Change the industry to be studied in new research*. This study only gives an empirical analysis on the toy and video game industry, but the researchers doing follow-up research may apply the model to other industries for further verification, so the model can be readily adapted to other applications.

References

Aaker, D.A. (1996), *Building Strong Brand*, Free Press, New York, NY.

Aaker, D.A. (1997), "Dimension of brand personality", *Journal of Marketing Research*, Vol. 34, pp. 347-56.

Aaker, D.A. (1999), "The malleable self: the role of self-expression in persuasion", *Journal of Marketing Research*, Vol. 36 No. 2, pp. 45-57.

Aaker, D.A. and Biel, A. (1993), *Brand Equity and Advertising: Advertising's Role in Building Strong Brands*, Lawrence Erlbaum Associates, Inc., Mahwah, NJ.

Aaker, J.L., Benet-Martinez, V. and Garolera, J. (2001), "Consumption symbols as carriers of culture: a study of Japanese and Spanish brand personality constructs", *Journal of Personality and Social Psychology*, Vol. 81 No. 3, pp. 492-508.

Allport, G.W. (1937), *Personality: A Psychological Interpretation*, Holt, New York, NY.

Allport, G.W. (1961), *Pattern and Growth in Personality*, Holt, Rinehart & Winston, New York, NY.

Allport, G.W. and Odbert, H.S. (1936), "Trait names: a psycho-lexical study", *Psychological Monographs*, Vol. 47 No. 1, pp. 171-220.

Assael, H. (1993), *Marketing Principles and Strategy*, 2nd ed., Dryden Press, Hinsdale, IL.

Baldinger, A.L. and Rubinson, J. (1996), "Brand loyalty: the link between attitude and behavior", *Journal of Advertising Research*, Vol. 36 No. 6, pp. 22-34.

Bennett, R. and Rundle-Thiele, S. (2000), "Attitudinal loyalty – personality trait or brand-specific?", *ANZMAC 2000 Visionary Marketing for the 21st Century: Facing the Challenge*, Griffith University School of Marketing and Management, pp. 97-101.

Cattell, R.B. (1943), "The description of personality: basic traits resolved into clusters", *Journal of Abnormal and Social Psychology*, Vol. 58, pp. 69-90.

Chaudhuri, A. and Holbrook, M.B. (2001), "The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty", *Journal of Marketing*, Vol. 65 No. 2, pp. 81-93.

Chen, M.Z. (1998), "A study on the relationship between brand personality, consumer satisfaction and customer loyalty", Graduate Institute of Department of Business Administration, Chang Gung University, Taoyuan.

Chen, Z.G. and Chang, Y.X. (1989), *Psychology of Personality*, 1st ed., Wu-Nan Book Inc., Taipei.

Chiou, H.J. (2000), *Quantitative Research and Statistical Analysis in Social & Behavioral Sciences*, 1st ed., Wu-Nan Book Inc., Taipei.

Chow, H.-L. (1993), "A study on the relationships among big-five personality traits, gender-role orientation, and transformational leadership", thesis for Master of Graduate Institute of Department of Business Administration, Chung Yuan Christian University, Jhongli City.

Chow, S.-Y., Chen, C.-W. and Chang, W.-S. (2004), "A study of relationship between human personality and brand personality: sports shoes as an example", *Chung Hua Journal of Management*, Vol. 5 No. 3, pp. 1-16.

Chow, W.S. (2004), *Multivariate Statistical Analysis: With Application of SAS/STAT, 1E*, Best-Wise Publishing Co., Taipei.

Costa, P.T. and McCrae, R.R. (1985), *The NEO PI-R Personality Inventory Manual*, Psychological Assessment Resources, FL.

Day, G.S. (1996), "A two-dimensional concept to brand loyalty", *Journal of Advertising*, Vol. 30 No. 9, pp. 29-35.

Dick, A. and Basu, K. (1994), "Customer loyalty: towards an integrated framework", *Journal of the Academy of Marketing Science*, Vol. 22 No. 2, pp. 99-113.

Dowling, G.R. and Uncles, M. (1997), "Do customer loyalty programs really work?", *Sloan Management Review*, Vol. 38 No. 4, pp. 71-82.

Doyle, P. (1990), "Building successful brands: the strategic options", *Journal of Consumer Marketing*, Vol. 7 No. 2, pp. 5-20.

Dyson, P., Farr, A. and Hollis, N.S. (1996), "Understanding measuring, and using brand equity", *Journal of Advertising Research*, Vol. 36 No. 6, pp. 9-22.

Eisman, R. (1990), *Building Brand Loyalty, Incentive*, Holt, Rinehart & Winston Inc., New York, NY.

Eysenck, H.J. (1975), *The Inequality of Man*, EDITS Publishers, San Diego, CA.

Farley, J.U. (1964), "Brand loyalty and the economics of information", *Journal of Business*, Vol. 37 No. 4, pp. 370-81.

Galton, F. (1884), "Measurement of character", *Fortnightly Review*, Vol. 36, pp. 179-85.

Goldberg, L.R. (1990), "An alternative description of personality: the big five factor", *Journal of Personality and Social Psychology*, Vol. 59, pp. 1216-29.

Govers, P.C.M. and Schoormans, J.P.L. (2005), "Product personality and its influence on consumer preference", *Journal of Consumer Marketing*, Vol. 22 No. 4, pp. 189-97.

Groth, J.C. and McDaniel, S.W. (1993), "The exclusive value principle", *Journal of Consumer Marketing*, Vol. 10 No. 1, pp. 10-16.

Guo, L.-J. (2003), *The Effects of Personality Trait and Brand Personality on Brand Preference*, Graduate Institute of Management Science, National Chiao Tung University, Hsinchu.

Han, G.-H. (2004), *The Study of the Effects among Brand Character, Image, Reputation and Involvement Have on Brand Equity – An Example of Watches*, Graduate Institute of Management Science, Ming Chuan University, Taipei.

Huang, Z.-J. (2004), *A Study on Brand Loyalty of Mobile Phone*, Graduate Institute of Department of Management Science, Tamkang University, Taipei.

Jacoby, J. and Olson, J.C. (1970), *An Attitude Model of Brand Loyalty: Conceptual Underpinnings and Instrumentation Research*, John Wiley & Sons, New York, NY.

Karande, K., Zinkhan, G.M. and Lum, A.B. (1997), *Brand Personality and Self-Concept: A Replication and Extension, American Marketing Association Summer Conference*, Vol. 8, pp. 165-71.

Keller, K.L. (1993), "Conceptualizing, measuring, and managing customer-based brand equity", *Journal of Marketing*, Vol. 57 No. 1, pp. 1-22.

Kotler, P. and Keller, K.L. (2005), *Marketing Management*, 12th ed., Prentice-Hall, Englewood Cliffs, NJ.

Kumar, R., Luthra, A. and Datta, G. (2006), "Linkages between brand personality and brand loyalty: a qualitative study in an emerging market in the Indian context", *South Asian Journal of Management*, Vol. 13 No. 2, pp. 11-35.

Levy, S.J. (1959), "Symbols for sales", *Harvard Business Review*, Vol. 37 No. 4, pp. 117-24.

Liebert, R.M. and Liebert, L.L. (1994), *Personality: Strategies and Issues*, Brooks/Cole, A Division of International Thomson Publishing, Inc., Pacific Grove, CA.

McCrae, R.R., Costa, P.T. Jr and Busch, C.M. (1986), "Evaluating comprehensiveness in personality systems: the California Q-set and the five-factor model", *Journal of Personality*, Vol. 54 No. 2, pp. 430-46.

Massad, E. (1996), "Transmission rates and the evolution of HIV virulence", *Evolution*, Vol. 50 No. 2, pp. 916-17.

Matzler, K., Bidmon, S. and Grabner-Kräuter, S. (2006), "Individual determinants of brand affect: the role of the personality traits of extroversion and openness to experience", *Journal of Product & Brand Management*, Vol. 15 No. 7, pp. 427-34.

Mengxia, Z. (2007), "Impact of brand personality on PALI: a comparative research between two different brands", *International Management Review*, Vol. 3 No. 3, pp. 36-46.

Milewicz, J. and Herbig, P. (1994), "Evaluating the brand extension decision using a model of reputation building", *Journal of Product & Brand Management*, Vol. 3 No. 1, pp. 39-47.

Norman, W.T. (1963), "Toward an adequate taxonomy of personality attributes: replicated factor structure", *Journal of Abnormal and Social Psychology*, Vol. 66, pp. 574-83.

Oliver, R.L. (1999), "Whence consumer loyalty?", *Journal of Marketing*, Vol. 63 No. 4, pp. 33-44.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1996), "The behavioral consequences of service quality", *Journal of Marketing*, Vol. 60 No. 2, pp. 31-46.

Phau, I. and Lau, K.C. (2000), "Conceptualising brand personality: a review and research propositions", *Journal of Targeting, Measurement and Analysis for Marketing*, Vol. 9 No. 1, pp. 52-69.

Reichheld, F. and Sasser, W.E. (1990), "Zero defections: quality comes to services", *Harvard Business Review*, Vol. 68 No. 5, pp. 105-11.

Schiffman, L.G. and Kanuk, L.L. (2000), *Consumer Behavior*, 7th ed., Prentice-Hall, Inc., Englewood Cliffs, NJ.

Sirgy, M.J. (1982), "Self-concept in consumer behavior: a critical review", *Journal of Consumer Research*, Vol. 9 No. 3, pp. 287-300.

Sternberg, R.J. (2000), *Pathways to Psychology*, 2nd ed., Harcourt, A Division of Thomson Learning, Inc., New York, NY.

Corresponding author

Long-Yi Lin can be contacted at: longyi@ms12.url.com.tw

Executive summary and implications for managers and executives

This summary has been provided to allow managers and executives a rapid appreciation of the content of this article. Those with a particular interest in the topic covered may then read the article in toto to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefits of the material present.

That certain brands boast a unique personality is cited as a key factor in their success. A personality that is consistent and enduring helps consumers better engage with the brand in

question and this effect is considerably enhanced when brand personality is clearly differentiated from rival offerings.

Key variables

Brand personality emerges as a result of consumer associations with the brand, company efforts to project a certain image through advertising and communication, and from the brand's attributes. Plenty evidence exists to substantiate beliefs that consumers prefer brands that more closely match their own self-concept, whether real or ideal. Some scholars have also discovered that human and brand personality can mutually reinforce each other. Marlboro's successful use of macho cowboys to target males with its cigarette brand is one example of such an outcome.

Seminal work in 1997 led to the creation of a brand personality measurement scale consisting of five dimensions incorporating a total of 15 facets and 42 traits. The dimensions were classified as sincerity, excitement, competence, sophistication and ruggedness. Later modification for the Japanese market took culture into account and peacefulness replaced ruggedness in a revised scale containing 12 facets and 36 traits.

Studies into personality traits have origins in psychology and theory is broadly divided into two schools of thought. One purports that everyone has the same traits but differ by degree, while trait combinations that vary from person to person forms the basis of the other position. Researchers have likewise disagreed on the number of trait categories, with different frameworks featuring two, three or five. Extraversion, agreeableness, conscientiousness, neuroticism and openness were identified as factors that have become known as the Big Five Model. Although slight variations have since emerged, the model has become a standard for research in this area.

With markets becoming increasingly more competitive, organizations are further recognizing the value of having customers who are loyal to their brands. Loyal customers can generate extra revenue and profit, are less price sensitive and more likely to ignore competitor advertising. In addition, it is more expensive to attract new customers than to retain existing ones, who provide added benefits in the shape of referrals and positive word-of-mouth recommendations. Various interpretations of brand loyalty are in existence. Most analysts initially measured loyalty solely through repurchase behavior but consideration of other factors led to more complex definitions. A growing number of scholars subscribed to the belief that attitude provides a truer reflection of loyalty and the term "affective loyalty" was coined to reflect "psychological and affective commitments" to a brand. Certain models have introduced additional classifications but models incorporating both affective loyalty and behavioral or "action" loyalty have become the norm.

Different studies investigating the relationship between these variables have discovered:

- Brand preference is substantially influenced by personality traits.
- Consumers rating high in openness and extraversion are more likely to be influenced by brand personality.
- A significant degree of congruence between brand personality and consumer self-concept.

- Evidence that brand personality positively impacts on brand preference, affective loyalty, action loyalty and purchase intention.
- Loyalty towards brands with "hedonic value" is positively influenced by openness and extraversion.

Brand personality has been studied extensively in recent years within a wide variety of contexts. However, research involving toy and video game brands is scant. The two are closely related through links to cartoons or movies and are major industries in Japan and its main export markets such as Taiwan. Analysts have noted that a growing number of older adults are now consuming such products and suggest that marketers need to target this growing segment as a matter of priority.

Study and results

Lin explores the above issues in a study of Taiwanese consumers from a shopping mall in Taipei. The location was chosen because of its volume of toy shops and video game stores and the number of adult visitors to these establishments. Adult consumers were targeted specifically because "highly stable" personality traits are common among this segment.

A questionnaire was distributed and the author obtained 387 usable responses. The four-part questionnaire related to personality traits, brand personality, brand loyalty and demographic details of the participants. BANDAI was the selected brand for this study because it has been established in Taiwan since 2003 and is a familiar name among toys and video game consumers in the country. Males accounted for 74 percent of the sample and females 26 percent. The vast majority of respondents were adults aged 30 or below.

The study used the Big Five Model, the modified brand personality scale and brand loyalty incorporated both affective loyalty and action loyalty. Findings indicated partial support for:

- Positive relations between the personality traits extroversion, agreeableness and consciousness and brand personality dimensions excitement, competence and sincerity.
- Positive influence of brand personality on affective loyalty.
- Positive influence of personality trait on brand loyalty.

Explanations offered by Lin for these findings include:

- A possibility that consumers scoring high in openness and conscientiousness are not fully aware of the brand personality of BANDAI. This potentially raises questions about the company's marketing strategy in Taiwan.
- Differentiation objectives may have resulted in BANDAI placing more emphasis on competence and sophistication at the expense of sincerity, peacefulness and excitement. Consumers are thus likely to rate the brand superior in some personality respects but not in others.
- Brand loyalty will be lower among consumers who value extraversion as such consumers are likelier to engage in outdoor activities rather than playing with toys or video games.
- Consumers scoring highly in conscientiousness may be driven by study and career objective and have little interest in entertainments.

- Impulsiveness is common among consumers indicating a high score in neuroticism. Since this trait can trigger strong urges for random products, brand loyalty is highly improbable.

Marketing implications and further study

Based on this analysis, the author believes that BANDAI has not yet created a distinct brand image and cites that as the reason why consumers with different personality traits have different perception of the brand's personality. It is therefore recommended that the company adopts a variety of marketing approaches and focus on specific dimensions. That way, brand personality can be conveyed more effectively to eliminate this recognition disparity and add value to the brand.

The indication that competence and sophistication can positively impact on "true loyalty" towards the brand prompts Lin to urge BANDAI to focus on these brand personality traits, along with sophistication. Loyalty towards the company was particularly evident among consumers high in openness and agreeableness. In the author's opinion, these consumers should be regarded as the core target audience. Retention and loyalty are plausible rewards for addressing the needs of these consumers. Another idea is for BANDAI to acquire a better understanding of consumer personality traits so that brand personality can be shaped accordingly.

Additional research could include more than one brand and also expand the study within Taiwan or to different nations. A consideration of additional brands or industries can likewise help indicate whether or not any generalization of findings here is possible.

(A précis of the article "The relationship of consumer personality trait, brand personality and brand loyalty: an empirical study of toys and video gamesbuyers". Supplied by Marketing Consultants for Emerald.)

Brief Report

Ten facet scales for the Big Five Inventory: Convergence with NEO PI-R facets, self-peer agreement, and discriminant validity

Christopher J. Soto [a,*], Oliver P. John [b]

[a] Department of Psychology, Colby College, 5550 Mayflower Hill, Waterville, ME 04901, USA
[b] Institute of Personality and Social Research, University of California, 4143 Tolman Hall, MC 5050, Berkeley, CA 94720-5050, USA

A R T I C L E   I N F O

A B S T R A C T

Scales were developed to assess 10 specific facet traits within the broad Big Five personality domains from the item pool of the Big Five Inventory (BFI). In two independent samples, the BFI facet scales demonstrated substantial (a) reliability, (b) convergence with self-reports on the Revised NEO Personality Inventory and peer-reports on the BFI, and (c) discriminant validity. These brief scales offer new opportunities for researchers who wish to assess specific personality characteristics within an overarching Big Five framework.

© 2008 Elsevier Inc. All rights reserved.

1. Introduction

One of the most important advances in personality psychology in the past half-century has been the emergence of a consensus that the most important individual differences in adults' personality characteristics can be organized in terms of five broad trait domains: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness. These "Big Five" domains (Goldberg, 1990) now serve as a common language in the field, facilitating communication and collaboration.

Since the emergence of the Big Five model, however, researchers have come to recognize that there are both advantages and disadvantages to investigating personality in terms of these five broad domains. On the one hand, each Big Five domain possesses the advantage of high bandwidth (John, Hampson, & Goldberg 1991). That is, each domain's great breadth allows for efficient personality description, and the for prediction of many outcomes with modest-to-moderate levels of precision. On the other hand, an important limitation of examining personality in terms of the five broad domains is their low fidelity. Each domain subsumes more specific personality characteristics, sometimes referred to as facets (Costa & McCrae, 1992, 1995). Aggregating these related but distinguishable facet traits into only five broad domains results in a loss of information—information that may be useful for psychological description, prediction, and explanation.

This bandwidth-fidelity dilemma (Cronbach & Gleser, 1957) can be resolved by examining personality hierarchically, that is, by examining specific personality characteristics within an overarching Big Five framework. To achieve this resolution, hierarchical Big Five measures are needed—measures that assess both the five broad domains and more specific traits within those domains. Some such measures have already been developed, including the Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992) and measures scored from the International Personality Item Pool (Goldberg, 1999). However, use of these measures in many types of research has been limited by the fact that they each include hundreds of items. To address this limitation, and thereby further promote examination of more specific personality characteristics within the Big Five domains, the present research developed and validated facet scales from the item pool of a brief and widely used Big Five measure, namely the Big Five Inventory (BFI; John, Donahue, & Kentle, 1991; see John, Naumann, & Soto (2008)).

2. Selecting a universe of potential BFI facets

The complete process by which we developed facet scales for the BFI is described below, in Section 3. However, one preliminary issue

---

* Corresponding author.
   E-mail address: cjsoto@colby.edu (C.J. Soto).

warrants special comment here: that of selecting a universe, or comprehensive set, of potential facet traits to assess using the BFI.

Different researchers have taken different approaches to the task of defining facet-level personality characteristics within the Big Five domains. These approaches have included identifying previously studied psychological constructs that fall within the Big Five domains (e.g., Costa & McCrae, 1992), defining facets as circumplex regions that mix or blend the domains (e.g., Hofstee, de Raad, & Goldberg, 1992), and factor-analyzing sets of trait adjectives, questionnaire items, or scales within each domain (e.g., DeYoung, Quilty, & Peterson, 2007; Roberts, Chernyshenko, Stark, & Goldberg, 2005; Saucier, 1994; Saucier & Ostendorf, 1999). Before developing facet scales for the BFI, we therefore faced an important choice: What set of facet traits should we set out to measure?

We ultimately decided to measure a subset of the 30 facets assessed by the NEO PI-R (Costa & McCrae, 1992). We chose these 30 facets as our universe of potential BFI facets for three reasons. First, the list of NEO PI-R facets is quite extensive. It includes 6 facets within each domain, providing flexibility for developing a smaller set of BFI facet scales. Second, previous research has demonstrated that the BFI includes item content relevant to many of the NEO PI-R facets (John et al., 2008), suggesting that much or all of the BFI item pool could be mapped onto the NEO PI-R facets. Finally, the NEO PI-R is currently the most widely used hierarchical Big Five measure; therefore, developing conceptually similar facet scales for the BFI would promote convergence with a substantial body of existing research.

3. Method

3.1. Samples and procedures

Development and validation of the BFI facet scales drew on data from two independent samples.

3.1.1. Community sample for scale development

This sample (see Goldberg, 1999) consisted of 642 adults (58% female; $M = 50.98$ years old, $SD = 12.52$ years). Most of these participants completed the NEO PI-R ($N = 565$) and rated themselves on a set of 739 trait-descriptive adjectives ($N = 521$). Four years later, all participants provided BFI self-reports, and most ($N = 590$) were also described by one to three peers ($M = 2.52$ peers) using the BFI.

3.1.2. Student sample for replication

This sample consisted of 829 undergraduate students (77% female; $M = 21.68$ years old, $SD = 3.90$ years) who completed the BFI and the NEO PI-R in a single session. Approximately two months later, a subsample ($N = 138$) completed the BFI again, and another subsample ($N = 277$) was described by a friend, romantic partner, or family member using the BFI.

3.2. Measures

3.2.1. The Big Five Inventory

The Big Five Inventory (BFI; John, Donahue et al. 1991; see Appendix A and John et al. (2008)) is a 44 item questionnaire that assesses the Big Five personality domains and is freely available for use in research. In previous research, its domain scales have shown high reliability, clear factor structure, strong convergence with longer Big Five measures, and substantial self-peer agreement (Benet-Martínez & John, 1998; John et al., 2008; Soto, John, Gosling, & Potter, 2008). Across the two present samples, alpha reliabilities for the domain scales ranged from .81 to .88, with a mean of .85.

3.2.2. The Revised NEO Personality Inventory

The Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992) is a 240-item questionnaire that assesses the Big Five domains, as well as 6 more specific facet traits within each domain. Costa and McCrae (1992) presented evidence for the structural validity, reliability, and self-peer agreement of the 30 facet scales and 5 domain scores. Across the two present samples, the alpha reliabilities of the domain scales ranged from .88 to .93, with a mean of .90.

3.2.3. Controlling for individual differences in acquiescent response style

Acquiescent response style is the tendency to consistently agree (yea-saying) or consistently disagree (nay-saying) with test items, regardless of their content. Uncontrolled individual differences in acquiescence pose a serious threat to validity, especially for scales with an imbalance of true- and false-keyed items (McCrae, Herbst, & Costa, 2001; Soto et al., 2008). Because the small number of BFI items prohibits the development of fully balanced facet scales, we controlled for individual differences in acquiescence via within-person centering prior to all analyses presented here (see Appendix B, and Soto et al. (2008)).

3.3. Development of the BFI facet scales

Development of the BFI facet scales proceeded in three steps. First, the pool of 44 BFI items was compared with the 30 NEO PI-R facet scales. To identify facet-level personality characteristics assessed by the NEO PI-R that were also clearly represented in the BFI item pool, we used conceptual judgments and correlations, in the community sample, of the BFI items with the NEO PI-R facets. For example, the BFI Extraversion domain scale includes several items conceptually and empirically related to the NEO PI-R Assertiveness facet (e.g., *Has an assertive personality*). Altogether, 10 such constructs were identified, two per Big Five domain. (This symmetry was coincidental.) The constructs were Assertiveness and Activity in the Extraversion domain, Altruism and Compliance in the Agreeableness domain, Order and Self-Discipline in the Conscientiousness domain, Anxiety and Depression in the Neuroticism domain, and Aesthetics and Ideas in the Openness domain.

Second, each of the 44 BFI items was assigned to 1 of 10 preliminary facet scales, on the basis of conceptual judgments and correlations, in the community sample, of the BFI items with the NEO PI-R items and facet scales. Analyses of the 10 preliminary scales indicated strong convergence with the corresponding NEO PI-R facets, but also considerable intercorrelations between each pair of same-domain BFI facet scales (e.g., between the Assertiveness and Activity facets of Extraversion), indicating much general domain variance.

Third, a total of 9 BFI items were removed from the preliminary facet scales, in order to improve the scales' discriminant validity while maintaining (or even improving) their internal consistency and convergence with the NEO PI-R facets. The 10 final scales were thus scored using 35 of the 44 BFI items; see Appendix A for item text and Appendix B for scoring instructions.

4. Results

4.1. Reliabilities and intercorrelations of the BFI facet scales

Despite their brevity, the BFI facet scales demonstrated moderate to strong reliability, as shown in Table 1. In the community sample, their alpha reliabilities averaged .72 (range = .63–.84). In the student sample, their alphas averaged .70 (range = .53–.83), and their retest reliabilities averaged .80 (range = .71–.88). These

Table 1
Alpha reliabilities and intercorrelations of the BFI facet scales in two samples.

BFI facet	Assertiveness		Activity		Altruism		Compliance		Order		Self-Discipline		Anxiety		Depression		Aesthetics		Ideas	
	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.
Reliability																				
Alpha	.84	.83	.66	.76	.74	.68	.63	.61	.63	.56	.71	.75	.82	.83	.65	.53	.78	.78	.72	.71
Retest	—	.88	—	.74	—	.71	—	.81	—	.74	—	.77	—	.86	—	.82	—	.82	—	.80
Intercorrelations																				
Assertiveness	—	—																		
Activity	**.53**	**.58**	—	—																
Altruism	.17	.15	.29	.33	—	—														
Compliance	-.17	-.06	.07	.18	**.53**	**.56**	—	—												
Order	.05	.00	.25	.17	.17	.23	.03	.12	—	—										
Self-Discipline	.18	.19	.43	.28	.22	.32	.11	.19	**.61**	**.56**	—	—								
Anxiety	-.07	-.21	-.23	-.24	-.16	-.12	-.23	-.22	-.12	-.07	-.25	-.22	—	—						
Depression	-.11	-.20	-.34	-.31	-.30	-.30	-.26	-.33	-.15	-.20	-.30	-.27	**.46**	**.56**	—	—				
Aesthetics	.07	.05	.11	.18	.06	.05	.10	.08	.01	.05	.06	.11	-.03	-.08	-.01	.00	—	—		
Ideas	.20	.23	.23	.30	-.06	.08	-.03	.03	.02	.04	.12	.18	-.21	-.26	-.04	-.13	**.49**	**.47**	—	—

Note. Com., Community sample (*N* = 642); Stud., Student sample (*N* = 829); *N* = 138 for retest reliabilities. For the community sample, correlations of at least .08 in magnitude are statistically significant at the α = .05 level (two-tailed). For the student sample, correlations of at least .07 in magnitude are statistically significant at the α = .05 level (two-tailed). Within-domain discriminant correlations are printed in boldface.

reliabilities were similar to the alphas of the longer NEO PI-R facet scales, which averaged .75 across the two samples (see Table 2).

Table 1 also shows that the BFI facet scales were well differentiated from each other. The five within-domain discriminant correlations (e.g., Assertiveness with Activity) averaged a moderate .53 in the community sample and .55 in the student sample. The magnitudes of the 40 between-domain discriminant correlations (e.g., Assertiveness with Order) were much lower still, averaging only .15 in the community sample and .17 in the student sample.

4.2. Correlations with the NEO PI-R facet scales

There was strong convergence between each BFI facet scale and the corresponding NEO PI-R facet, as shown in Table 2. In the community sample, despite the fact that the BFI and the NEO PI-R were administered four years apart, the 10 raw convergent correlations (e.g., BFI Assertiveness with NEO PI-R Assertiveness) averaged .61; corrected for unreliability (as indexed by alpha coefficients), these correlations averaged .82 (range = .72–.90). In the student sample, the raw convergent correlations averaged .69, and the corrected correlations averaged .93 (range = .87–1.00).

The two sets of facets also showed impressive discriminant validity. In both samples, each BFI facet scale correlated more strongly with its corresponding NEO PI-R facet scale than with any other NEO PI-R facet. The 20 within-domain discriminant correlations (e.g., BFI Assertiveness with NEO PI-R Activity) averaged a moderate .44 in the community sample and .48 in the student sample. The magnitudes of the 80 between-domain discriminant correlations (e.g., BFI Assertiveness with NEO PI-R Order) averaged only .12 in the community sample and .15 in the student sample.

4.3. Correlations with peer-reports

The BFI facet scales demonstrated substantial self-peer agreement, as shown in Table 2. In the community sample (with ratings averaged across as many as three peers), the raw convergent correlations between self- and peer-reports averaged .51 (range = .39–.66), and the corrected correlations averaged .68 (range = .53–.82). In the student sample, the peer criterion was less reliable (with ratings from only a single peer per participant); nevertheless, the raw convergent correlations still averaged .45 (range = .25–.61), and the corrected correlations averaged .64 (range = .37–.84). These self-peer correlations were similar to those typically observed for the BFI domain scales (John et al., 2008).

Self-peer discrimination was also strong. Within-domain discriminant correlations (e.g., self-reported Assertiveness with peer-reported Activity) averaged a modest .35 in the community sample and .33 in the student sample. Cross-domain discriminant correlations (e.g., self-reported Assertiveness with peer-reported Order) were weaker still, with magnitudes averaging only .09 in each of the two samples. In fact, each self-reported BFI facet correlated most strongly with the corresponding peer-reported facet in 19 of 20 cases. The lone exception was that self-rated Openness to Ideas correlated slightly more strongly with peer-rated Openness to Aesthetics (.37) than with peer-rated Openness to Ideas (.36) in the student sample.

4.4. Partial correlations with NEO PI-R self-reports and BFI peer-reports

To examine the unique personality variance captured by each BFI facet scale, we computed their convergent partial correlations with (a) self-reports on the corresponding NEO PI-R facet scales and (b) peer-reports on the same BFI facet scales. Each convergent partial correlation controlled for self-reports on the

Table 2
Correlations of BFI facet self-reports with NEO PI-R facet self-reports and BFI facet peer-reports in two samples.

Criterion	Alpha		Assertiveness		Activity		Altruism		Compliance		Order		Self-Discipline		Anxiety		Depression		Aesthetics		Ideas	
	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.
NEO PI-R facet																						
Assertiveness	.80	.80	**.61**	**.71**	.44	.49	.01	.07	−.18	−.10	.14	.14	.25	.30	−.17	−.31	−.15	−.25	.03	.08	.30	.29
Activity	.75	.65	.40	.48	**.61**	**.63**	.04	.17	−.09	.00	.22	.18	.37	.38	−.03	−.07	−.14	−.17	.05	.13	.21	.27
Altruism	.72	.74	.13	.08	.26	.26	**.65**	**.68**	.37	.46	.16	.27	.22	.26	−.09	−.05	−.25	−.24	.10	.09	−.02	.09
Compliance	.73	.67	−.24	−.25	−.03	−.03	.42	.40	**.53**	**.58**	.03	.06	.03	.06	−.17	−.03	−.19	−.20	.11	.01	−.14	−.11
Order	.74	.76	.10	−.03	.16	.08	.05	.05	−.05	.00	**.60**	**.67**	.49	.43	−.04	.07	−.08	−.04	−.07	.03	−.11	−.08
Self-Discipline	.79	.82	.15	.20	.35	.30	.13	.25	.03	.16	.54	.53	**.67**	**.72**	−.25	−.25	−.27	−.31	−.02	.08	.02	.14
Anxiety	.83	.82	−.11	−.19	−.23	−.22	−.11	−.11	−.19	−.22	−.08	−.01	−.20	−.17	**.68**	**.78**	.40	.49	−.03	−.05	−.16	−.23
Depression	.85	.85	−.14	−.29	−.32	−.37	−.21	−.25	−.18	−.25	−.19	−.25	−.33	−.34	.51	.62	**.54**	**.70**	−.05	−.06	−.08	−.22
Aesthetics	.83	.81	.02	.09	.09	.20	.04	.11	.13	.15	−.03	.04	−.01	.10	.00	−.04	.04	.01	**.68**	**.71**	.41	.44
Ideas	.81	.82	.08	.14	.08	.18	−.13	−.01	−.03	−.03	−.02	.02	.03	.11	−.13	−.25	.00	−.09	.39	.43	**.59**	**.66**
Peer BFI facet																						
Assertiveness	.80	.87	**.63**	**.61**	.45	.43	.15	.08	−.14	−.09	.01	.04	.12	.19	−.07	−.26	−.10	−.15	.06	.01	.13	.17
Activity	.72	.75	.38	.33	**.54**	**.47**	.19	.12	.01	.01	.09	.09	.21	.18	−.15	−.13	−.24	−.22	.07	.07	.12	.18
Altruism	.72	.79	.01	.01	.14	.17	**.44**	**.38**	.32	.24	.05	.07	.03	.19	−.10	−.05	−.20	−.21	−.03	.02	−.12	−.06
Compliance	.73	.80	−.16	−.10	.03	.07	.32	.19	**.45**	**.25**	.00	−.01	−.02	.05	−.16	−.01	−.20	−.20	.04	.04	−.06	.00
Order	.57	.73	−.09	.03	.04	.04	.06	.12	−.01	.01	**.51**	**.48**	.34	.40	−.01	−.01	−.07	−.09	−.06	−.04	−.13	−.04
Self-Discipline	.74	.78	.00	.11	.19	.19	.06	.18	.01	.16	.35	.42	**.39**	**.51**	−.10	−.10	−.20	−.24	−.05	−.05	−.09	.09
Anxiety	.81	.88	.00	−.20	−.13	−.16	−.07	−.05	−.15	−.05	−.07	.02	−.10	−.06	**.51**	**.43**	.29	.34	.11	−.05	−.06	−.19
Depression	.54	.66	−.01	−.07	−.23	−.15	−.24	−.15	−.20	−.09	−.08	−.06	−.13	−.11	.34	.24	**.46**	**.44**	.07	−.01	.04	−.05
Aesthetics	.73	.84	.02	.05	.04	.12	−.01	.01	.06	.03	−.10	.08	−.05	.13	.00	−.05	.03	−.11	**.66**	**.54**	.34	.37
Ideas	.70	.78	.13	.08	.16	.20	−.07	.02	.00	−.02	−.08	.09	.02	.16	−.16	−.12	−.02	-.08	.37	.29	**.52**	**.36**

Note. Com., Community sample (*N* = 642; *N* = 565 for correlations with NEO PI-R self-reports; *N* = 590 for correlations with BFI peer-reports); Stud., Student sample (*N* = 829; *N* = 277 for correlations with BFI peer-reports). Convergent correlations are printed in boldface. For the student sample, correlations of at least .07 in magnitude with NEO PI-R self-reports, and correlations of at least .12 in magnitude with BFI peer-reports, are statistically significant at the α = .05 level (two-tailed). For the community sample, correlations of at least .09 in magnitude are statistically significant at the α = .05 level (two-tailed).

other same-domain BFI facet scale (e.g., self-reported BFI Assertiveness with NEO PI-R Assertiveness, controlling for BFI Activity), thus eliminating any general domain variance shared by the two BFI facets. The partial correlations with NEO PI-R self-reports averaged .50 in the community sample and .58 in the student sample. The partial correlations with BFI peer-reports averaged .41 in the community sample and .34 in the student sample. All 40 partial correlations were positive and statistically significant (ps < .05). These findings provide further evidence that the BFI facet scales provide meaningful information beyond that captured by the five broad domains.

4.5. Matching the facet scales with their adjective correlates

Finally, we used a matching task to test whether the BFI facet scales could be reliably distinguished on the basis of their external correlates (cf. Costa & McCrae, 1995). The first author created two sets of 10 cards. Each card in one set presented the name and items for a BFI facet scale. Each card in the second set presented a list of the 10 trait-descriptive adjectives (from the set of 739 administered to the community sample) that correlated most strongly with a particular (but unspecified) facet scale. For example, the correlate card corresponding with the BFI Depression facet listed the adjectives *depressed*, *moody*, *sad*, *grumpy*, *troubled*, *angry*, *negative*, and *irritated*, versus *happy* and *joyful*.

Six judges who had not previously seen the facet scales' adjective correlates—one professor of personality psychology (the second author), four advanced students in a personality psychology graduate program, and one non-psychologist—were each presented with the facet cards, and with the correlate cards in random order. They were instructed to match each facet card with the card they thought contained that facet's strongest adjective correlates. All 6 judges correctly matched all 10 pairs of facet and correlate cards, providing further evidence for the discriminant validity of the facet scales.

4.6. Effects of within-person centering

Did centering the BFI item responses, to control for individual differences in acquiescent responding, affect the facets' measurement properties? Most results were only trivially affected. Convergent correlations between the facet scales when scored from raw responses and when scored from centered responses were very high: they averaged .99 across the two samples, with a minimum of .97. Moreover, scoring the facet scales from raw or from centered responses resulted in very similar patterns of reliability coefficients and correlations with NEO PI-R self-reports and BFI peer-reports. However, the centering procedure did substantially affect correlations between scores on the facet scales and scores on the BFI acquiescence index. When scored from raw responses, these correlations averaged .14 (maximum = .35) across the two samples; when scored from centered responses, they averaged only .09 (maximum = .20).

5. Discussion

The present research developed 10 facet scales for the Big Five Inventory. Despite their brevity, these scales demonstrated moderate to strong levels of reliability. They converged well with both NEO PI-R self-reports and BFI peer-reports. They also showed substantial discriminant validity.

5.1. Controlling for individual differences in acquiescence

Prior to developing the BFI facet scales, we controlled for individual differences in acquiescent responding through within-person centering (around each participant's score on an acquiescence index); see Appendix B. This approach proved highly effective at minimizing correlations between individual differences in acquiescence and scores on the facet scales. We therefore encourage researchers to center their data around the BFI acquiescence index (Soto et al., 2008) before scoring the facet scales.

5.2. Convergence with other Big Five facet models

The 10 BFI facet scales were initially developed to converge with facets assessed by the widely used NEO PI-R. However, the particular facets that emerged from our analyses also correspond well with lower-level traits identified by other hierarchical Big Five models. For example, within the Extraversion domain, our Assertiveness and Activity facets are quite similar to (a) the Assertiveness and Activity-Adventurousness facets identified by Saucier and Ostendorf (1999) in analyses of English and German trait adjectives, (b) the I+/II− and I+/III+ circumplex regions defined by Hofstee et al. (1992) in analyses of English trait adjectives, and (c) the Assertiveness and Enthusiasm constructs identified by DeYoung et al. (2007) in analyses of existing Big Five questionnaire scales. These correspondences suggest that research conducted using the BFI facet scales should be easy to synthesize with that conducted using other Big Five facet models. They also suggest that personality researchers are progressing toward consensus about the most important lower-level traits that can be distinguished within each Big Five domain.

6. Conclusion

We are confident that the BFI facet scales will prove useful to researchers who wish to investigate personality at a level of abstraction more specific than that captured by the broad Big Five domains, especially those for whom the advantage of administering a brief measure rather than a lengthy one outweighs the disadvantage of slightly lower reliability coefficients. The scales encourage researchers to design new studies that use the BFI as a brief hierarchical measure of the Big Five. They also create opportunities for archival research using the many existing BFI datasets. Both types of research will help us progress toward a comprehensive understanding of personality structure and process.

Appendix A

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

The Big Five Inventory

Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly
1	2	3	4	5

I see myself as someone who...

__1. is talkative
__2. tends to find fault with others
__3. does a thorough job
__4. is depressed, blue
__5. is original, comes up with new ideas
__6. is reserved
__7. is helpful and unselfish with others
__8. can be somewhat careless
__9. is relaxed, handles stress well
__10. is curious about many different things
__11. is full of energy
__12. starts quarrels with others
__13. is a reliable worker
__14. can be tense
__15. is ingenious, a deep thinker
__16. generates a lot of enthusiasm
__17. has a forgiving nature
__18. tends to be disorganized
__19. worries a lot
__20. has an active imagination
__21. tends to be quiet
__22. is generally trusting

__23. tends to be lazy
__24. is emotionally stable, not easily upset
__25. is inventive
__26. has an assertive personality
__27. can be cold and aloof
__28. perseveres until the task is finished
__29. can be moody
__30. values artistic, aesthetic experiences
__31. is sometimes shy, inhibited
__32. is considerate and kind to almost everyone
__33. does things efficiently
__34. remains calm in tense situations
__35. prefers work that is routine
__36. is outgoing, sociable
__37. is sometimes rude to others
__38. makes plans and follows through with them
__39. gets nervous easily
__40. likes to reflect, play with ideas
__41. has few artistic interests
__42. likes to cooperate with others
__43. is easily distracted
__44. is sophisticated in art, music, or literature

Please check: Did you write a number in front of each statement?

Note. Copyright © 1991 by Oliver P. John. Reprinted with permission.

Appendix B. The BFI acquiescence index and facet scales

B.1. Scoring the BFI acquiescence index and centering the BFI items

Item numbers for 16 pairs of BFI items with opposite implications for personality are 1 and 21, 6 and 16, 31 and 36, 2 and 17, 7 and 12, 27 and 42, 32 and 37, 3 and 43, 8 and 13, 18 and 33, 23 and 28, 9 and 19, 24 and 29, 34 and 39, 5 and 35, and 30 and 41 (Soto et al., 2008). The BFI acquiescence index is computed as the mean response to this set of 32 items. To center a participant's BFI item responses around the acquiescence index, subtract their score on the index from each of their 44 item responses. To reverse-key a centered item response, multiply it by −1. SPSS syntax for centering BFI responses is available from us.

B.2. Scoring the BFI facet scales

Item numbers for the 10 BFI facet scales are presented below. Reverse-keyed items are denoted by "R." We recommend that researchers center each participant's set of 44 item responses before scoring the facet scales, in order to control for individual differences in acquiescent responding. SPSS syntax for scoring the facet scales is available from us.

Assertiveness (Extraversion): 1, 6R, 21R, 26, 31R
Activity (Extraversion): 11, 16
Altruism (Agreeableness): 7, 22, 27R, 32
Compliance (Agreeableness): 2R, 12R, 17
Order (Conscientiousness): 8R, 18R

Self-Discipline (Conscientiousness): 13, 23R, 28, 38, 43R
Anxiety (Neuroticism): 9R, 19, 34R, 39
Depression (Neuroticism): 4, 29
Aesthetics (Openness): 30, 41R, 44
Ideas (Openness): 10, 15, 25, 35R, 40.

References

Benet-Martínez, V., & John, O. P. (1998). Los Cinco Grandes across cultures and ethnic groups: Multitrait-multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology, 75*, 729–750.

Costa, P. T., Jr., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual.* Odessa, FL: Psychological Assessment Resources.

Costa, P. T., Jr., & McCrae, R. R. (1995). Domains and facets: Hierarchical personality assessment using the Revised NEO Personality Inventory. *Journal of Personality Assessment, 64*, 21–50.

Cronbach, L. J., & Gleser, G. C. (1957). *Psychological tests and personnel decisions.* Urbana, IL: University of Illinois Press.

DeYoung, C. G., Quilty, L. C., & Peterson, J. B. (2007). Between domains and facets: 10 aspects of the Big Five. *Journal of Personality and Social Psychology, 93*, 880–896.

Goldberg, L. R. (1990). An alternative "description of personality": The Big-Five factor structure. *Journal of Personality and Social Psychology, 59*, 1216–1229.

Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Deary, F. De Fruyt, & F. Ostendorf (Eds.). *Personality psychology in Europe* (Vol. 7, pp. 7–28). Tilburg, the Netherlands: Tilburg University Press.

Hofstee, W. K. B., de Raad, B., & Goldberg, L. R. (1992). Integration of the Big Five and circumplex approaches to trait structure. *Journal of Personality and Social Psychology, 63*, 146–163.

John, O. P., Donahue, E. M., & Kentle, R. L. (1991). The Big Five Inventory—Versions 4a and 54. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.

John, O. P., Hampson, S. E., & Goldberg, L. R. (1991). The basic level of personality-trait hierarchies: Studies of trait use and accessibility in different contexts. *Journal of Personality and Social Psychology, 60*, 348–361.

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 114–158). New York, NY: Guilford.

McCrae, R. R., Herbst, J. H., & Costa, P. T. Jr., (2001). Effects of acquiescence on personality factors structures. In R. Riemann, F. M. Spinath, & F. Ostendorf (Eds.), *Personality and temperament: Genetics, evolution, and structure* (pp. 217–231). Berlin, Germany: Pabst Science Publishers.

Roberts, B. W., Chernyshenko, O. S., Stark, S., & Goldberg, L. R. (2005). The structure of Conscientiousness: An empirical investigation based on seven major personality questionnaires. *Personnel Psychology, 58*, 103–139.

Saucier, G. (1994). Replicable item-cluster subcomponents in the NEO Five-Factor Inventory. *Journal of Personality Assessment, 70*, 263–276.

Saucier, G., & Ostendorf, F. (1999). Hierarchical subcomponents of the Big Five personality factors: A cross-language replication. *Journal of Personality and Social Psychology, 76*, 613–627.

Soto, C. J., John, O. P., Gosling, S. D., & Potter, J. (2008). The developmental psychometrics of Big Five self-reports: Acquiescence, factor structure, coherence, and differentiation from ages 10 to 20. *Journal of Personality and Social Psychology, 94*, 718–737.

Arjun Chaudhuri & Morris B. Holbrook

The Chain of Effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty

The authors examine two aspects of brand loyalty, purchase loyalty and attitudinal loyalty, as linking variables in the chain of effects from brand trust and brand affect to brand performance (market share and relative price). The model includes product-level, category-related controls (hedonic value and utilitarian value) and brand-level controls (brand differentiation and share of voice). The authors compile an aggregate data set for 107 brands from three separate surveys of consumers and brand managers. The results indicate that when the product- and brand-level variables are controlled for, brand trust and brand affect combine to determine purchase loyalty and attitudinal loyalty. Purchase loyalty, in turn, leads to greater market share, and attitudinal loyalty leads to a higher relative price for the brand. The authors discuss the managerial implications of these results.

Price premiums and market share have been closely associated with the increasingly salient concept of brand equity (Aaker 1996; Bello and Holbrook 1995; Holbrook 1992; Park and Srinivasan 1994; Winters 1991). These outcomes, which in turn drive brand profitability, depend on various aspects of brand loyalty. Specifically, brand-loyal consumers may be willing to pay more for a brand because they perceive some unique value in the brand that no alternative can provide (Jacoby and Chestnut 1978; Pessemier 1959; Reichheld 1996). This uniqueness may derive from greater trust in the reliability of a brand or from more favorable affect when customers use the brand. Similarly, brand loyalty leads to greater market share when the same brand is repeatedly purchased by loyal consumers, irrespective of situational constraints (Assael 1998). Furthermore, because of various affective factors, loyal consumers may use more of the brand—that is, may like using the brand or identify with its image (Upshaw 1995). In summary, superior brand performance outcomes such as greater market share and a premium price (relative to the leading competitor) may result from greater customer loyalty. This loyalty, in turn, may be determined by trust in the brand and by feelings or affect elicited by the brand.

The importance of brand loyalty has been recognized in the marketing literature for at least three decades (Howard and Sheth 1969, p. 232). In this connection, Aaker (1991) has discussed the role of loyalty in the brand equity process

and has specifically noted that brand loyalty leads to certain marketing advantages such as reduced marketing costs, more new customers, and greater trade leverage. In addition, Dick and Basu (1994) suggest other loyalty-related marketing advantages, such as favorable word of mouth and greater resistance among loyal consumers to competitive strategies. Yet despite the clear managerial relevance of brand loyalty, conceptual and empirical gaps remain. Specifically, with some exceptions (Oliver 1999; Zeithaml, Berry, and Parasuraman 1996), our conceptualizations of brand loyalty emphasize only the behavioral dimension of that concept, thereby neglecting its attitudinal components and its relationship with other variables at both the consumer and market levels. Therefore,

> Even though many marketers have emphasized the need to define brand loyalty beyond operational measures (mostly sequence of purchases), the nomology of brand loyalty in behavioral theory (i.e., its relationships with other concepts in the expanding vocabulary of marketing research) requires stronger integration. (Dick and Basu 1994, p. 99)

The present study explores the relationship among brand trust, brand affect, and brand performance outcomes (market share and relative price) with an emphasis on understanding the linking role played by brand loyalty. Toward this end, we further examine the effects of two general product-level, category-related control variables (hedonic and utilitarian value) on brand trust and brand affect and the effect of two brand-level control variables (brand differentiation and share of voice) on market share and relative price. If these relationships exist, measures of brand trust and brand affect can be included (along with existing measures of brand loyalty and brand equity) in our assortment of brand-valuation techniques (Keller 1993). Moreover, marketing managers can justify expenditures on promotions to create such long-

Arjun Chaudhuri is Associate Professor of Marketing, School of Business, Fairfield University. Morris B. Holbrook is W.T. Dillard Professor of Marketing, Graduate School of Business, Columbia University. The authors thank David A. Kenny, Sharmila Chatterjee, and the three anonymous *JM* reviewers for their help. The authors also gratefully acknowledge support by grants from Fairfield University's Research Committee, Fairfield's School of Business, and the Columbia Business School's Faculty Research Fund.

term consumer effects as brand trust and brand affect. Furthermore, our understanding of the process of brand loyalty and brand performance will benefit from an empirically supported explanation for these crucial marketing concepts.

We use brands—that is, specific branded versions of particular product classes—as the units of analysis in this study. This enables us to bring consumer-level notions of trust and affect toward brands into the same plane as market-level measures of brand performance such as market share and relative price, which are at the level of the brand. We do this by averaging across consumer responses and thus arriving at single brand-specific scores for the notions of brand trust, brand affect, and brand loyalty. We then merge these scores with data on market share and relative price to create a single data set at the level of brands as the units of analysis. We do not mean to suggest in any way that brands themselves are capable of affect or trust, but rather that brands have the response potential to elicit affect and trust from consumers. The brand scores thus represent the average response potential of the brand in terms of the trust, affect, or loyalty that it is capable of eliciting from consumers. These brand scores also include data on the product-category characteristics of the brand. As explained in the "Methods" section, these product-level, category-related scores control for the effect of the product category on the theoretical relationships of interest. This helps us extricate the relationships that are at the level of the brand alone.

In what follows, we begin by defining the constructs of interest and developing a model of the relationships among these constructs. To develop our hypotheses, we draw from the new and emerging concepts of relationship marketing, brand equity, and double jeopardy. Here, we propose that instead of representing separate, competing, or antithetical orientations, these conceptualizations can be reconciled and integrated as crucial aspects in an overall process of brand development and brand performance. In this direction, we present the methods, measures, and results of three surveys designed to test the hypotheses of interest. We discuss the results in terms of their managerial relevance and implications for further research.

Model

Background

Oliver (1999, p. 34) defines brand loyalty as

> a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, *despite* situational influences and marketing efforts having the potential to cause switching behavior.

This definition emphasizes the two different aspects of brand loyalty that have been described in previous work on the concept—behavioral and attitudinal (Aaker 1991; Assael 1998; Day 1969; Jacoby and Chestnut 1978; Jacoby and Kyner 1973; Oliver 1999; Tucker 1964). Behavioral, or purchase, loyalty consists of repeated purchases of the brand, whereas attitudinal brand loyalty includes a degree of dispositional commitment in terms of some unique value associated with the brand. We propose in Figure 1 that brands high in consumer trust and affect are linked through both attitudi-

nal and purchase loyalty (also among consumers) to greater market share and premium prices in the marketplace.[1]

Consider, for example, a diner who patronizes only one restaurant. One explanation for this behavior could involve a lack of knowledge of other restaurants and thus habituation to a single place of patronage. Another possible explanation is that the consumer has visited other restaurants; has found that restaurants differ in quality, convenience, service, and so forth; has discovered a particular restaurant that can be trusted and relied on in terms of these criteria; and now chooses to frequent this restaurant rather than other, less trustworthy places. Another scenario is that the customer might have developed strong emotional ties with the restaurant or with its staff. This brand affect leads to greater commitment in the form of attitudinal loyalty and a willingness not only to revisit the restaurant but also to pay a premium price for the pleasure involved. Moreover, the loyal consumer may even increase his or her usual frequency of eating out every week (instead of cooking at home), thus providing the favorite restaurant with increases in sales. The consumer may now also find other uses for the restaurant, such as ordering take-out food when in a hurry, encouraging group visits with friends, asking the staff to cater a party, and so on. All this will generate additional sales and consequent profitable brand outcomes for the restaurant.

In the present study, brand affect is defined as a brand's potential to elicit a positive emotional response in the average consumer as a result of its use. In consonance with the definition of trust provided by Moorman, Zaltman, and Deshpande (1992, p. 315) and Morgan and Hunt (1994, p. 23), we define brand trust as the willingness of the average consumer to rely on the ability of the brand to perform its stated function. Moorman, Zaltman, and Deshpande (1992) and Doney and Cannon (1997) both also stress that the notion of trust is only relevant in situations of uncertainty (e.g., when greater versus lesser differences among brands occur). Specifically, trust reduces the uncertainty in an environment in which consumers feel especially vulnerable because they know they can rely on the trusted brand.

Doney and Cannon (1997, p. 37) suggest that the construct of trust involves a "calculative process" based on the ability of an object or party (e.g., a brand) to continue to meet its obligations and on an estimation of the costs versus rewards of staying in the relationship. At the same time, Doney and Cannon point out that trust involves an inference regarding the benevolence of the firm to act in the best interests of the customer based on shared goals and values. Thus, beliefs about reliability, safety, and honesty are all important facets of trust that people incorporate in their operationalization of trust, as we discuss subsequently. Overall, we view brand trust as involving a process that is well thought out and carefully considered, whereas the development of brand affect is more spontaneous, more immediate, and less deliberately reasoned in nature.

---

[1]This framework draws on assumptions made at the level of individual consumers, whereas the data in the study are compiled at the level of aggregated responses. This is not uncommon. As Fox, Reddy, and Rao (1997, pp. 253–54) point out, "The conceptual basis for most observed aggregate (macro) phenomena is at the disaggregate, individual (micro) level." See also the other references cited by these authors in defense of this treatment.

FIGURE 1
A Model of Brand Loyalty and Brand Performance
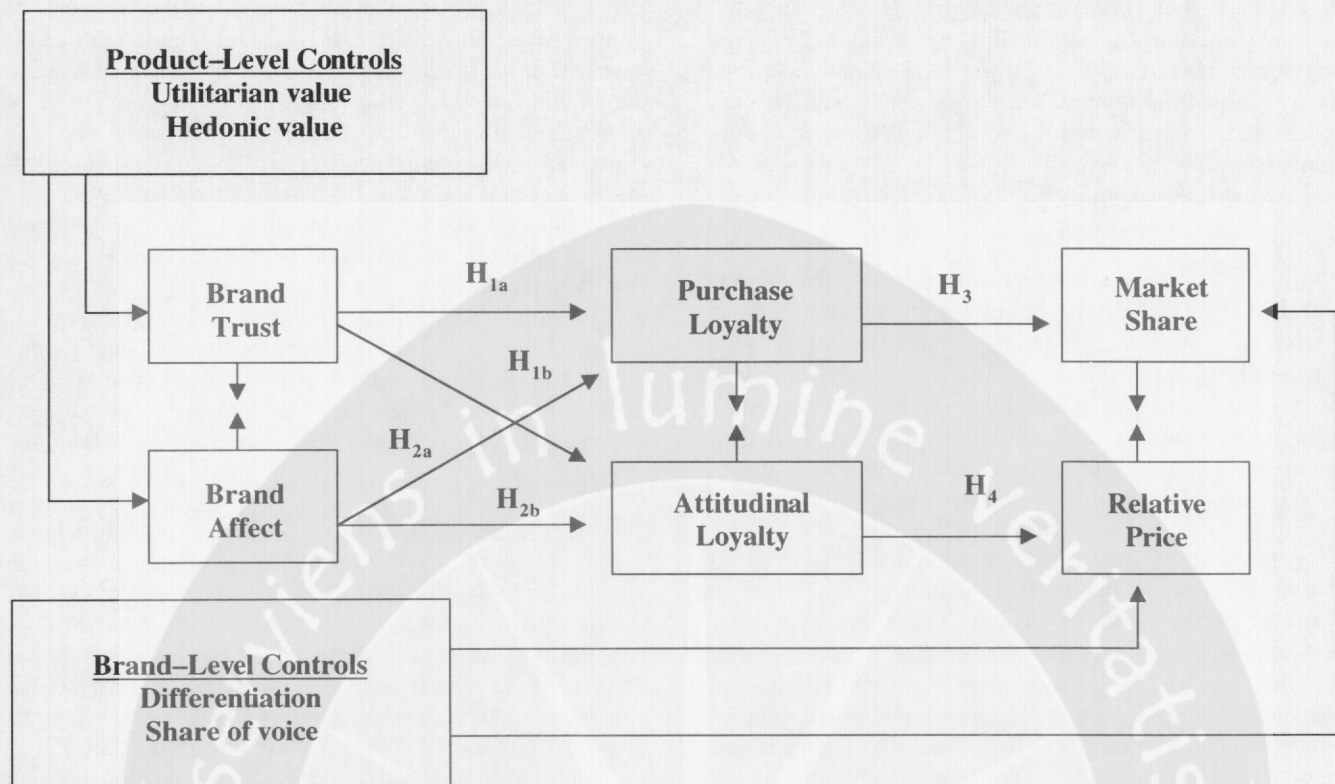
The model in Figure 1 also includes certain product-level, category-related control variables (hedonic and utilitarian value) and certain brand-level control variables that are discussed fully in a later section (see "Control Variables"). Researchers have suggested that the product-category characteristics will influence brand-level effects (such as brand trust, brand affect, brand loyalty, or brand performance). Categorization and schema theory (Lurigio and Carroll 1985; Sujan 1985) appears to bear this out. These theories both suggest that product-category cognitions are likely to precede thoughts and feelings about brands within the product category. According to categorization theory (Sujan 1985), people form categories of the stimuli around them, and new stimuli (e.g., brands) are understood according to how they fit into these existing categories. Thus, prior knowledge of the product category determines the type of evaluation that a brand stimulus will evoke. Similarly, schema theory (Lurigio and Carroll 1985) suggests that people form abstract schemata from prior knowledge and experience and then use these schemata (say, product categories) to evaluate new information (say, on brands). Hedonic and utilitarian values can thus be conceived of as abstractly representing two types of knowledge gathered from prior experience with the product category for use in evaluating individual brands within that product category.

Hypotheses

As mentioned previously, it has been suggested that brand loyalty includes some degree of predispositional commitment toward a brand (Aaker 1991; Assael 1998; Beatty and Kahle 1988; Jacoby and Chestnut 1978). Therefore, our notion of brand loyalty in this study includes both purchase loyalty and attitudinal loyalty (Figure 1). Purchase loyalty is defined as the willingness of the average consumer to repurchase the brand. Attitudinal loyalty is the level of commitment of the average consumer toward the brand.

We propose that brand trust and brand affect are each related to both purchase and attitudinal loyalty. This proposition stems from the emerging theory of brand commitment (similar to brand loyalty) in relationship marketing (Fournier 1998; Gundlach, Achrol, and Mentzer 1995; Moorman, Zaltman, and Deshpande 1992; Morgan and Hunt 1994; Webster 1992). Brand trust and brand affect appear to serve as key determinants of brand loyalty or brand commitment, consistent with the concept of one-to-one marketing relationships.

Brand trust leads to brand loyalty or commitment because trust creates exchange relationships that are highly valued (Morgan and Hunt 1994). Indeed, commitment has been defined as "an enduring desire to maintain a valued relationship" (Moorman, Zaltman, and Deshpande 1992, p. 316). Thus, loyalty or commitment underlies the ongoing process of continuing and maintaining a valued and important relationship that has been created by trust. In other words, trust and commitment should be associated, because

trust is important in relational exchanges and commitment is also reserved for such valued relationships. In this connection, Moorman, Zaltman, and Deshpande (1992) and Morgan and Hunt (1994) find that trust leads to commitment in business-to-business relational exchanges. Thus, we suggest that brand trust will contribute to both purchase loyalty and attitudinal loyalty. Trusted brands should be purchased more often and should evoke a higher degree of attitudinal commitment.

H_1: Brand trust is positively related to both (a) purchase loyalty and (b) attitudinal loyalty.

In the context of maintaining brand relationships, the emotional determinants of brand loyalty or commitment need to be considered separately. Gundlach, Achrol, and Mentzer (1995) suggest that commitment is associated with positive affect and that though this may prevent the exploration of other alternatives in the short run, steady customer benefits are likely to accrue from such affective bonding in the long run. In particular, these authors view such a relationship or "affective attachment" (p. 79) to be most beneficial in uncertain environments. Our expectation of a positive relationship between brand affect and brand commitment or loyalty is further predicated on the ties between positive emotional feelings and close interpersonal relationships (Berscheid 1983). In this connection, Berscheid (1983) isolates two critical aspects of a close emotional relationship—namely, the magnitude of the affect (intensity) and its hedonic sign (positive/negative). We suggest that the close relationship of a brand with its consumers (i.e., commitment) also tends to reflect the level of positive affect generated by that brand. Strong and positive affective responses will be associated with high levels of brand commitment. Similarly, Dick and Basu (1994) have proposed that brand loyalty should be greater under conditions of more positive emotional mood or affect. Thus, brands that make consumers "happy" or "joyful" or "affectionate" should prompt greater purchase and attitudinal loyalty. People may not always purchase the brands they "love" for reasons of high price and so forth. In general, however, brands that are higher in brand affect should be purchased more often and should encourage greater attitudinal commitment. Therefore,

H_2: Brand affect is positively related to both (a) purchase loyalty and (b) attitudinal loyalty.

Figure 1 further suggests that the variables of purchase loyalty and attitudinal loyalty contribute to brand outcomes such as market share and relative price. Here, as elsewhere, market share is defined as a brand's sales taken as a percentage of sales for all brands in the product category. We expect that brands higher in purchase loyalty will also be higher in market share because of higher levels of repeat purchases by the brand's users. This expectation is predicated on the theory of double jeopardy (McPhee 1963), which has been advanced as one of the few "lawlike" generalizations in marketing (Ehrenberg, Goodhardt, and Barwise 1990, p. 90) and is supported by a considerable body of evidence (see also Donthu 1994; Fader and Schmittlein 1993).

The double-jeopardy theory specifies that brands with smaller market share are at a disadvantage compared with brands with larger market share in two ways: First, they have fewer buyers; second, they are purchased less frequently by these few buyers. In contrast, more popular brands with larger market shares have more buyers and are purchased more often by these buyers. In short, relevant to our present concerns, brands with greater purchasing loyalty should and do exhibit greater market shares, with a correlation of approximately r = .60 for frequently purchased products (Ehrenberg, Goodhardt, and Barwise 1990, p. 83). Accordingly, we can expect a positive relationship between a brand's market share and the purchase loyalty of its buyers. The caveat must be made that increasing purchase loyalty results in increased market share only if the size of the targeted segment is large enough and if other segments (e.g., present heavy users of the brand) are not alienated by any changes in marketing strategy. Also, this discussion may be more appropriate for national or international brands than for regional or local brands. These caveats notwithstanding,

H_3: Market share increases as purchase loyalty increases.

Relative price is defined as the price of a brand relative to that of its leading competitor. We use relative price as an aspect of brand performance with the caveat that in evaluating this performance, price should be considered in conjunction with the costs of maintaining the brand (which, in the present case, we assume to be roughly equal among competitors and/or held constant by partialing out share of voice as a control variable, as described subsequently).

Consumers' price perceptions of brands have been found to be unrelated to brand loyalty (Yoo, Donthu, and Lee 2000). However, when actual rather than perceived relative price measures are used, we propose that brands higher in attitudinal loyalty will command higher relative prices. This proposition draws on the theory of brand equity, which has been described by the Marketing Science Institute as "the set of associations and behavior on the part of a brand's customers, channel members, and parent corporation that permits the brand to earn greater volume or greater margins than it could without the brand name" (Leuthesser 1988, p. 31). Winters (1991) and Aaker (1996) have reviewed different ways of assessing brand equity, and both authors reach the conclusion that the price of a brand in the marketplace is a critical aspect of its brand equity. Furthermore, Holbrook (1992; Bello and Holbrook 1995) defines brand equity operationally as the price premium associated with a given brand name across a range of product categories. Moreover, to cite Keller (1993, p. 9), "Consumers with a strong, favorable brand attitude should be more willing to pay premium prices for the brand." In other words, greater attitudinal loyalty should lead to greater willingness to sacrifice by paying a premium price for a valued brand. Therefore, on the basis of the literature, we expect a significant and positive relationship between a brand's attitudinal loyalty and its relative price in the marketplace.

H_4: Relative price increases as attitudinal loyalty increases.

Control Variables

Although they are not of primary theoretical interest to our study, we include in our model control variables that have been found in prior research to affect brand outcomes.

Beyond whatever substantive interest these control variables possess in their own right, their major purpose here is to help remove statistical noise due to omitted-variables bias in a case in which we can capture effects that have been shown elsewhere to make a difference.

Brand-level control variables. Smith and Park (1992) find that the degree of brand differentiation is significantly related to market share. With some exceptions, the brand's share of voice has also tended to account for market share (Jones 1990). Furthermore, brand differentiation may justify a higher relative price. Also, share of voice may reflect differences in advertising expenditures and therefore may also tend to affect relative price. Thus, controlling for these variables statistically by including them with the other independent variables of interest provides for a stronger test of our hypotheses regarding the impact of brand loyalty on the relevant brand performance outcomes (while brand differentiation and share of voice are held constant).

Product-level, category-related control variables. In presenting an alternative to the usual decision-oriented perspective on consumer behavior, Holbrook and Hirschman (1982) advocate research on the experiential aspects of human consumption in which emotions and feelings of enjoyment or pleasure are key outcomes. They also propose two different types of consumption: utilitarian products with tangible or objective features and hedonic products with nontangible or subjective features that produce a pleasurable response from consumers. More recently, other researchers have attempted to measure the hedonic versus utilitarian aspects of consumption (Babin, Darden, and Griffin 1994; Batra and Ahtola 1991; Mano and Oliver 1993; Spangenberg, Voss, and Crowley 1997). Viewed broadly, these two aspects of hedonic and utilitarian value correspond to the archetypal constructs of emotion and reason. In this connection, it has been found that affect and reason meaningfully describe a variety of product categories (Buck et al. 1995). In a similar spirit, we adopt the hedonic and utilitarian value of products as basic and fundamental descriptors of product-category characteristics. We define hedonic value as the pleasure potential of a product class and utilitarian value as the ability to perform functions in the everyday life of a consumer. Note that hedonic value and utilitarian value are not considered in this study to represent two ends of a single continuum. Instead, we view them as two potentially orthogonal types of value, and we suggest that products are best conceived as offering some degree of both.[2]

Hedonic and utilitarian value reflect two contrasting paradigms in consumer behavior theory. Specifically, the information-processing paradigm (e.g., Bettman 1979) regards consumer behavior as largely objective and rational and as oriented toward problem solving. Thus, brand trust (which involves a calculative process, as described previously)

toward a particular favored brand may be greater when the utilitarian value in the product category is high in terms of tangible product attributes, such as quality or convenience. In contrast, in the experiential paradigm, consumer behavior pursues the more subjective, emotional, and symbolic aspects of consumption (e.g., Hirschman and Holbrook 1982; Holbrook and Hirschman 1982). More hedonic products have nontangible, symbolic benefits and are likely to encourage a greater potential for positive brand affect. When the emotional elements of pleasure are high and positive for a product category, consumers should experience more favorable affect toward the brand consumed.

Allowing for these kinds of relationships helps control for that part of the trusting or affective response to a brand that depends on the product category itself rather than the brand alone. Some of the benefits of a brand may indeed accrue from the product category it belongs to, and accordingly we control for both hedonic and utilitarian aspects of products, which may account for certain tangible and nontangible aspects of brands. This helps ensure that whatever brand-related effects appear in this study are due to the brand and not to its product-category characteristics.

Method

The Unit of Analysis

This study used brands, rather than individuals, as the units of observation. This approach, which aggregates across consumers to produce scores for (in this case) brands or (elsewhere) advertisements (Holbrook and Batra 1987; Olney, Holbrook, and Batra 1991; Smith and Park 1992; Stewart and Furse 1986), avoids the pitfalls of experimental manipulations that examine only two or a few cases across people (thereby giving rise to alternative hypotheses) while carrying greater significance for practitioners (who must consider the effects of their decisions on individual brands).

Independent Measures

The aggregate-level, brand-specific data for the study were compiled from three separate surveys conducted in three phases. Collecting these responses independently for almost every stage in the model ensures that linkages between any two variables are not artifacts of consistency bias due to asking the same respondents to provide both sets of answers in a single questionnaire. The use of three separate samples guards against this kind of consistency bias and thereby provides a more valid test of the key relationships (Holbrook and Batra 1987; Olney, Holbrook, and Batra 1991; Smith and Park 1992).

In Phase 1, the data on utilitarian and hedonic value were collected in the form of product-level data (i.e., ratings of product categories that pertain to the particular brands surveyed later in Phases 2 and 3). Note that no brand-specific data were collected in Phase 1. In Phase 2, measures of brand performance (market share, relative price) were obtained from a survey of product managers. In Phase 3, the data on brand trust, brand affect, and brand loyalty were gathered by a survey of consumers who were users of the brands in the study.

Phases 2 and 3 were completed during a three-month period in the year immediately following Phase 1. The aggregate-level data generated during each phase were then

---

[2]As one of the reviewers of this article points out, the distinction between hedonic and utilitarian value may depend on whether the relevant satisfaction is immediate (utilitarian value) or in the future (hedonic value). Pharmaceuticals, for example, may be considered utilitarian in their initial use but result in relief from pain, which may be viewed as a gratifying and pleasurable end result. Here and elsewhere, a given product category potentially contributes to both types of customer value.

The Role of Brand Loyalty / 85

merged to form a single brand-specific data set for the study. Details regarding the procedures and measures used in the three phases are described in the remainder of this section.

Phase 1

Data collection. A sample of 146 products was randomly selected from the Standard Industrial Classification (SIC) manual (1987). Four-digit SIC codes were selected at random from the manual's index of manufacturing and non-manufacturing industries. Next, a specific subdivision was randomly selected from within each industry, and its good or service was taken as a unit of observation. Industrial products were not included in the selection, so that commonly known brands for consumer products could be surveyed in the later phases of data collection. As discussed subsequently, the final data set consisted of 107 brands in 41 of these product categories.

A field survey of 30 actual users was conducted for each of the 146 products, requiring an overall sample of 30 × 146 = 4380 respondents (mean age = 32.2 years). Respondents were first asked if they were users of the good or service and, if thus qualified, were then invited to participate. If they agreed, they were shown the survey and asked to complete it. Reasons for nonparticipation were mostly either nonusage of the product or lack of time to complete the survey. Overall, 11,139 total approaches were made in the Northeastern United States, mostly in Massachusetts, Connecticut, New York, and New Jersey. Insofar as possible, surveys were conducted at places where the product was consumed or purchased. Thus, for example, the surveys for hair tonics were conducted at a hairstyling salon, potato chips at a grocery store, electric fans at the appliance section of a department store, and so forth.

The surveys consisted of a self-administered paper-and-pencil questionnaire that contained the scales for the measures relevant to the present study and for some other measures not relevant to this study. The surveys began with an introductory statement that asked respondents to administer their own responses, assured them of confidentiality, and so forth. This was followed by the measures and a request for demographic information. The surveys were distributed and immediately collected by 49 college students enrolled in two sections of an upper-level marketing course at a private university in the Northeastern United States. The students volunteered for the task (in place of completing alternative class assignments) and received course credit on successful collection of 30 consumer interviews for each of three product categories (i.e., 90 completed responses per student). Their work was carefully supervised, and they were well rehearsed in the procedures to be followed in the distribution and collection of the questionnaires.

The individual-level responses of consumers were combined to produce aggregate-level scores by averaging across the 30 respondents in each of the 146 product categories. An aggregate data set for a representative sample of 146 randomly selected products was thus compiled.

Measures of product-level control variables: hedonic and utilitarian value. Hedonic and utilitarian value were each measured on indices composed of two items accompanied by seven-point scales of agreement (1 = disagree, 7 = agree). For hedonic value, the two items were "I love this product" and

"I feel good when I use this product." For utilitarian value, the two items were "I rely on this product" and "This product is a necessity for me." Coefficient alphas for the two-item indices were .74 (hedonic) and .95 (utilitarian), respectively.

Phase 2

Data collection. Of the original 146 products in Phase 1, 50 were included in Phase 2 by virtue of (1) having easily identifiable branded alternatives and (2) representing commonly used offerings for which it would be feasible to locate 30 users of a brand in Phase 3. Questionnaires were mailed to product managers of 372 brands in these 50 product categories.[3] Only one manager was used for each brand. Three weeks later, a second mailing was sent out. A personalized cover letter stating the academic purpose of the study and promising absolute confidentiality was enclosed. Follow-up personal telephone calls were made to encourage participants to complete the survey. Through this approach, 160 completed surveys were obtained, for a response rate of 43%, which was judged quite satisfactory, given the sensitivity of the data requested.

Despite this healthy response rate, it was important to rule out nonresponse bias. In this connection, 42 of the original 50 product categories were represented in the returned surveys. The eight products that were not represented included canned soft drinks, shampoos, synthetic sweeteners, ballpoint pens, women's underwear, cigarettes, flashlights, and razor blades. Our best efforts to contact these managers and to persuade them to complete the surveys were not successful. In general, we were told that the information was confidential and not publicly available. The eight product categories appear to group together as frequently purchased and widely distributed consumer goods. Therefore, their absence was likely to be compensated by the large number of similar products that remained in the data set (e.g., bottled iced tea, hair tonic, candy, coffee, hosiery, laundry soap, chewing gum, suntan lotion, cereal, bacon, beer, margarine, ice cream). A full list of product categories in the final data set appears in Table 1. In general, this table reveals a wide representation of brands drawn from a variety of product categories.

Care was also taken that the sample was not biased toward any one viewpoint or opinion. For example, bias could result from managers with poor outcome measures for their brands not responding to the survey. However, examination of sample statistics on brand outcomes shows that the sample contains a substantial representation of brands with both low and high scores.

Finally, the sample was split into early and late respondents (Armstrong and Overton 1977). The two were compared in terms of the key brand performance outcomes, market share and relative price. This comparison showed no difference in means or variances between the early and late

---

[3]These brands were derived from an extensive search through both secondary information sources and personal observation at points of purchase for each of the 50 relevant product categories. Examination of the data provided by the product managers in the final data set reveals that 79% of the brands were nationally distributed in 50 states. The remainder of the brands were regionally or locally distributed brands. No dealer brands were used in the study.

TABLE 1
Products in the Study

Personal computers (3)	Macaroni (3)
Women's handbags (3)	Hotels (3)
Chewing gum (3)	Men's underwear (1)
Mattresses (3)	Potato chips (1)
Analgesics (3)	Hair tonic (1)
Cameras (3)	Margarine (2)
Ice cream (3)	Electric fans (3)
Cottage cheese (1)	Salad dressing (1)
Suntan lotion (3)	Microbrews (3)
Children's wear (3)	Laundry soap (3)
Cereal (3)	Room air conditioners (2)
Microwave ovens (3)	Vegetable cooking oil (2)
Perfume (3)	Golf clubs (3)
Bacon (3)	Kitchen utensils (3)
Barbecue grills (3)	Boys/men's slacks (1)
Gasoline (3)	Bottled iced tea (3)
Canned fruit (3)	Cooking ranges (3)
Beer (3)	Candy (3)
Trucks (3)	Coffee (3)
Hosiery (3)	Automotive tires (2)
Light bulbs (3)	

Notes: Numbers in parentheses indicate the number of brands for each product category in the final data set of 107 brands.

respondents, which further suggests that nonresponse bias in Phase 2 is unlikely to distort the findings of the present study.

Measures: market share, relative price, and brand-level control variables. All measures in Phase 2 were obtained from the questionnaire responses provided by the product managers. Specifically, these product managers were asked to define the served market of their brand and answer a series of questions on this brand while keeping its served market in mind. For example, market share was measured by asking respondents directly for the brand's market share within its served market. Relative price was constructed as the ratio of retail price per unit of the brand (numerator) to the retail price of the brand's leading competitor (denominator). The leading competitor was defined as the market share leader in the product category. If the brand itself was the market leader, the next strongest brand was taken as the leading competitor. It was deemed preferable to obtain market share and relative price information directly from the brand managers rather than to try to obtain these data through published secondary sources (e.g., *Market Share Reporter*). Such secondary sources do not report all the brands of interest to the study and report market shares from different years and different markets. Thus, obtaining reliable secondary data on these variables (especially relative price) proved to be impossible.

Furthermore, data on brand-level control variables were also collected from the brand managers. Share of voice was estimated as the ratio of a brand's annual advertising expenditures to those for the entire industry (all brands). Brand differentiation was operationalized as the sum of two questions, which asked the managers to give five-point ratings of (1) how different their brand was from all other brands in its category in terms of actual product attributes, defined as "those features of the brand which can be physically identified by touch, smell, sight, taste, etc.," and (2) how different their brand was in terms of

overall perceived quality, defined to include nontangible, psychological perceptions that consumers have about the brand in addition to its physical attributes. Coefficient alpha for these items was .75.

Phase 3

Data collection. Interviews to collect data on brand trust, brand affect, and brand loyalty were conducted by 50 students enrolled in a senior-level market research course at a private university in the Northeastern United States. Interviewers volunteered for the task (again, in place of alternative class assignments) and received course credit on successful completion of 30 consumer interviews for each of three brands in a single product category. One interviewer was assigned to each of the 50 product categories. Interviewers were trained on data collection using a mall-intercept technique. Their work was carefully supervised and checked for accuracy by random callbacks (to telephone numbers obtained in the interviews).

Overall, 47 interviewers collected data from 30 different respondents for each of three brands, and two interviewers obtained data for four brands (one interviewer was omitted because of errors), which resulted in a total of 149 brands in 49 product categories represented by 149 × 30 = 4470 respondents (mean age = 35.8 years). To obtain this sample, interviewers made a total of 13,386 approaches in Connecticut, Massachusetts, New Jersey, and New York. They conducted surveys mostly in shopping centers and malls. For some products, such as barbecue grills, this approach was not viable for producing actual users of the product. In these instances, interviewers found users in places where the product was purchased or consumed. For example, the barbecue grill interviewer went to a hardware store to obtain the requisite number of users per brand. Interviews were conducted around the middle of the semester and mostly during the midsemester break.

After qualification for product usage and willingness to participate, respondents were asked which brands of the product they used. They were then interviewed with reference to the first target brand mentioned. If respondents did not use any of the targeted brands from Phase 2, their responses were taken for the brand they did use, but these responses were not included in the final data set, as is discussed subsequently. In this manner, a field survey of 30 actual users was conducted for each of 149 brands in 49 product categories. The means across the 30 responses were calculated for each item on the survey, which resulted in a data set with 149 brands as the units of observation.

Measures: brand trust, brand affect, and brand loyalty. Brand trust was measured as a four-item index based on seven-point ratings of agreement (1 = very strongly disagree, 7 = very strongly agree) with the following four statements: "I trust this brand," "I rely on this brand," "This is an honest brand," and "This brand is safe." Coefficient alpha for this four-item index of brand trust was .81. Brand affect was measured by the sum of three similarly rated items: "I feel good when I use this brand," "This brand makes me happy," and "This brand gives me pleasure." Coefficient alpha for brand affect was .96. In general, brand loyalty was measured by agreement with four statements constructed to reflect either the purchase-related or attitudinal aspects of

The Role of Brand Loyalty / 87

brand commitment (Jacoby and Chestnut 1978). Specifically, purchase loyalty was measured by agreement with the following two statements: "I will buy this brand the next time I buy [product name]" and "I intend to keep purchasing this brand." Coefficient alpha for purchase loyalty was .90. Attitudinal loyalty was measured by two statements: "I am committed to this brand" and "I would be willing to pay a higher price for this brand over other brands." Coefficient alpha for attitudinal loyalty was .83.

Note that at least one of the measures for brand trust and brand affect corresponds closely to the measures cited previously for utilitarian and hedonic value. This correspondence was introduced intentionally to control for the variance due to the product category when effects due to the brand alone are examined. Thus, for example, we capture the variance due to affect toward the product category with the hedonic value item cited previously ("I feel good when I use this product"), and we separately estimate the variance due to affect toward the brand with the brand affect item ("I feel good when I use this brand"). As stated previously, the product-level, category-related variables of hedonic and utilitarian value act as control variables in the sense that they capture product-category effects that might otherwise be subsumed in the brand-level data. By relating the product-category variables to the brand-level variables of trust and affect, we can isolate the variance that is due to the brand alone from the variance that is due to the product category.

As a test of discriminant validity, Fornell and Larcker (1981) have suggested that the average variance extracted for each construct should be higher than the squared correlation between that construct and any other construct. To demonstrate this for the four constructs just described, we conducted a confirmatory factor analysis with LISREL 8.14 (Jöreskog and Sörbom 1996) using the aggregated data for the 149 brands in Phase 3. Fornell and Larcker's (1981) test of discriminant validity held for all four constructs considered separately; specifically, the largest squared correlation between any two of the constructs was .46, whereas the average variance extracted ranged from .67 to .88. Accordingly, we then summed the relevant items to form multi-item indices of brand trust, brand affect, purchase loyalty, and attitudinal loyalty.

Final Data Set

To construct the final data set, we merged the aggregated consumer-survey data set (Phase 3) based on the means of

30 responses for each of 149 brands with the data set from the managerial survey (Phase 2) for the corresponding brands in the 41 product categories covered by both sets of responses. Next, we entered the appropriate product-category data (Phase 1) on hedonic and utilitarian value for each brand in the data set. This resulted in a combined data set for 107 brands with complete observations on all variables except, in a few cases, one or more of the final brand performance outcomes. These brand performance variables were not always provided by the product managers. In Table 1, we provide a list of the 41 product categories in the final data set of 107 brands (with the number of brands in each category shown parenthetically). Confidentiality agreements with the product managers prevent us from divulging the specific brand names in the final data set.

In Table 2, we provide the full set of correlations among the constructs of interest in the study. Note that the two brand performance outcomes, market share and relative price, were essentially independent ($r = .03$, n.s.), with a vanishingly small shared variance ($r^2 = .0009$).

Results

Path analysis (LISREL 8.14) was used for testing the model and hypotheses shown in Figure 1. In this path analysis, the multiple indicators were summed together for each construct, and the resulting summated score was used to represent that construct in the simultaneous equation model.[4] Path analysis (LISREL 8.14) testing the proposed model (Figure 1) resulted in the following fit statistics: $\chi^2(18) = 20.32$, $p = .32$, root mean residual (RMR) = .036, goodness-of-fit index (GFI) = .96, adjusted goodness-of-fit index (AGFI) = .89, normed fit index (NFI) = .94, nonnormed fit index (NNFI) = .96, comparative fit index (CFI) = .99, incremental fit index (IFI) = .99. Fourteen structural paths and 13 correlations were estimated for the model containing the ten constructs in Figure 1.

Three of the paths in the proposed model (utilitarian → trust, hedonic → trust, and differentiation → market share) were not statistically significant ($p < .05$). These departures

---

[4]The path-analytic procedure used here is becoming common in studies in which a small sample size restricts the use of the full structural equation model. For a similar use of the technique, see Li and Calantone (1998) and the references cited by these authors in defense of this approach.

TABLE 2
Correlations Among Constructs

Constructs	1	2	3	4	5	6	7	8	9	10
1. Utilitarian value	1.00									
2. Hedonic value	.07	1.00								
3. Brand trust	.15	.06	1.00							
4. Brand affect	−.24	.30	.66	1.00						
5. Share of voice	−.17	−.07	.04	−.05	1.00					
6. Differentiation	−.13	.11	.04	.07	.06	1.00				
7. Purchase loyalty	.02	−.09	.63	.55	.03	−.03	1.00			
8. Attitude loyalty	−.02	.08	.52	.51	−.03	−.03	.64	1.00		
9. Market share	−.03	−.01	.19	.08	.35	.02	.22	.12	1.00	
10. Relative price	−.03	.14	.17	.05	.33	.31	.12	.22	.03	1.00

from the model refer to relationships involving control variables not represented by H_1 to H_4 (i.e., not of specific theoretical interest in the present study). The statistically non-significant χ^2 indicates a good fit of the model with the data, and the other indices of fit further confirm this. Note that the final model explained 16% of the variance in market share and 24% of the variance in relative price, respectively.

Standardized path coefficients for the model appear in Table 3, which shows that the results support all four hypotheses at $p < .05$ or better. As diagrammed in Figure 2, these results also indicate that brand trust and brand affect are both indirectly related to market share and relative price, and the indirect linkage occurs through the constructs of purchase loyalty and attitudinal loyalty. Note also that as expected the two components of loyalty have different outcomes in terms of brand performance. Purchase loyalty explains market share but not relative price, whereas attitudinal loyalty explains relative price but not market share.

To check for reverse causality, we also tested a nonrecursive model that freed the paths from market share back to purchase loyalty and from relative price back to attitudinal loyalty. Both feedback effects were nonsignificant (t-value < 1.96, $p > .05$).

To determine the robustness of the model to variations among specific groups of products, we ran the same model on durable and nondurable product categories within the final data set. Path analysis (LISREL 8.14) to test the model for durable product categories resulted in the following fit statistics: $\chi^2(18) = 34.34$, RMR = .05, GFI = .94, AGFI = .82, NFI = .92, NNFI = .89, CFI = .96, IFI = .96. With the exception of H_{2a} and H_{2b}, all hypotheses in the study were supported again. Only the paths from brand affect to attitudinal and purchase loyalty were not significant at $p < .05$. However, both paths were positive in direction, as hypothesized. It appears likely that with a larger sample of products, these relationships would become significant.

Path analysis (LISREL 8.14) was also used to test the model for nondurable product categories and resulted in the

TABLE 3
Standardized Path Coefficients

	Hypothesis	Coefficient
Hypothesized Links		
Brand trust → purchase loyalty	H_{1a}	.46
Brand trust → attitudinal loyalty	H_{1b}	.33
Brand affect → purchase loyalty	H_{2a}	.25
Brand affect → attitudinal loyalty	H_{2b}	.30
Purchase loyalty → market share	H_3	.21
Attitudinal loyalty → relative price	H_4	.21
Control Variables		
Utilitarian value → brand affect		−.26
Hedonic value → brand affect		.32
Share of voice → market share		.35
Share of voice → relative price		.32
Differentiation → relative price		.27

Notes: All coefficients are significant (t-value > 1.96, $p < .05$).

FIGURE 2
Significant Paths and Correlations
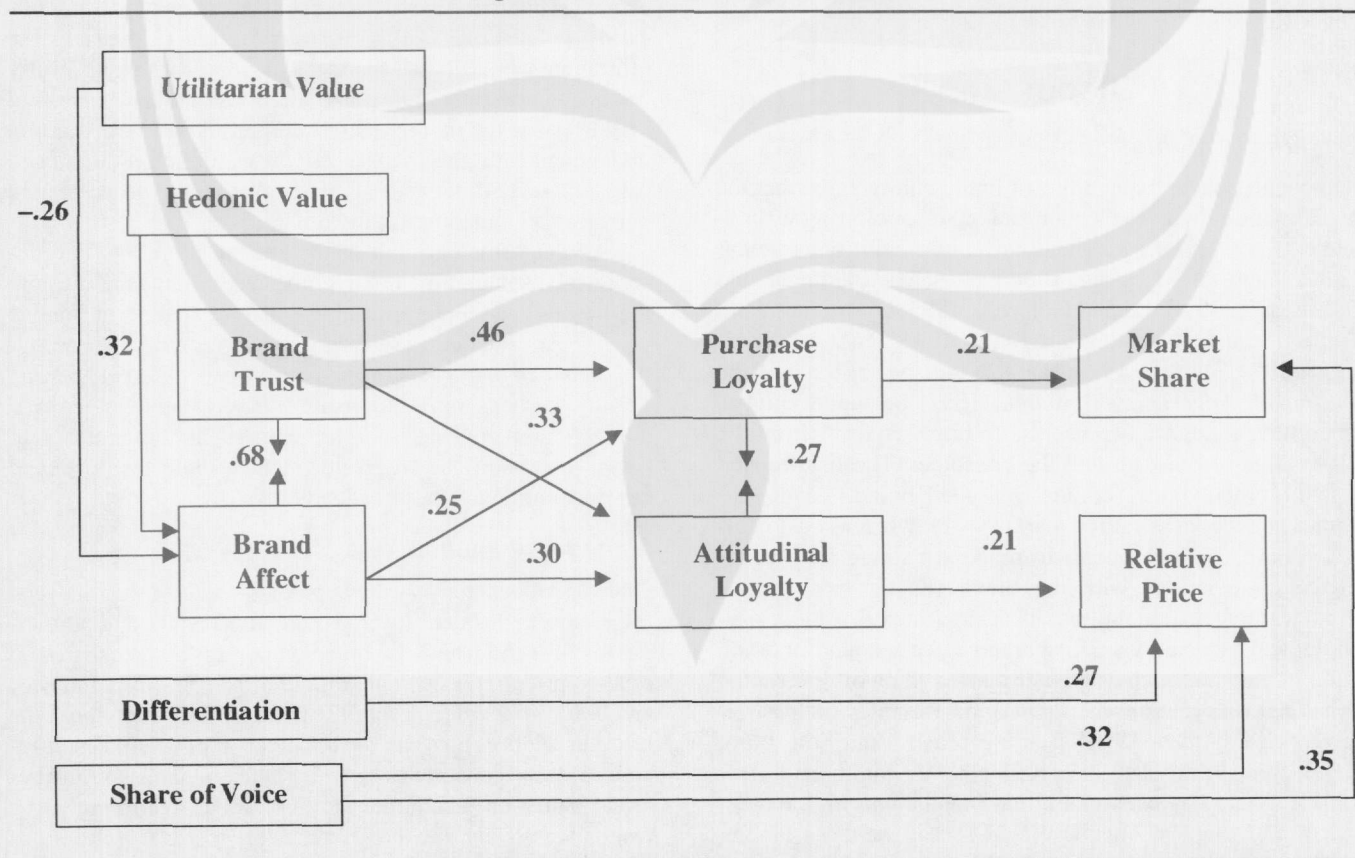
following fit statistics: $\chi^2(18) = 50.45$, RMR = .06, GFI = .92, AGFI = .75, NFI = .87, NNFI = .76, CFI = .90, IFI = .91. Here, two of the six hypothesized paths (H_{1b} and H_3; brand trust → attitudinal loyalty and purchase loyalty → market share) had standardized coefficients of .15 but were not significant at $p <$ .05. However, both paths again were positive in direction, as hypothesized, and it seems likely that with a larger sample size, these relationships would prove to be significant.

We further tested the robustness of the model by running it separately on utilitarian and hedonic product categories within the final data set. Path analysis (LISREL 8.14) to test the model for utilitarian product categories resulted in the following fit statistics: $\chi^2(18) = 68.69$, RMR = .06, GFI = .90, AGFI = .69, NFI = .84, NNFI = .67, CFI = .87, IFI = .88. All the hypotheses in the study were supported ($p < .05$) in this version of the model.

The fit statistics for hedonic product categories were $\chi^2(18) = 51.94$, RMR = .08, GFI = .92, AGFI = .74, NFI = .86, NNFI = .75, CFI = .90, and IFI = .91. Three of the six hypothesized paths (H_{1a}, H_{1b}, and H_3; brand trust → purchase loyalty, brand trust → attitudinal loyalty, and purchase loyalty → market share) were not significant at $p < .05$. However, all paths were positive in direction, as hypothesized, and would be expected to become significant with larger sample sizes.

In summary, we are confident that the model also applies at the level of more specific product categories, perhaps with a need for some variations in the paths included (to be determined in further research). Such deviations from the norm when testing for segments within the overall "population" of product categories are not uncommon (for a vivid description of the issue, see Wells 1993). However, pending further research, they do not appear to pose a serious threat to the validity of the present findings.

Discussion

Empirical Findings

Almost all conceptualizations of brand equity agree that the phenomenon involves the value added to an offering by consumers' perceptions of and associations with a particular brand name (Aaker 1996; Baldinger 1990; Baldinger and Rubinson 1996; Bello and Holbrook 1995; Dyson, Farr, and Hollis 1996; Holbrook 1992; Keller 1993; Park and Srinivasan 1994; Winters 1991; see also the special issue of the *Journal of Advertising Research* [1997] on brand equity). Therefore, there are two aspects to brand equity—from the viewpoints of the firm and the consumer. The firm-related side of brand equity emphasizes such brand-related outcomes as relative price and market share, whereas customer-based brand equity appears to hinge at its core on psychological associations with the brand (Keller 1993, p. 1). Furthermore, several authors have suggested that these psychological associations with a brand name account for brand equity outcomes such as greater market share or differential consumer responses to marketing-mix variables such as relative price (Aaker 1996; Baldinger and Rubinson 1996; Bello and Holbrook 1995; Keller 1993; Smith and Park 1992). It also has been noted that brands with high market share tend to have high levels of repeat purchase among

their users (Ehrenberg, Barnard, and Scriven 1997; Ehrenberg, Goodhardt, and Barwise 1990). However, in this large and growing literature, the role that brand trust and brand affect play in the creation of brand loyalty as a determinant of brand equity outcomes has not been explicitly considered. In the latter connection, our findings suggest that brand trust and brand affect are separate constructs that combine to determine two different types of brand loyalty—purchase loyalty and attitudinal loyalty—which in turn influence such outcome-related aspects of brand equity as market share and relative price, respectively.

This conceptualization has been corroborated by our empirical results, in which very different outcomes were evidenced for brand trust and brand affect as opposed to brand loyalty. Although brand trust and brand affect were each directly related to both purchase and attitudinal loyalty (Table 3), they were indirectly related to market share and relative price. Specifically, brand trust and brand affect contributed to both purchase loyalty and attitudinal loyalty, which in turn contributed significantly to market share and relative price, respectively. From this, it follows that brand loyalty may be viewed as a link in the chain of effects that indirectly connects brand trust and brand affect with the market performance aspects of brand equity.

Brand trust, brand affect, and brand loyalty are also relevant constructs in the relationship marketing literature, which considers trust and commitment or loyalty to be "key mediating variables" in relational exchanges (Morgan and Hunt 1994). As contributors to brand loyalty, brand trust and brand affect have distinct antecedents. In this connection, our results show that different product-category characteristics influence brand trust and brand affect differently. For example, hedonic value in the product category was significantly and positively related to brand affect. Conversely, the utilitarian value of the product category was significantly but negatively related to brand affect. In summary, we find that every level in our model (Figure 1) is necessary to understand fully the chain of effects from the product-level, category-related control variables at one end to the brand performance outcomes at the other.

Although they are not of theoretical interest to the present study, some of the nonhypothesized findings relevant to the purely endogenous variables, market share and relative price, bear repeating. For example, the lack of any correlation between market share and relative price is an interesting finding. Perhaps this relationship is moderated by other variables. Also, it appears from the findings that brand differentiation does not lead to greater market share for the brand but does influence the brand's relative price.

Managerial Implications

One goal of our study was to explore the relationship between the concepts of brand loyalty (purchase loyalty and attitudinal loyalty) and firm-level brand outcomes (market share and relative price) in ways that would tie the roles of brand trust and brand affect to the overall structure of brand equity. If the relevant relationships can be replicated in other studies, measures of these constructs can be included in our assortment of brand valuation techniques (Keller 1993). Accordingly, the results tentatively encourage managers to include measures

of brand trust, brand affect, purchase loyalty, and attitudinal loyalty in performing brand valuation analysis. Our study has shown the potential importance of brand loyalty in general and as a link in the determination of brand performance outcomes in particular, while also providing some useful measures of the construct. These measures appear to be reliable and valid predictors of brand performance outcomes. With more work, it should be possible to arrive at even better brand loyalty indices, which can then be combined for use as one among other crucial methods of brand valuation.

Also, marketing managers can interpret these results as helping to justify expenditures on design, communication, and merchandising strategies that create such long-term effects on consumers as brand trust, brand affect, and brand loyalty insofar as these consumer-level constructs contribute to profitable brand performance outcomes. Moreover, as we better relate the consumer and market levels on which brands perform, our overall understanding of the antecedents to brand performance should improve, which will lead to more effective marketing-mix strategies. Brand communication strategies might also be designed with special regard to the product-level, category-related determinants of brand outcomes. For example, understanding that favorable brand affect may be more prevalent in certain product categories—those associated with low utilitarian value and high hedonic value—suggests different advertising themes and strategies for these product categories.

Our study has distinguished among brand trust, brand affect, and brand loyalty while also suggesting that brand loyalty includes components related to both repeat purchase and attitudinal commitment (Jacoby and Kyner 1973). Thus, the results provide managers with evidence for theories of both double jeopardy (through purchase loyalty) and brand equity (through attitudinal loyalty). On the one hand, the evidence suggests that higher brand trust and brand affect, working through higher purchase loyalty to the brand, lead to sales-related brand outcomes such as market share. On the other hand, the evidence also suggests that brand trust and brand affect, working through attitudinal loyalty, lead to premium-related outcomes such as higher relative prices in the marketplace. Most important, there is evidence from this study that brand trust and affect are only indirectly related to market share and relative price through their combined impacts on purchase loyalty and attitudinal loyalty, respectively (Table 3 and Figure 2). Thus, in both cases, the roles of brand loyalty in general and of its attitudinal or purchase-related aspects in particular are critical in understanding the contrasting brand performance outcomes.

Limitations and Further Research

As previously discussed at length, the results of this study are largely in accord with our theoretical expectations. However, as in any study, further research is needed to replicate and extend our findings. In general, these findings should be replicated with different product categories and brands. To assess the generalizability of the model, we have provided fairly consistent results for different product categories. Studies on other product classes, such as luxury goods, services, and impulse purchases, might reveal findings that corroborate or extend our approach. Also, the present study did not examine such personal factors as product involvement, vari-

ety seeking, impulsiveness, and so forth. Such individual differences or consumer-based segmentation variables should be incorporated in future studies. Overall, we still need to develop a more detailed understanding of the relationship between brand loyalty and other marketing-related variables.

Furthermore, additional measures of brand trust, brand affect, purchase loyalty, and attitudinal loyalty should be developed, which would lead to a better explanation of brand performance outcomes. Despite the importance of the concept, brand loyalty measurement has not flourished in the marketing literature. For example, there is only one brand loyalty scale included in the 1305 pages of the *Marketing Scales Handbook* (Bruner and Hensel 1992) published by the American Marketing Association, and that lone scale is specific to soft drinks. Scales for both types of brand loyalty (purchase and attitudinal) exist (for some examples, see Jacoby and Chestnut 1978), but they generally are not used in conjunction with one another. Most often, we measure brand loyalty—neglecting its attitudinal component—according to the past purchasing patterns of consumers. The present study has moved toward considering both purchase and attitudinal loyalty, but there is room for further development in that direction and beyond. Similarly, in addition to our measures of market share and relative price, other brand performance outcomes, such as the brand's direct contribution to profits, should be assessed.

Our aggregate-level model using brands as the units of analysis has depicted paths from purchase loyalty to market share and from attitudinal loyalty to relative price. We also checked for possible feedback paths from the brand performance outcomes to the two components of brand loyalty. As mentioned in the "Results" section, we found these feedback effects to be nonsignificant in our data. However, such non-recursive effects might emerge when people rather than brands are used as the units of analysis. In other words, reverse causality is always a possibility and should continue to be considered in future studies that use different methodological designs. For example, we have suggested that brand trust and brand affect are key determinants of brand loyalty, but this does not preclude the possibility that continuous brand loyalty in turn may also create additional brand trust and brand affect. Indeed, it is likely that studies over time will find that these relationships are ongoing and reciprocal.

Finally and perhaps foremost, we recognize that other determinants of brand loyalty and performance outcomes might supplement the variables included here. In the present study, 16% of the variance in market share and 24% of the variance in relative price were accounted for. This leaves room for potential improvements in explanatory power achieved by more comprehensive models. As researchers increasingly probe the area of relational exchanges between brands and their consumers (Fournier 1998), other constructs that are prevalent in the literature on interpersonal relationships, such as similarity, attraction, love, familiarity, or power, should be examined for their potential relevance to brand loyalty and brand outcomes (e.g., Ahuvia 1999). Also, topics such as sex differences in the development of these constructs should be explored in studies that use group-level brand scores as the units of analysis. We have shown that brand trust and brand affect may differ according to the type of product, but do men and women also differ in their responses to brands or in their

The Role of Brand Loyalty / 91

subsequent brand loyalty? Furthermore, additional aspects of brand affect abound with research potential. For example, now that the role of emotions has been energetically researched in advertising studies related to marketing and consumer behav-

ior, there remains a need to examine emotional experiences that arise from other product- and brand-related aspects of consumption (Holbrook 1995, p. 14; Mano and Oliver 1993).

REFERENCES

Aaker, David A. (1991), *Managing Brand Equity: Capitalizing on the Value of a Brand Name*. New York: The Free Press.

——— (1996), "Measuring Brand Equity Across Products and Markets," *California Management Review*, 38 (Spring), 102–20.

Ahuvia, Aaron C. (1999), "What Is Love in the Domain of Consumption? A Qualitative Exploration of Contemporary Folk Psychology," working paper, Department of Management Studies, University of Michigan at Dearborn.

Armstrong, Scott J. and Terry S. Overton (1977), "Estimating Nonresponse Bias in Mail Surveys," *Journal of Marketing Research*, 14 (August), 396–402.

Assael, Henry (1998), *Consumer Behavior and Marketing Action*. Cincinnati, OH: South-Western.

Babin, Barry J., William R. Darden, and Mitch Griffin (1994), "Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value," *Journal of Consumer Research*, 20 (March), 644–56.

Baldinger, Allan L. (1990), "Defining and Applying the Brand Equity Concept: Why the Researcher Should Care," *Journal of Advertising Research*, 30 (June/July), RC2–RC5.

——— and J. Rubinson (1996), "Brand Loyalty: The Link Between Attitude and Behavior," *Journal of Advertising Research*, 36 (November/December), 22–34.

Batra, Rajeev and Olli T. Ahtola (1991), "Measuring the Hedonic and Utilitarian Sources of Consumer Attitudes," *Marketing Letters*, 2 (April), 159–70.

Beatty, Sharon E. and Lynn R. Kahle (1988), "Alternative Hierarchies of the Attitude–Behavior Relationship: The Impact of Brand Commitment and Habit," *Journal of the Academy of Marketing Science*, 16 (Summer), 1–10.

Bello, David C. and Morris B. Holbrook (1995), "Does an Absence of Brand Equity Generalize Across Product Classes?" *Journal of Business Research*, 34 (October), 125–31.

Berscheid, Ellen (1983), "Emotion," in *Close Relationships*, Harold H. Kelly, ed. New York: W.H. Freeman, 110–68.

Bettman, James R. (1979), *An Information Processing Theory of Consumer Choice*. Reading, MA: Addison Wesley.

Bruner, Gordon C. and Paul J. Hensel (1992), *Marketing Scales Handbook*. Chicago: American Marketing Association.

Buck, Ross, Arjun Chaudhuri, Mats Georgson, and Srinivas Kowta (1995), "Conceptualizing and Operationalizing Affect, Reason and Involvement in Persuasion: The ARI Model," in *Advances in Consumer Research*, Vol. 22, Frank R. Kardes and Mita Sujan, eds. Provo, UT: Association for Consumer Research, 440–47.

Day, George S. (1969), "A Two-Dimensional Concept to Brand Loyalty," *Journal of Advertising Research*, 9 (September), 29–35.

Dick, Alan S. and Kunal Basu (1994), "Customer Loyalty: Toward an Integrated Conceptual Framework," *Journal of the Academy of Marketing Science*, 22 (Spring), 99–113.

Doney, Patricia M. and Joseph P. Cannon, (1997), "An Examination of the Nature of Trust in Buyer–Seller Relationships," *Journal of Marketing*, 61 (April), 35–51.

Donthu, Naveen (1994), "Double Jeopardy in Television Program Choice," *Journal of the Academy of Marketing Science*, 22 (Spring), 180–85.

Dyson, P., A. Farr, and N.S. Hollis (1996), "Understanding, Measuring, and Using Brand Equity," *Journal of Advertising Research*, 36 (November/December), 9–21.

Ehrenberg, Andrew S.C., N. Barnard, and J. Scriven (1997), "Differentiation or Salience," *Journal of Advertising Research*, 37 (November/December), 82–91.

———, Gerald J. Goodhardt, and T. Patrick Barwise (1990), "Double Jeopardy Revisited," *Journal of Marketing*, 54 (July), 82–91.

Fader, Peter S. and David C. Schmittlein (1993), "Excess Behavioral Loyalty for High-Share Brands: Deviations from the Dirichlet Model for Repeat Purchasing," *Journal of Marketing Research*, 30 (November), 478–93.

Fornell, Claes and David F. Larcker (1981), "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research*, 18 (February), 39–50.

Fournier, Susan (1998), "Consumers and Their Brands: Developing Relationship Theory in Consumer Research," *Journal of Consumer Research*, 24 (March), 343–73.

Fox, Richard J., Srinivas K. Reddy, and Bharat Rao (1997), "Modeling Response to Repetitive Promotional Stimuli," *Journal of the Academy of Marketing Science*, 25 (Summer), 242–55.

Gundlach, Gregory T., Ravi S. Achrol, and John T. Mentzer (1995), "The Structure of Commitment in Exchange," *Journal of Marketing*, 59 (January), 78–92.

Hirschman, Elizabeth C. and Morris B. Holbrook (1982), "Hedonic Consumption: Emerging Concepts, Methods and Propositions," *Journal of Marketing*, 46 (Summer), 92–101.

Holbrook, Morris B. (1992), "Product Quality, Attributes, and Brand Name as Determinants of Price: The Case of Consumer Electronics," *Marketing Letters*, 3 (January), 71–83.

——— (1995), *Consumer Research*. Thousand Oaks, CA: Sage Publications.

——— and Rajeev Batra (1987), "Assessing the Role of Emotions as Mediators of Consumer Responses to Advertising," *Journal of Consumer Research*, 14 (December), 404–20.

——— and Elizabeth C. Hirschman (1982), "The Experiential Aspects of Consumption: Consumer Fantasies, Feelings, and Fun," *Journal of Consumer Research*, 9 (September), 132–40.

Howard, John and Jagdish Sheth (1969), *The Theory of Buyer Behavior*. New York: John Wiley & Sons.

Jacoby, Jacob and Robert Chestnut (1978), *Brand Loyalty Measurement and Management*. New York: John Wiley & Sons.

——— and D.B. Kyner (1973), "Brand Loyalty Versus Repeat Purchasing," *Journal of Marketing Research*, 10 (February), 1–9.

Jones, John P. (1990), "Ad Spending: Maintaining Market Share," *Harvard Business Review*, 68 (January/February), 38–48.

Jöreskog, Karl and Dag Sörbom (1996), *LISREL8: User's Reference Guide*. Chicago: Scientific Software International.

Keller, Kevin L. (1993), "Conceptualizing, Measuring, and Managing Customer-Based Brand Equity," *Journal of Marketing*, 57 (January), 1–22.

Leuthesser, L. (1988), *Defining, Measuring and Managing Brand Equity: A Conference Summary*. Cambridge, MA: Marketing Science Institute.

Li, Tiger and Roger J. Calantone (1998), "The Impact of Market Knowledge Competence on New Product Advantage: Conceptualization and Empirical Examination," *Journal of Marketing*, 62 (October), 13–29.

Lurigio, Arthur J. and John S. Carroll (1985), "Probation Officers' Schemata of Offenders: Content, Development, and Impact on Treatment Decisions," *Journal of Personality and Social Psychology*, 48 (5), 1112–26.

Mano, Haim and Richard L. Oliver (1993), "Assessing the Dimensionality and Structure of the Consumption Experience: Evaluation, Feeling, and Satisfaction," *Journal of Consumer Research*, 20 (December), 451–66.

McPhee, William N. (1963), *Formal Theories of Mass Behavior*. New York: The Free Press.

Moorman, Christine, Gerald Zaltman, and Rohit Deshpande, (1992), "Relationships Between Providers and Users of Market Research: The Dynamics of Trust Within and Between Organizations," *Journal of Marketing Research*, 29 (August), 314–28.

Morgan, Robert M. and Shelby D. Hunt (1994), "The Commitment-Trust Theory of Relationship Marketing," *Journal of Marketing*, 58 (July), 20–38.

Oliver, Richard L. (1999), "Whence Consumer Loyalty?" *Journal of Marketing*, 63 (Special Issue), 33–44.

Olney, Thomas J., Morris B. Holbrook, and Rajeev Batra (1991), "Consumer Responses to Advertising: The Effects of Ad Content, Emotions, and Attitude Toward the Ad on Viewing Time," *Journal of Consumer Research*, 17 (March), 440–53.

Park, Chan S. and V. Srinivasan (1994), "A Survey-Based Method for Measuring and Understanding Brand Equity and Its Extendibility," *Journal of Marketing Research*, 31 (May), 271–88.

Pessemier, E.A. (1959), "A New Way to Determine Buying Decisions," *Journal of Marketing*, 24 (October), 41–46.

Reichheld, Frederic F. (1996), *The Loyalty Effect: The Hidden Force Behind Growth, Profits and Lasting Value*. Boston: Harvard Business School Press.

Smith, Daniel and C. Whan Park (1992), "The Effects of Brand Extensions on Market Share and Advertising Efficiency," *Journal of Marketing Research*, 29 (August), 296–313.

Spangenberg, Eric R., Kevin E. Voss, and Ayn E. Crowley (1997), "Measuring the Hedonic and Utilitarian Dimensions of Attitudes: A Generally Applicable Scale," in *Advances in Consumer Research*, Vol. 24, Merrie Brucks and Deborah J. MacInnis, eds. Provo, UT: Association for Consumer Research, 235–41.

Statistical Policy Division (1987), *Standard Industrial Classification Manual*. Washington, DC: Government Printing Office.

Stewart, David W. and David H. Furse (1986), *Effective Television Advertising: A Study of 1000 Commercials*. Lexington, MA: Lexington Books.

Sujan, Mita (1985), "Consumer Knowledge: Effects on Evaluation Strategies Mediating Consumer Judgements," *Journal of Consumer Research*, 12 (June), 31–46.

Tucker, W.T. (1964), "The Development of Brand Loyalty," *Journal of Marketing Research*, 1 (August), 32–35.

Upshaw, L.B. (1995), *Building Brand Identity*. New York: John Wiley & Sons.

Webster, Frederick E. (1992), "The Changing Role of Marketing in the Corporation," *Journal of Marketing*, 56 (October), 1–17.

Wells, William D. (1993), "Brand Equities, Elephants and Birds: A Commentary," in *Brand Equity and Advertising*, David A. Aaker and Alexander L. Biel, eds. Hillsdale, NJ: Lawrence Erlbaum Associates, 343–55.

Winters, Lewis C. (1991), "Brand Equity Measures: Some Recent Advances," *Marketing Research*, 3 (December), 70–73.

Yoo, Boonghee, Naveen Donthu, and Sungho Lee (2000), "An Examination of Selected Marketing Mix Elements and Brand Equity," *Journal of the Academy of Marketing Science*, 28 (Spring), 195–211.

Zeithaml, Valarie A., Leonard L. Berry, and A. Parasuraman (1996), "The Behavioral Consequences of Service Quality," *Journal of Marketing*, 60 (April), 31–46.

Consumption Symbols as Carriers of Culture: A Study of Japanese and Spanish Brand Personality Constructs

Jennifer Lynn Aaker
Stanford University

Verónica Benet-Martínez
University of Michigan

Jordi Garolera
Universitat Pompeu Fabra

This research argues that the meaning embedded in consumption symbols, such as commercial brands, can serve to represent and institutionalize the values and beliefs of a culture. Relying on a combined emic–etic approach, the authors conducted 4 studies to examine how symbolic and expressive attributes associated with commercial brands are structured and how this structure varies across 3 cultures. Studies 1 and 2 revealed a set of "brand personality" dimensions common to both Japan and the United States (*Sincerity, Excitement, Competence,* and *Sophistication*), as well as culture-specific Japanese (*Peacefulness*) and American (*Ruggedness*) dimensions. Studied 3 and 4, which extended this set of findings to Spain, yielded brand personality dimensions common to both Spain and the United States (*Sincerity, Excitement,* and *Sophistication*), plus nonshared Spanish (*Passion*) and American (*Competence* and *Ruggedness*) dimensions. The meaning of these brand personality dimensions is discussed in the context of cross-cultural research on values and affect, globalization issues, and cultural frame shifting.

The Marlboro Man is an egoistic ideal; at home in his universe, master of his destiny. Thus, the Marlboro Man has come to symbolize individualism and independence. (Vacker, 1992, p. 746)

Traditional research in both cultural and cross-cultural psychology has focused on culture-based effects by identifying the influence of culture on the individual (culture affects psyche; see Cooper & Denner, 1998). However, the reverse relationship also exists; individuals influence culture (psyche affects culture) by the creation of institutions, symbols, and practices that carry and validate particular cultural meaning systems (DiMaggio, 1997; Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Shore, 1996). In this research, we relied on this bidirectional conceptu-

alization of culture to examine how cultural meaning is represented in the minds of individuals. We argue that, similar to cultural icons (e.g., Hong, Morris, Chiu, & Benet-Martínez, 2000), reasons (e.g., Briley, Morris, & Simonson, 2000), and public messages (e.g., Kim & Markus, 1999), consumption symbols such as commercial brands (e.g., Marlboro cigarettes) can serve as carriers of culture. That is, the meaning embedded in brands can serve to represent and institutionalize the values and beliefs of a culture.

To test this premise we raised the following question: To what degree are the symbolic and expressive attributes that people perceive in socially constructed entities, such as commercial brands, organized similarly or differently across cultures? More specifically, to what degree do basic dimensions of *brand personality*, defined as a set of human-like attributes associated with a particular brand (Aaker, 1997), carry universal or specific cultural meaning? Insight into this question will shed more light on the degree to which culture and psyche are mutually constituted and how culture-specific and universal human needs are carried through the creation, perception, and use of nonhuman symbolic objects such as brands. Further, from a more applied perspective, the role that culture may play in people's perception of consumer goods needs to be examined against the assumption that market globalization makes all of us psychologically more similar (Hermans & Kempen, 1998).

Dynamic Role of Culture and the Meaning of Commercial Brands

Much of the research in cross-cultural psychology has conceptualized culture as a broad, domain-general, and stable set of value

tendencies (e.g., individualism–collectivism, power distance; Hofstede, 1980). In this light, the portrayal of culture is of an abstract, encompassing structure, one that is often indexed by nationality and examined in light of its influence on individuals' behavior. Another perspective is that culture is more fragmented and dynamic, a set of subjective contexts and situations that are constructed and experienced by the individual (Cross & Markus, 1999; Hong et al., 2000). Two key issues within this perspective are that (a) culture is best conceptualized in terms of the meaning derived from and added to everyday experience and (b) individuals and culture are inseparable and mutually constitute each other. In light of these views, the study of how cultural meaning and individual psychological tendencies influence each other becomes critical (Shweder & Sullivan, 1990). In the present research, we suggest that one way to study the mutual constitution of the individual and culture is by examining the structural properties of nonhuman, symbolic objects such as commercial brands.

Commercial Brands: Carriers of Cultural Meaning

Referred to as *consumption symbols* or *cultural icons* (McCracken, 1986), commercial brands have significance that goes beyond their physical properties, utilitarian character, and commercial value. This significance rests largely in their ability to carry and communicate cultural meaning (Douglas & Isherwood, 1978; Richins, 1994). Culture-specific meaning typically resides in the more abstract qualities of the commercial brand that provide primarily symbolic or value-expressive functions to the individual (Shavitt, 1990), what are commonly known as "brand personality" attributes. That is, in contrast to the utilitarian attributes associated with commercial brands (e.g., Levi's jeans are durable), which tend to demonstrate limited variability in meaning or importance across cultures (Aaker & Maheswaran, 1997), the symbolic and expressive functions provided by a brand (e.g., Levi's allows for the expression of independence, strength, and masculinity; Solomon, 1986) tend to vary to a larger degree because of the fact that individuals vary in their needs and self-views (Fiske, Kitayama, Markus, & Nisbett, 1998; Han & Shavitt, 1994; Kim & Markus, 1999).

The process by which material objects come to possess meaning has been studied in detail by anthropologists (e.g., Douglas & Isherwood, 1978; Levi-Strauss, 1966, p. 116; Solomon, 1986). One institution that has received attention in the context of commercial brands is advertising, which works as a method of meaning transfer by bringing the consumer good and a representation of culture together within the frame of an advertisement (McCracken, 1986). The mechanics of this method begin with the advertising agency charged with the promotion of the commercial brand. On the basis of marketing research in which individuals are asked what characteristics of the commercial brand are important to them and what needs are served by the commercial brand, advertisers determine what characteristics of the brand will be communicated in the advertisement (Lannon, 1993; Plummer, 1985). In this light, individual needs serve to influence the creation of brand meaning. At the same time, however, the communication of these cultural icons in advertisements influences reality and ultimately individuals' attitudes and behavior (Belk & Pollay, 1985; Kim & Markus, 1999; Shore, 1996). Thus, the bidirectional relationship between culture and the individual is captured in both the process of

creating the commercial brands and the process by which brands are communicated to and used by individuals.

Note that the above processes of cultural-meaning creation and redefinition occur over time and involve many different fragments of society (e.g., consumers, companies, technology, political and cultural institutions). Given this complexity, it is difficult to design specific studies to explicitly model these mechanisms and their directionality that are not decontextualized or overambitious. Accordingly, in the present research, we focused instead on providing insight into a slice of this phenomenon by examining some of its perceptual and structural elements: how individuals organize the symbolic and expressive attributes associated with commercial brands and how this organization may vary across cultures.

"Brand Personality" Dimensions

As a basis for the current research, we draw on work that has explored the meaning of commercial brands by examining how brand personality attributes are structured in the minds of individuals in the United States (Aaker, 1997). In this research, the process of meaning identification involved a set of studies whereby individuals were asked to rate a representative set of commercial brands on a battery of personality attributes. Results of exploratory and confirmatory factor analyses showed that American individuals perceive brand perceptual space in terms of five personality dimensions (see Figure 1). These dimensions include Sincerity, represented by attributes such as down-to-earth, real, sincere, and honest; Excitement, typified by attributes such as daring, exciting, imaginative, and contemporary; Competence, represented by attributes such as intelligent, reliable, secure, and confident; Sophistication, represented by attributes such as glamorous, upper-class, good looking, and charming; and Ruggedness, typified by attributes such as tough, outdoorsy, masculine, and western.

Note that at least three of the above dimensions (Sincerity, Excitement, and Competence) resemble personality dimensions that are also present in human personality models such as the Big Five.[1] Specifically, Sincerity is defined by attributes related to warmth and honesty that also are present in Agreeableness, Excitement captures the energy and activity elements of Extraversion, and Competence denotes dependability and achievement similar to Conscientiousness. The links between Sophistication and Ruggedness and the Big Five are less clear however. Compared with Sincerity, Excitement, and Competence (which seem to capture

---

[1] Although the conceptualization of brand and human personality may be similar, the two constructs vary in their antecedents as well as the distinct roles that they serve. In the case of individuals, personality traits are inferred from observable and stated attitudes and behavior as well as physical characteristics (Park, 1986). In this light, people develop their own personalities, thereby reflecting a relatively basic process of personality development (McCrae et al., 2000). In contrast, brands are inanimate objects imbued with personality trait associations through marketing communications, thereby reflecting a more impressionable process of personality development. For example, marketers rely on user imagery (defined as the set of human characteristics associated with the user of the brand), celebrity endorsers (e.g., Michael Jordan), symbols, logos, and slogans (e.g., AT&T's "Reach out and touch someone" slogan), and personification (e.g., the Pillsbury Doughboy) to develop the personality associations of a brand (Plummer, 1985).
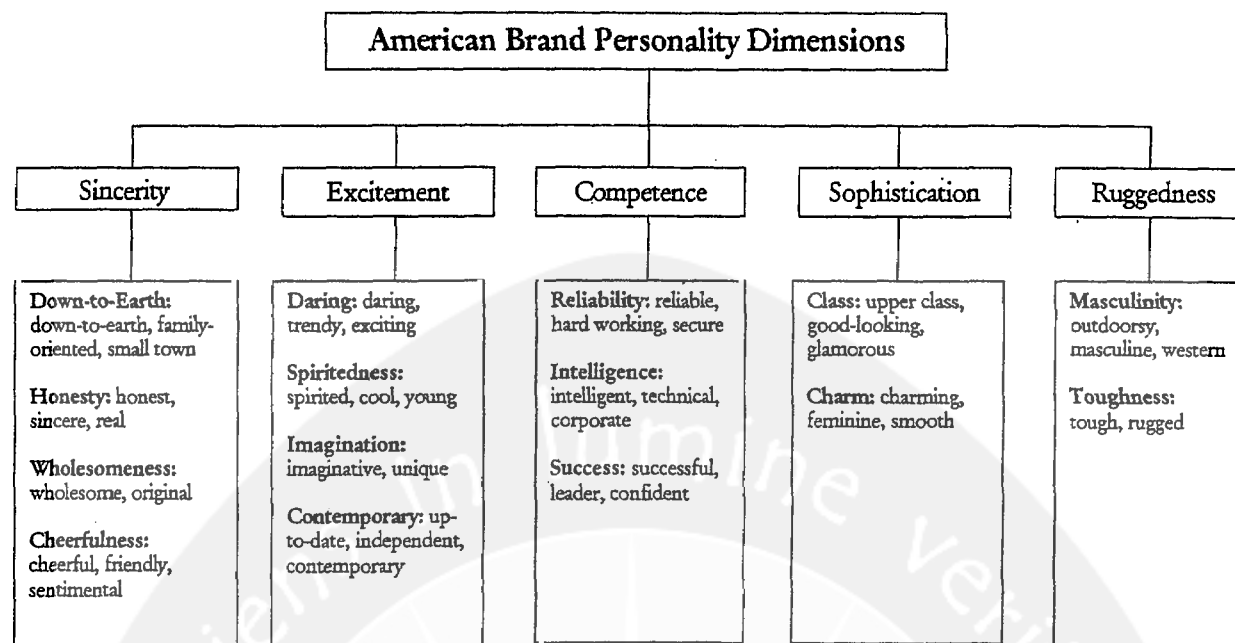
Figure 1. Five American brand personality dimensions, and their facets.

relatively basic tendencies that may apply to both humans and brands), Sophistication and Ruggedness capture more aspirational images associated with wealth and status (e.g., Lexus automobiles, Monet jewelry) or American individualism (e.g., Levi's jeans, Harley-Davidson motorcycles) that may be more specific to carriers of culture such as commercial brands.

In the current research, we examine the extent to which Aaker's (1997) structure of personality attributes associated with commercial brands differs across cultural contexts; that is, how much do Sincerity, Excitement, Competence, Sophistication, and Ruggedness connote culture-specific versus more universal meaning? In addressing this question, we hope to provide insight into the degree to which cultural meaning, as influenced by individuals within a cultural context, is conveyed and consequently communicated to individuals both within and across cultural contexts (Bond, 1994b).

Values and Cultural Products

One literature that may contribute insight on this question is that on values. Schwartz (1994), for example, proposed a taxonomy of seven distinct types of cultural-level values organized around the two dimensions of (a) Conservatism versus Autonomy that relate to social conservatism versus openness to change and (b) Hierarchy/Mastery versus Egalitarian Commitment/Harmony that relate to self-enhancement versus self-transcendence (Schwartz, 1992). The seven value types, Conservatism, Intellectual Autonomy, Affective Autonomy, Hierarchy, Mastery, Egalitarian Commitment, and Harmony, were identified through a psychometrically rigorous procedure involving more than 60 cultural groups (Schwartz, 1994; Schwartz & Bilsky, 1990; Schwartz & Sagiv, 1995). Note that, although these dimensions capture universal needs, cultures vary considerably in their standing along these dimensions (see Schwartz, 1994, Table 7.3). These differences in the locations of cultures along the above seven value dimensions reflect differ-

ences in the degree to which each value type is embraced by a particular culture. An illustration is that valuing the social aspects of Mastery (self-assertion and getting ahead of other people) seems particularly important in the United States. In contrast, more collectivistic societies such as Asian and Latin cultures stand out as placing particular emphasis on Harmony needs (keeping balance and peace with nature and people).

There is some variation within collectivist cultures, however, in their value discrepancies with the United States. Southern Mediterranean cultures such as Spain, Greece, and France, for instance, have particularly high scores compared with both the United States and Asian cultures on Affective Autonomy (valuing novelty, creativity, and having an exciting life) and Egalitarian Commitment (voluntary commitment to promoting the welfare of others). Note that one particularly useful aspect of Schwartz's value taxonomy is that country differences such as those we just described can be used to interpret cultural differences in norms, attitudes, behavioral patterns, and important macro socioeconomic variables (e.g., Gouvenia & Ross, 2000; Schwartz, 1994, 1999; Schwartz & Ross, 1995).

The attributes that structure the meaning of commercial brands in the United States (Aaker, 1997) seem to align themselves with several of Schwartz's cultural value types for which the United States has moderate to high scores. For instance, a close inspection of the attributes that define Sincerity (e.g., family-oriented, real, small-town), suggests that this dimension may capture brand perceptions associated to Conservatism needs (emphasis on family security and safety, being stable and polite). Terms defining Excitement (e.g., unique, exciting, young), on the other hand, suggest a link with Affective Autonomy needs (valuing novelty and creativity, having an exciting life). Competence (e.g., reliable, successful, intelligent) appears to be related to Mastery needs (emphasis on being capable and successful, demonstrating competence), and Sophistication (e.g., upper class, glamorous,

smooth) to Hierarchy needs (value of social status and prestige, having wealth). Finally, Ruggedness (e.g., masculine, tough, western) appears to be less directly related to a specific value orientation, although some of the attributes may encompass elements from Mastery (being independent, daring) and low Egalitarian Commitment (detachment from others). This Ruggedness dimension is reflected in popular American movies (e.g., *The Quiet Man, Stagecoach, High Noon;* Kim & Markus, 1999) as well as in popular American commercial brands (e.g., Harley-Davidson, Marlboro, Levi's; Solomon, 1986), and appears to represent institutionalized American values such as strength, masculinity, and ruggedness.

One way to assess the particular cultural significance of Ruggedness relative to the other four dimensions and Aaker's (1997) findings in general is to compare the American dimensions against those uncovered in other cultures. By doing so, the possible culture-specific psychological values and needs served by commercial brands in the United States and other cultures can be more clearly ascertained. In the present research, we specifically address two potential hypotheses. Both are based on the premise that commercial brands are symbols that can carry cultural meaning (McCracken, 1986; Richins, 1994); however, they differ in their predictions of the degree of cross-cultural similarity in the perceptual representation of the brands. The first possibility is that the perceptual structure may remain largely robust across cultural contexts. That is, because the basic kinds of values held by individuals as well as the organization of these values—namely, their intercorrelation pattern—tend to be similar across cultural contexts (Schwartz, 1992, 1994), the meaning conveyed in commercial brands may also be largely universal. That is, the number and nature of the basic dimensions that organize brand personality perception will be similar across cultures given that the kinds of values people have (and may seek to fulfill through commercial brands) are also universal. Dimensions very similar to those uncovered by Aaker (1997) in the United States should therefore also emerge when the structure of brand personality perception is examined in other cultures.

An alternative possibility, however, is that different cultures have somewhat unique organizations of the brand representational space that are reflective of cultural differences in value emphasis. In other words, it is possible that the structure of brand meaning perception is mainly associated with the importance of the value that brands provide for consumers in a given culture. If indeed brand meaning is created to reflect the needs and values held by individuals within a culture (McCracken, 1986), there may be some cross-cultural variance in the meaning connoted in commercial brands and the organization of this meaning (e.g., number and nature of the basic dimensions). For instance, as discussed earlier, Schwartz (1994) showed that Harmony is a value that is endorsed by East Asian cultures to a greater degree than Western cultures such as the United States. Indeed, keeping balance or maintaining harmony is respected as one of the highest virtues by Confucius (Kim & Markus, 1999). Further, the interdependent goal of harmoniously fitting in with others, with its emphasis on fulfilling various social roles and maintaining connections with others, plays a larger role in determining overall life satisfaction in East Asian cultures relative to North American cultures (Kwan, Bond, & Singelis, 1997; Oishi, Diener, Lucas, & Suh, 1999). These findings suggest that, to the degree that a particular value type such as Harmony varies in its importance across cultural contexts, we may

observe evidence of culture-specific meaning that relates to this particular value in cultures that embrace allocentric beliefs and harmony-oriented values (Fiske et al., 1998; Schwartz, 1994).

In sum, although the research reviewed above does not allow us to predict a specific perceptual structure of commercial brands, it does suggest that there may be some cultural variance in how they are represented in the minds of consumers. Cultural variation in values and needs may influence commercial brand perception in two interrelated ways: by influencing the content of marketing communications that are used to create and develop commercial brands and, at the same time, by influencing the kinds of attributes individuals focus on when perceiving brands (Belk & Pollay, 1985). It is through these processes that cultural differences in the structure of brand personality perception may arise. The current research relies on a combined emic–etic approach to determine the degree to which individuals across cultures share a similar perceptual representation of commercial brands.

Methodological Overview

Choice of Countries

Many cross-cultural researchers have argued that multiple cultural groups are needed to disentangle the influences of the various cultural dimensions that may underlie the observed differences (Bond, 1994a). The present research focuses on two countries, one with an East Asian culture (Japan) and one with a Latin culture (Spain). These two countries were chosen for several reasons. First, relative to members of Anglo American cultures, individuals from East Asian and Latin cultures tend to be less idiocentric and more allocentric (i.e., higher in desire for interdependence and harmony; Marín & Triandis, 1985; Oishi et al., 1999, Schwartz, 1994; Wierzbicka, 1991; but see Matsumoto, 1999; Takano & Osaka, 1999). These value differences may relate to variation in brand personality perception.

Second, although individuals in Japanese and Spanish cultures both score relatively high on allocentrism, they differ on other dimensions. Perhaps most notably, individuals in Latin cultures, relative to those in East Asian cultures, place special value on several socioemotional behaviors related to Affective Autonomy needs; namely, sensation seeking (McVeagh, 1990), emotional intensity (Benet-Martínez, 1999), and *simpatía* (Latin-specific term for friendliness defined around warmth and expression of positive emotions; Triandis, Marín, Lisansky, & Betancourt, 1984; for more details, see Marín & Marín, 1991; Marín & Triandis, 1985). Therefore, the selection of Japan and Spain provides a context that allows for potential replication, as both cultures share an endorsement of allocentric values, but also an extension whereby the values unique to Mediterranean cultures such as Spain may be identified.

Finally, from a methodological standpoint, Japan and Spain are in similar stages of industrial and economic development and spend approximately the same percentage of the gross national product on advertising as compared with the United States (1.0% for Japan, 1.5% for Spain, 1.1% for the United States). Thus, several variables that could account for cultural differences in communication styles and possibly bias the results of this research may be kept relatively constant.

The Combined Emic–Etic Approach

An important issue in cross-cultural research is the distinction between *emic* (indigenous) and *imposed-etic* (imported) approaches to data collection (Berry, 1969). Emic approaches explore a particular psychological construct from within the cultural system, whereas imposed-etic approaches study behavior from outside the cultural system. With the emic approach, instruments and theories indigenous to the target culture are developed by relying on a systematic process that generates a set of culture-specific attributes and stimuli. Imposed-etic approach instruments, in contrast, are either imported in their original form or translated into the local language (Enriquez, 1979).

The question of whether imported (i.e., translated) measurement tools overlook important domains of the local culture is the foundation of a classic debate in cross-cultural psychology, the emic–etic issue (Berry, Poortinga, Segall, & Dasen, 1992). On one hand, an imposed-etic strategy is useful in that it makes cross-cultural comparisons feasible given that quantitative judgments of similarity require stimuli that are equivalent, but its use may distort the meaning of constructs in some cultures or overlook their culture-specific (emic) aspects. On the other hand, an emic strategy is well suited to identify culture-specific qualities of a construct, that is, it is ecologically valid. However, its use makes cross-cultural comparisons difficult. Given the opposing advantages and disadvantages of the emic and etic approaches, one solution to the emic-etic debate has been to pool both approaches into what is known as a combined emic–etic approach (Hui & Triandis, 1985). This approach, compared with emic or imposed-etic approaches, provides a more complete and unbiased picture of the degree of cross-cultural overlap and specificity between constructs (for examples, see Benet-Martínez & Waller, 1997; Church & Katigbak, 1988; Yang & Bond, 1990).

In our study, the application of a combined emic–etic approach involved the following steps: First, indigenous attributes relevant to the target concept (e.g., commercial brands) were isolated in the new cultures and their underlying dimensional structure identified (Japan in Study 1, Spain in Study 3). Next, using an independent set of participants, we combined this set of emic-based attributes with attributes identified in the United States, and the overlap between the emic and imposed-etic dimensions underlying these two sets of attributes was measured (Aaker, 1997; Studies 2 and 4). This approach does not bias the results in favor of universality, an outcome that is often associated with the imposed-etic approach (McCrae & Costa, 1997). Further, it is more consistent with the perspective of culture adopted in this research, in which cultural knowledge is a "lens" that colors people's perception of objects and messages in the environment (McCracken, 1986). By allowing for cultural variations in the form or meaning of personality attributes to be represented (Church & Katigbak, 1988), the emic-derived set of attributes is more likely to reflect the culture-specific lens through which people see.

Study 1: Identification of Indigenous Japanese Brand Personality Dimensions

The objective of Study 1 was to determine how Japanese individuals perceive the perceptual space of commercial brands as defined by personality attributes. We first generated a set of culture-specific attributes and stimuli, and then identified the per-

ceptual representation of brands through a factor-analytic procedure involving attribute ratings on a set of brands by Japanese individuals.

Method

Stimuli selection. Two criteria guided the selection of commercial brands to serve as stimuli. First, to enhance the representativeness of the sample of stimuli, we selected commercial brands in product categories that serve both symbolic and utilitarian functions. Therefore, we randomly selected 24 product categories that were shown to vary on these two functional dimensions (Ratchford, 1987, Appendix). Six of the categories were highly symbolic or value expressive (e.g., apparel, alcohol, fragrances), six were utilitarian (e.g., laundry detergent, medication, toothpaste) and 12 scored relatively high on both symbolic and utilitarian dimensions (e.g., automobiles, beverages, toys). Second, to enhance familiarity of the sample of stimuli, we selected well-known commercial brands. Thus, a pretest was conducted in which Japanese participants ($n = 46$, 50% female, M age = 30.2) were invited to participate in a study on brands. Paid $7 for their participation, the participants were asked, "What is the first brand that comes to mind when you think of this product category?" The most frequently listed brands in each of the 24 categories were identified.

Although the relatively large number of brands allowed for greater variance in brand personality types, it also increased the chance of participant fatigue. Thus, to minimize potential fatigue, we randomly grouped the 24 brands into six sets of four brands. Each group was composed of one symbolic brand, one utilitarian brand, and two symbolic/utilitarian brands, such that each brand group contained a similar profile of brands. For example, Group 1 contained Suntory Old whiskey, Denter T toothpaste, Pocari Sweat beverage, and Mercedes Benz automobiles. In this way, the brand groups' profiles were similar to that of the total sample of brands. Finally, one well-known brand (Coca-Cola) was used as a control and included in each of the groups to assess the variation of perceptions of personality attributes for a given brand across groups. Thus, the result was a set of 25 brands that were meaningful to the target culture.

Personality attribute selection. The selection of brand-related attributes followed a three-step process similar to the one used in Aaker's (1997) study. First, to ensure familiarity and relevance of the attributes, we conducted a free-association task in which Japanese participants ($n = 50$, 40% female, mean age = 28.2) were asked to write down the personality attributes that first come to mind when thinking about well-known brands in 10 product categories (3 symbolic, 3 utilitarian, and 4 symbolic/utilitarian), a process that yielded 138 attributes. Second, to maximize the content representation of personality attributes, we compiled 71 additional attributes from three sources that rely on brand personality research in Japan (Japanese advertising agency, client company, and research supplier) and 44 more that were representative of the Big Five personality dimensions (e.g., Benet-Martínez & John, 1998), as in Aaker (1997). Finally, from the total set of 253 personality attributes, three groups of attributes were eliminated because they were redundant ($n = 61$; e.g., *reliable* arose from the free-association task as well as from Benet-Martínez & John, 1998), ambiguous ($n = 25$; e.g., *slight, unfocused, rigid*), or relatively irrelevant to the construct of interest ($n = 67$; e.g., *artistically sensitive, fickle, hypochondriacal*).[2] Thus, the result of this stage was the identification of 100 attributes.

---

[2] To identify the relatively irrelevant attributes, Japanese participants ($n = 140$, 55% female, M age = 35.3) rated how descriptive the 167 attributes (253 minus the redundant and ambiguous attributes) were of the most salient brand in 10 product categories that spanned the symbolic-utilitarian framework. To isolate the most relevant attributes for this set of stimuli, we set the cutoff for the final list of attributes at a scale rating of 4 (*very descriptive*), thereby leaving 100 attributes for Study 1. Of those 100 attributes, 68% were indigenous (plus 15% from the Big Five and 17% from Aaker, 1997).

Participants. To enhance generalizability, a sample (*n* = 1,495) that represented the Japanese population with respect to five demographic dimensions was used (gender, age, marital status, education level, and occupation; http://www.stat.go.jp/1.htm). That is, 51% of the sample were female, 14% of the sample were 20 to 30 years of age, 56% of the sample were married, 46% of the sample had a college or graduate school education, and 13% of the sample were professional or technical workers.[3] The participants in each of the brand groups were selected to have the same profile as the total sample (*n* ranged from 243 to 253 in each of the six brand groups), and belonged to a Japanese national mail panel.

Procedure. Participants, who were paid 500 yen (approximately $5) and were entered into a lottery of gift prizes, were asked to take part in a study about people's impressions toward particular brands (names of commodity goods or services). To communicate the brand personality construct and enhance the imaginability of the task (Lannon 1993; Plummer, 1985), we asked participants to think of the brand as a person. Specifically, they were told,

> If I asked you to give me your impression of a particular person, you might answer with a set of personality attributes. Now, let's think about brands in the same way. For example, you may be asked to rate the extent to which a set of attributes describes Porsche. Please ask yourself, "If Porsche was a person, how would you describe him/her?," and then circle a number between "not at all descriptive" (1) to "extremely descriptive" (5) for the subsequent set of attributes.

Then participants were asked to rate the extent to which the 100 personality attributes describe a specific brand. Participants repeated the rating task for the four additional brands in the particular brand group. Thus, six subsamples of participants rated five brands (Coca-Cola being common in each group), a task that took approximately 50 to 60 min. For example, Group 1 contained Chanel fragrance, Yomiuri Shimbun newspaper, Nintendo toys, Kuroneko Yamato delivery services, and Coca-Cola soft drinks. To control for primacy and recency effects, we counterbalanced the order in which the attributes were presented for each brand as well as the order in which the brands were presented in the questionnaire.

Results and Discussion

First, to assess the variation of perceptions of personality attributes for a given brand, we examined the mean ratings of Coca-Cola across the groups. No significant differences were found, suggesting high levels of agreement of the human characteristics associated with a particular brand. Second, to examine the systematic individual differences in perceptions of brands in general, we subjected the correlation matrix for the brand personality traits (*n* = 100) across individuals' ratings of each brand to a principal component analysis followed by varimax rotation. The first 10 eigenvalues from the 100 × 100 interitem Pearson correlation matrix were 28.2, 9.5, 5.7, 3.7, 2.9, 1.3, 1.1, 0.8, 0.7, and 0.6. The moderate break after the fifth latent root suggested that a solution with five components was plausible. The adequacy of this solution was supported by the following criteria: (a) shape of the scree plot, (b) stability of the solutions in separate principal-components analyses with distinct subsamples (e.g., men vs. women, older vs. younger individuals), (c) meaningfulness of the dimensions (at least nine traits loaded on each of the first five factors, whereas only one trait loaded on the sixth component (family-oriented), and (d) amount of variance explained by the five components relative to Dimensions 6 through 9 (under 2% each). The five-component solution is reported in Table 1.[4] Labels for all the dimensions were selected on the basis of the attributes emphasized within each component. To provide English translations, a six-person back-translation team translated each of the personality

attributes. First, a three-person translation team (one native Japanese speaker, one native English speaker, and one bilingual speaker) discussed the linguistic meaning of each attribute before final translation into English. Then, the three-person back-translation team followed the same process, translating the attributes back into Japanese to ensure accuracy (Brislin, 1970). Intercoder agreement was high (94%); that is, for 94 of the 100 traits, the Japanese trait was back translated as the same word as the original. When discrepancies existed, all six coders discussed them until consensus was formed.

A close look at Table 1 reveals that all but one of the Japanese brand personality dimensions are highly isomorphic to the American dimensions reported in Aaker (1997): Dimension 1 clearly represents Excitement and is primarily defined by attributes such as funny, contemporary, young, and energetic. It is interesting that several of these terms are also markers of Excitement in the American brand personality structure. Dimension 2 (Competence) was defined by attributes such as responsible, reliable, confident, and tenacious—consistent with the markers of Competence in the United States. Dimension 3 (Peacefulness), on the other hand, was defined by a unique blend of attributes (e.g., shy, peaceful, naive, dependent) reflective of an allocentric and harmony-fostering orientation (Schwartz, 1994). Dimension 4 (Sincerity) included warm, thoughtful, and kind, markers that are in line with those found in the United States for Sincerity. Finally, Dimension 5 (Sophistication) is defined by terms such as elegant, smooth, stylish, and sophisticated markers that are consistent with those found in the United States for Sophistication.

Identification of facets and markers. Because the full set of 100 attributes may be too lengthy to manipulate and measure in subsequent research, a more limited set of attributes that reliably captures each dimension was desired. To achieve this, we first identified the different facets subsumed by each component through separate principal-components analyses of the attributes within each brand personality dimension (see also Costa & McCrae, 1992). Adopting this process, Aaker (1997) found a distinct set of facets that provided a structure to justify which attributes to select to represent each dimension as well as texture to understand the dimensions in greater detail. For example, the American Sincerity dimension consists of four facets: Down-to-Earth, Honesty, Wholesomeness, and Cheerfulness (see Figure 1).

---

[3] The participants were representative of the geographic regions in Japan (e.g., 30% of the participants were from the Kanto region), although no one from the islands outside of Honshu participated.

[4] One limitation of a disaggregated analysis (i.e., making each individual's ratings of each brand the unit of analysis) relative to an aggregated analysis (in which brands are the unit of analysis after averaging across individuals' ratings of each particular brand) is that the correlations among attributes are likely to also reflect individual differences in scale use. To assess the impact of this methodological issue, we also examined factor solutions obtained from aggregated data (*n* = 25 brands). It is interesting that these factor structures were similar to those obtained with the disaggregated data (see Leung & Bond, 1989, and Schwartz, 1994, for a discussion of why structures obtained from aggregated and disaggregated data tend to be closely related, and the rationale for using aggregated vs. disaggregated data in factor analyses). We also examined structure obtained using an oblique rotation (promax), which proved nearly identical to the orthogonal solution (varimax).

Table 1
Japanese Brand Personality Dimensions

Abbreviated English translation	Varimax-rotated principal factors					Original Japanese term
	Ex	Co	Pe	Si	So	
Fun	76	13	−06	−03	14	のりがいい
Humorous	72	09	14	06	09	ひょうきんな
Talkative	72	09	15	06	08	話好きな
Optimistic	72	09	14	02	02	楽観的な
Free	71	12	−08	05	15	自由な
Funny	70	−04	28	−07	01	ユーモアがある
Chatty	69	−00	18	00	07	おしゃべりな
Energetic	69	20	−18	21	−01	元気な
Youthful	68	04	−16	07	27	若々しい
Laid-back	67	06	11	09	−04	こだわらない
Spirited	67	19	−15	17	05	快活な
Cheerful	67	06	−20	28	16	明るい
Friendly	66	06	09	36	−02	人なつっこい
Active	66	29	−27	08	07	活動的な
Easygoing	63	05	17	−15	07	のんきな
Positive	61	43	−16	06	14	積極的な
Happy	61	08	15	33	10	ほがらかな
Curious	61	30	−02	−05	17	好奇心の強い
Generous	60	25	15	14	12	気前のよい
Unrefined	60	03	27	−23	−14	素朴な
Approachable	61	10	17	28	−07	親しみやすい
Likable	59	10	12	31	11	愛想の良い
Open-minded	58	17	14	25	09	おおらかな
Careless	54	−07	38	−12	−10	おっちょこちょいな
Sociable	54	27	−05	13	31	好感のもてる
Bold	53	44	00	−17	13	度胸がある
Emotional	52	29	25	18	29	感情豊かな
Good-natured	52	05	39	26	06	気立てのいい
Contemporary	50	22	−23	03	28	現代的な
Relaxed	50	20	14	07	−04	気楽な
Enthusiastic	48	43	−05	19	14	意欲的な
Frank	48	35	05	35	01	きさくな
Openhearted	48	17	−05	22	19	打ち解けた
Hopeful	47	44	−09	27	11	前向きな
Fresh	44	19	−08	27	36	新鮮な
Refreshing	43	22	29	34	04	さわやかな
Nice	40	10	−11	31	31	よい
Cooperative	40	31	14	38	11	協調性のある
Easygoing	40	35	19	09	−03	マイペースな
Ordinary	38	00	08	32	−31	庶民的な
Reliable	13	71	04	26	15	しっかりした
Determined	22	71	09	15	08	意志の強い
Dignified	29	68	−06	07	19	堂々とした
Patient	11	66	23	17	01	忍耐強い
Tenacious	18	65	18	17	−02	粘り強い
Responsible	02	64	15	38	12	責任感のある
Respectable	09	64	11	18	34	立派な
Confident	30	63	−10	07	22	自信に満ちた
Strong	36	63	00	00	04	強い
Sharp	28	63	02	−08	23	鋭い
Consistent	02	59	20	41	09	一貫した
Courageous	39	58	04	−05	09	大胆な
Tough	07	56	25	−13	−01	たくましい
Neat	−06	56	13	39	31	きちんとした
Prudent	−03	56	27	28	22	慎重な
Levelheaded	−06	55	25	16	29	冷静な
Diligent	01	55	21	52	06	まじめな
Assertive	19	55	00	09	25	がんこな
Masculine	27	54	−01	−20	−07	男性的な
Clear	43	52	−12	06	10	はっきりした
Precise	−02	51	30	36	24	几帳面な
Stable	11	50	12	41	05	安定した
Self-composed	−17	49	28	37	26	落ち着いた

Table 1 (continued)

Abbreviated English translation	Varimax-rotated principal factors					Original Japanese term
	Ex	Co	Pe	Si	So	
Dependable	−04	**46**	38	34	−09	頼れる
Rational	25	**43**	06	11	−05	合理的な
Tolerant	38	**42**	22	26	13	寛大な
Realistic	35	37	−04	17	−02	現実的な
Mild mannered	00	04	**74**	20	15	おっとりした
Timid	−03	09	**73**	10	12	恥ずかしがりやの
Shy	09	07	**67**	12	13	内気な
Reserved	−05	12	**66**	21	10	ひかえめな
Peaceful	−13	18	**64**	31	19	平和な
Modest	−18	32	**55**	20	−09	地道な
Clumsy	17	14	**55**	−16	−14	不器用な
Dependent	08	17	**51**	−07	12	寂しがり屋な
Childlike	30	04	**50**	07	−03	子供っぽい
Calm	12	18	**49**	43	21	おだやかな
Naive	20	16	**42**	33	−12	ナイーブな
Cute	32	−12	**41**	31	37	かわいい
Feminine	11	−12	39	34	38	女性的な
Kind	19	20	32	**55**	30	優しい
Family oriented	18	10	30	**54**	−02	家庭的な
Thoughtful	21	31	32	**53**	−02	気が利く
Sincere	09	**49**	21	**53**	18	誠実な
Clean	17	29	05	**51**	35	清潔な
True	**47**	22	12	**49**	09	率直な
Warm	39	16	26	**49**	12	暖かい
Honest	39	39	10	**47**	04	正直な
Healthy	37	19	−07	**46**	08	健康的な
Considerate	35	33	17	**40**	21	思慮深い
Stylish	29	11	−01	10	**68**	おしゃれな
Elegant	−10	31	19	26	**65**	上品な
Romantic	18	05	31	16	**63**	ロマンチックな
Smooth	−12	38	16	08	**60**	素敵な
Extravagant	39	15	02	−01	**58**	贅沢な
Sexy	18	05	36	−02	**55**	色っぽい
Delicate	−05	29	25	27	**51**	繊細な
Stunning, cool	**44**	29	−12	−04	**50**	かっこいい
Sophisticated	39	19	−20	00	**47**	洗練された
Poised	12	39	03	−02	**41**	平静な

Note. N = 1,495 Japanese. All loadings multiplied by 100; loadings that were |.40| or larger are set in bold. Ex = Excitement; Co = Competence; Pe = Peacefulness; Si = Sincerity; So = Sophistication.

The separate principal-components analyses of terms within each dimension yielded a total of 12 facets: 4 for Dimension 1, 3 for Dimension 2, 2 for Dimension 3, 1 for Dimension 4, and 2 for Dimension 5. Within each facet, we then selected the three attributes with the highest item-to-total correlation. Each of the resulting 36 markers (3 attributes for each of the 12 facets) had high item-to-total correlations within its corresponding three-item facet and dimension (ranging from .80 to .94). Cronbach's alphas calculated for each of the five dimensions using the 36-item scale indicated high levels of internal reliability, ranging from .80 (Dimension 3) to .90 (Dimension 1). The final set of 36 Japanese brand personality markers and their corresponding facets and dimensions are depicted in Figure 2.

To further ensure high levels of reliability, we asked a small sample of Japanese participants (n = 60, 50% female, mean age = 31.3) to complete the same questionnaire approximately 8 weeks after completing the original questionnaire. A total of 15 participants each rated four groups of five brands (Groups 1–4) over the two time periods. Test–retest correlations for the five dimensions defined by the 36 final markers were high, ranging from .81 (Dimension 3) to .88 (Dimensions 5).

In sum, the results of Study 1 suggest that the brand personality space for Japanese individuals is organized in terms of five dimensions representing Excitement, Competence, Peacefulness, Sophistication, and Sincerity. Although four of these dimensions appear to have overlapping meaning with those identified in the United States using North American stimuli (Aaker, 1997), a fifth dimension (Peacefulness) appears to be relatively indigenous to Japan. In Study 2, we empirically test this premise by directly comparing Japanese and North American brand representational structures.

Study 2: Overlap Between Japanese and American Brand Personality Dimensions

Study 2 was conducted with the primary objective of assessing the conceptual overlap between the Japanese brand personality dimensions identified in Study 1 and American brand dimensions (Aaker, 1997). A secondary objective was to test the robustness of the five Japanese brand dimensions on a different sample of Japanese participants. To accomplish both objectives, we had an independent sample of Japanese individuals rate a subset of brands
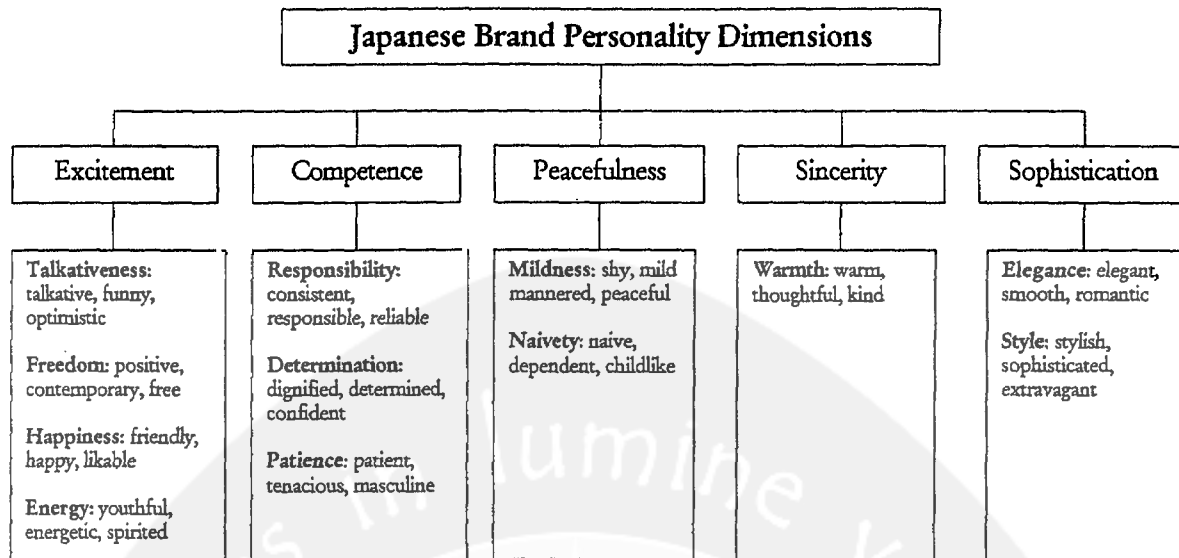
Figure 2. Five Japanese brand personality dimensions, and their facets.

using the Japanese attributes (English translated) identified in Study 1, as well as the attributes that represent the American dimensions.

Method

Participants. To gain confidence that the results found in Study 1 were driven by culture-based perceptions of brands rather than linguistic differences (Enriquez, 1979), we administered the questionnaire entirely in English rather than Japanese. Therefore, a slightly different profile of participants was used, one in which the participants were preselected to be bilingual. The sample of 114 Japanese participants was recruited from two sources: (a) Japanese students enrolled at a graduate business program at a large Japanese university (*n* = 56) and (b) Japanese exchange students at a large U.S. western university, affiliated with the Center for East Asian Studies (*n* = 58). The latter sample had lived in the United States an average of 1.8 years (*SD* = 2.04). Participants were paid 500 yen (or $5) for their completion of the study. Participants who scored less than 4.0 when rating their written English knowledge on a scale of 1 (*extremely limited*) to 5 (*extremely good*) were eliminated (*n* = 15), as were those who were not born in Japan (*n* = 9), leaving a total of 90 Japanese individuals (50% female, *M* age = 31.9).[5]

Procedure. The cover story and structure of Study 2 were identical to those of Study 1 with two exceptions. First, participants rated each of the brands on 70 attributes, 42 markers of the five American brand personality dimensions and the 36 markers of the Japanese dimensions identified in Study 1 (minus eight overlapping attributes: confident, contemporary, friendly, masculine, reliable, smooth, spirited, and young). Second, only 10 brands were used; these brands were randomly selected from those used in Study 1 (Levi's jeans, Mercedes automobiles, Chanel fragrance, Coca-Cola soft drinks, Mizuno sports apparel, McDonalds restaurants, Sony walkman, Nintendo toys, Seven Eleven stores, and Kleenex tissue). The order in which the attributes were presented was counterbalanced, as was the order in which the brands were presented in the questionnaire.

Results and Discussion

What is the overall degree of content overlap or specificity between the indigenous Japanese brand personality dimensions and the imported American dimensions? To address this question,

we first examined the correlations among the indigenous components and imported components. Scale scores representing each participant's rating of each brand on every imported and indigenous dimension were computed. The validity correlations between the conceptually related dimensions were as follows: Sincerity (Japan) and Sincerity (United States) = .63; Excitement (Japan) and Excitement (United States) = .75; Competence (Japan) and Competence (United States) = .80; and Sophistication (Japan) and Sophistication (United States) = .81. The size of these convergence correlations (*M* = .75) contrasted markedly with the average off-diagonal discriminant correlations (*M* = .29), suggesting both convergent and discriminant validity.

The correlation patterns for the culture-specific Ruggedness (United States) and Peacefulness (Japan) dimensions were as follows: The highest correlation between Ruggedness and any Japanese personality dimension was .39 (with Japanese Competence), and the highest correlation between Peacefulness and any American dimension was .41 (with U.S. Sincerity). Using Fisher's *z* transformations, a statistical comparison of these two off-diagonal correlations with the validity correlations revealed that the two correlations, although sizable, were significantly smaller, suggesting that Ruggedness and Peacefulness are constructs that mainly capture culture-specific meaning.

A question to bear in mind when evaluating the convergent and discriminant correlations reported above is the extent to which they reflect shared measurement error, shared meaningful (i.e., conceptual) variance, or both. One way to address this issue is to explore the latent structure of the variance shared by the indigenous Japanese and imported American scales through confirma-

---

[5] By relying on a different sample than in Study 1, Study 2 provides more support for the robustness of the findings. However, it also suffers from the limitation of small sample-size.

tory joint factor analysis (CFA).[6] Relying on this methodology, we investigated the fit for a model with six latent components. Four of these six dimensions represented brand personality constructs common to Japan and the United States (i.e., Competence, Sophistication, Excitement, and Sincerity) and the other two represented culture-specific brand personality constructs (i.e., Ruggedness and Peacefulness).[7] This model yielded adequate fit indices: $\chi^2(20, N = 900) = 163$, $p < .001$; CFI = .91, goodness-of-fit index (GFI) = .92. Next, we compared the fit of our hypothesized six-component model against a more conservative four-component model that did not include culture-specific dimensions and instead represented American Ruggedness and Japanese Peacefulness as variations of Competence and Sincerity respectively (as suggested by the off-diagonal correlations for Ruggedness and Peacefulness reported above). This four-component model yielded unsatisfactory fit indices, $\chi^2(26, N = 900) = 325$, $p < .001$; CFI = .71, GFI = .79, and a significant decrease in overall fit, $\Delta\chi^2(6) = 626$. These results support the idea that two culture-specific and four common latent dimensions may best represent unique and shared variance underlying the Japanese and American scales.

In sum, the convergent–discriminant validity patterns derived from the correlational and confirmatory factor analyses suggest that there is considerable overlap between the dimensions organizing the American brand perceptual space and those representing the Japanese brand perceptual space. Specifically, moderate to high convergence was found between the Japanese and American dimensions representing Sincerity, Excitement, Competence, and Sophistication. Two other dimensions, however, appeared to be more culture-specific: the Japanese dimension of Peacefulness and the American dimension of Ruggedness. In other words, although Japanese perceptions of brands include meaning associations related to Peacefulness, Americans perceive brands to carry meaning relating to Ruggedness. These differences are in accordance with research suggesting that attributes and behaviors related to assertiveness are not as likely to be endorsed and nurtured in East Asian cultures (Church & Katigbak, 1988); rather, such associations are often devalued and discouraged (Wierzbicka, 1991). The presence of the Peacefulness dimension, on the other hand, may reflect the visibility that obedience, maintaining harmony, and interdependence has in Asian cultures (Triandis, 1989). Indeed, "wa" (loosely translated into harmony or peace) is "undoubtedly the single most popular component in mottoes and names of companies across Japan" (Wierzbicka, 1991; p. 354), whereas "rugged individualism" is a common theme found among many popular American brands (Solomon, 1986; Vacker, 1992).

The patterns of cultural overlap and differences obtained in Study 2 are consistent with theorizing in the consumer behavior literature (McCracken, 1986), suggesting that the creation and nurturance of certain meaning associations in brands (e.g., Excitement) is often culturally general, although other brand meaning associations may prove highly specific (e.g., Ruggedness). In Study 3, we examined the robustness of this finding by replicating the process adopted in Studies 1 and 2 in a new cultural context: Spain.

Study 3: Identification of Indigenous Spanish Brand Personality Dimensions

The objective of Study 3 was to test the generalizability of the dimensional structure uncovered in Study 1 in a different cultural

context. Specifically, we were interested in the following questions: To what degree will the perceptual space of brand personality in Spain also be organized around five dimensions? More importantly, given the Spanish culture's emphasis on interdependence values and allocentric beliefs, should a dimension similar to the Peacefulness construct uncovered in Japan also be expected? Finally, what is the likelihood that culture-specific Spanish brand personality constructs will emerge given Spain's unique cultural idiosyncrasies (Crow, 1985; McVeagh, 1990)? To address these questions, we constructed two studies that relied on emic and combined emic–etic methodology similar to that used in Studies 1 and 2.

Method

Stimuli selection. A set of 25 well-known global brands was selected on the basis of the identical criteria and process used in Study 1. The only difference was the specific brands in the set. For example, one group of brands contained Chanel fragrance (symbolic), Ariel detergent (utilitarian), NH and Melia hotel (symbolic/utilitarian), Volkswagen automobiles (symbolic/utilitarian), and Coca-Cola (constant across all brand groups).

Personality attribute selection. Personality attribute selection was also guided by the criteria used in Study 1. A free-association task was conducted in which Spanish participants who were economics or business undergraduate and graduate students ($n = 36$, 55% female. M age = 25.1) were asked to list the personality attributes that first come to mind when thinking about the most salient brand in 10 randomly selected product categories identified in stimuli selection process (and based on the same overall profile as in Study 1), yielding 128 attributes. Next was the addition of 64 attributes compiled from three sources that rely on brand personality research in Spain (Spanish advertising agency, client company, and research supplier), 44 markers that were representative of the Big Five personality markers (Benet-Martínez & John, 1998), and 30 personality descriptors representative of Benet-Martínez's (1999) indigenous Spanish personality constructs. Finally, from the total set of 266 personality attributes, three groups of attributes were eliminated because they were redundant ($n = 79$), ambiguous ($n = 16$), or relatively irrelevant to the construct of interest ($n = 94$).[8] Thus, the result of this stage was the identification of 77 attributes.

Participants and procedure. To enhance generalizability, a sample ($n = 692$) was selected that represented the Spanish population with respect to five demographic dimensions: gender (62% female), age ($M = 31.5$), marital status (35% married), education level (30% of the

---

[6] In Study 2, facets were used as indicators of the latent factors (which were allowed to correlate). The same was the case in Study 4.

[7] Many different indexes are available to assess the degree to which a hypothesized model is consistent with observed data. The chi-square statistic is the most widely used but is highly dependent on sample size so it can be significant even for models that fit the data well (Bentler, 1990). Another index is the comparative fit index (CFI; Bentler, 1990), which ranges from 0 to 1 and is relatively independent from sample size. The rule of thumb is that a CFI of .90 or greater indicates that the specified model fits the data well.

[8] To identify the relatively irrelevant attributes, we had Spanish participants ($n = 75$, 46% female, M age = 34) rate how descriptive the 171 attributes (266 minus the redundant and ambiguous attributes) were of the most salient brand in 10 product categories that spanned the symbolic–utilitarian framework. To isolate the most relevant attributes for this set of stimuli, we set the cutoff for the final list of attributes at a scale rating of 4 (very descriptive), thereby leaving 77 attributes for Study 3. Of those 77 attributes, 67% were indigenous (plus 7% from the Big Five and 26% from Aaker, 1997).

sample had a college or graduate school education), and occupation (48% of the sample were professional or technical workers). The participants in each of the six brand groups were selected to have the same profile as the total sample (n ranged from 108 to 131 in each of the six brand groups). Participants belonged to a Spanish national mail panel and were entered into a drawing for a set of electronic products (five televisions and two VCRs). The identical procedure used in Study 1, including counterbalancing, was followed in Study 3.

Results and Discussion

As in Study 1, no significant differences were found in the mean ratings of Coca-Cola across the groups. To identify the individual differences in perceptions of brand personality dimensions, the correlations among the personality traits (n = 77) across individuals' ratings of each brand were factor analyzed using principal-components analysis and varimax rotation. Replicating results from Study 1, we found that a five-component solution proved to be the most adequate to organize the covariance among the 77 Spanish brand personality descriptors. The choice of solution, like in Study 1, was based on the following criteria: (a) scree plot (the first 10 components were: 21.2, 6.8, 4.1, 3.2, 2.0, 1.3, 1.0, 0.9, 0.8, and 0.6), indicating a moderate break after the fifth latent root, (b) stability of the solution in separate principal-components analyses with distinct subsamples, (c) meaningfulness of the dimensions (at least seven traits loaded on each of the first five factors; only one trait loaded on the sixth component, Ruggedness), and (d) levels of variance explained (Dimensions 6 through 9 explained under 1.2% each). The five-component solution is reported in Table 2. Labels for the five dimensions were selected on the basis of the content of the dimensions.

As can be seen in Table 2, Dimension 1 (Excitement) included markers such as outgoing, daring, young, and unique, several of which are terms that also serve as markers of Excitement in the American and Japanese brand personality sets. Representative markers of Dimension 2 (Sincerity) included considerate, thoughtful, real, and sincere, which are consistent with the markers of Sincerity in the United States as well as Japan. Dimension 3 (Sophistication) was depicted by good looking, glamorous, upper-class, and stylish markers, which are consistent with those found in the United States for Sophistication. However, it was interesting that another facet of Sophistication included confident, successful, and leader (markers of Competence in the American model), which appear to be unique to Spain. Dimension 4 (Peacefulness) included markers such as affectionate, peaceful, naive, and dependent, which are consistent with the markers representing Peacefulness in the Japanese cultural context. Finally, Dimension 5 (Passion) included fervent, passionate, spiritual, and bohemian as representative markers, consistent with the culture-specific findings highlighted in Benet-Martínez and Waller (1997).[9]

Identification of markers and facets. To identify a smaller set of personality attributes representative of each of the Spanish five dimensions, we conducted a facet analysis identical to that adopted in Study 1. Second, five-facet analyses that were the same as those conducted in Study 1 were run. This analysis yielded a total of 11 facets: 3 for Dimension 1, 2 for Dimension 2, 2 for Dimension 3, 2 for Dimension 4, and 2 for Dimension 5. To maintain high levels of reliability, three attributes with the highest item-to-total correlation were selected from each facet, leaving 33 attributes (three attributes for each of the 11 facets; see Figure 3). Each attribute had high item-to-total correlations on the facets and dimensions

(ranging from .70 to .84), thereby ensuring high internal consistency. Further, Cronbach's alphas that were calculated for each of the five dimensions using the 33-attribute scale ranged from .80 (Dimension 3) to .91 (Dimension 1), suggesting high levels of internal reliability.

Finally, as in Study 1, an independent set of Spanish participants (n = 58, 60% female, M age = 21.3) were asked to complete the same questionnaire approximately 7 weeks (Time 2) after completing the original questionnaire. Four versions of the questionnaire were used (n = 14–15 participants in each cell). The average Pearson correlation of the five dimensions as measured at Time 1 and Time 2 was .80 (ranging from .77 to .83).

In sum, the results of Study 3 suggest that five dimensions representing Excitement, Sincerity, Peacefulness, Sophistication, and Passion organize brand personality attributes in Spain. Three findings appear particularly noteworthy. The first was the emergence of several components that convey meaning similar in nature to those previously found in the United States (i.e., Excitement, Sincerity) and Japan (i.e., Excitement, Sincerity, Peacefulness). Second, one dimension that appears to carry culture-specific meaning emerged, Passion. Third, there was a blending of Competence associations into the Sophistication dimension in Spain. Study 4 was conducted to determine the degree to which these findings are robust across stimuli and participants, and to explicitly examine the degree of overlap between these indigenous dimensions and those found in the United States.

Study 4: Overlap Between Spanish and American Brand Personality Dimensions

In Study 4, we compared the Spanish and North American brand representational structures by assessing their conceptual overlap at the dimension level through correlational and confirmatory joint factor analysis.

Method

Participants. As in Study 2, a sample of 101 Spanish individuals was recruited from two sources: (a) Spanish students enrolled at a graduate program in Spain (n = 42) and (b) Spanish individuals living in the United States, affiliated with the Association Española de Silicon Valley (n = 59). The average time that the latter sample lived in the United States was 2.8 years (SD = 2.66). Participants were paid approximately 1,000 pesetos (or approximately $5) for their participation. As in Study 2, participants who scored less than 4.0 when rating their written English knowledge were eliminated (n = 12), as were any participants not born in Spain (n = 3), thereby leaving 87 Spanish individuals (39% female, M age = 25.3).

Procedure. A total of 10 brands from the overall set used in Study 3 was randomly selected (Rolex watches, Chanel fragrance, Marlboro cigarettes, Armani suits, Coca-Cola soft drinks, Nintendo toys, Unicef group, Sony CD player, Kodak film). Participants rated each of these 10 brands on 65 attributes (33 markers of the Spanish dimensions and 42 markers of the American dimensions), minus the 10 overlapping attributes (daring, young, spirited, unique, real, sincere, down-to-earth, good looking, upper-class, tough, leader). The final set of Spanish markers was back translated

---

[9] As in Study 1, two additional analyses were run to gain insight into the robustness of the results. We examined the structure obtained using the disaggregated data and an oblique rather than an orthogonal rotation, as well as the factor solutions obtained from aggregated data (n = 25 brands). The results provided structures that were similar to that reported above.

through the process outlined in Study 1. Interrater agreement was 89%; discrepancies were resolved through discussion. For the purposes of assessing the convergent validity, we also included the three markers of Peacefulness for Japan that did not appear in the Peacefulness for Spain dimension (childlike, shy, dependent). Finally, attribute and brand order were counterbalanced.

Results and Discussion

First, we assessed the conceptual overlap between the indigenous Spanish and imported American brand personality dimensions (plus the Japanese Peacefulness dimension) by examining the patterns of intercorrelations among all the scales representing these constructs. Correlations between corresponding dimensions were as follows: Sincerity (Spain) and Sincerity (United States) = .85; Excitement (Spain) and Excitement (United States) = .87, and Sophistication (Spain) and Sophistication (United States) = .83. The correlation between the Spanish and Japanese Peacefulness dimensions was .78. These validity correlations (M = .83) contrasted with the off-diagonal correlations (M = .32), suggesting moderate to high levels of convergent and discriminant validity. A close examination of the off-diagonal correlations revealed that their relatively large absolute mean value was mostly driven by the presence of a large (.79) correlation between Sophistication (Spain) and Competence (United States). This result supports our previous observation that Sophistication in Spain appears to comprise a unique mixture of Sophistication and Competence attributes (i.e., Competence in Spain appears to be a facet of Sophistication instead of defining a separate dimension).

The correlation patterns for the culture-specific Passion (Spain) and Ruggedness (United States) dimensions were as follows: The highest correlation between Ruggedness and any Spanish personality dimension was only .42 (with Spanish Sophistication), and the highest correlation between Passion and any American dimension was .51 (with American Sophistication). Comparisons using Fisher's z transformations revealed that these two off-diagonal correlations are significantly smaller than the four validity pairwise correlations.

As in Study 2, we also examined the latent structure of the Spanish and American scales (plus the Japanese Peacefulness scale) through confirmatory joint factor analyses. We first examined a model that specified seven latent dimensions: Three dimensions representing brand personality constructs common to the United States and Spain (i.e., Sophistication, Excitement, and Sincerity), one dimension representing the one brand personality construct common to Spain and Japan (Peacefulness), and two dimensions representing Spanish- and U.S.-specific brand personality constructs (Passion and Ruggedness, respectively). This seven-component model fitted the data adequately, $\chi^2(23, N = 870) = 111$, $p < .001$; CFI = .92, GFI = .91. We also tested a more conservative four-component model in which dimensions not shared by the United States and Spain would load as follows: Ruggedness and Competence on Sophistication, Passion on Sophistication, and Peacefulness on Sincerity (reflecting the patterns of off-diagonal correlations discussed above). This four-component model yielded unsatisfactory fit indices, $\chi^2(43, N = 870) = 392$, $p < .001$; CFI = .55, GFI = .74, and a significant decrease in overall fit, $\Delta\chi^2(20) = 281$. These results corroborate that four culture-specific and three common dimensions are needed to capture the major sources of variance underlying the Spanish and American data.

General Discussion

The overarching goal of our studies was to gain insight into how cultural meaning is represented in individuals' perceptions of symbolic objects such as commercial icons. Findings from Studies 1 and 2 identified a set of brand personality dimensions that share similar meaning in Japan and the United States (Sincerity, Excitement, Competence, and Sophistication), as well as relatively culture-specific Japanese (Peacefulness) and American (Ruggedness) dimensions. Studies 3 and 4 extended this set of findings to Spain. Results from these studies also revealed brand personality dimensions that shared similar meaning in both Spain and the United States (Sincerity, Excitement, and Sophistication), plus nonshared Spanish (Passion) and American (Competence and Ruggedness) dimensions. Consistent with the premise that individuals in Japanese and Spanish cultures are more likely to embrace harmony-oriented value types than are individuals in the United States (Schwartz, 1994), Peacefulness emerged in Spain as it did in Japan.

These results are consistent with the proposition that consumption symbols such as commercial brands may carry both relatively culturally common and culturally specific meaning. Consider, for example, the meaning of the Japanese and Spanish Peacefulness dimensions. Considerable research has demonstrated that members of East Asian and Latin cultures tend to place greater weight on cooperation and harmony relative to members of North American cultures, who give more value to mastering the social environment through self-assertion and independence (Hsu, 1983; Marín & Marín, 1991; Triandis et al., 1984). The emergence of Peacefulness in Japan and Spain is consistent with these countries' significantly higher scores relative to the United States on Harmony values (see Schwartz, 1994, Table 7.3). The consequences of this cultural variance in value endorsement range from preferences in persuasion appeals that convey harmony (e.g., Kim & Markus, 1999) to subjective assessments of one's happiness that covary with perceptions of harmony in one's relationships (e.g., Kwan, Bond, & Singelis, 1997) to preference for conflict resolution strategies that involve mutual coordination of feelings (e.g., Gabrielidis, Stephan, Ybarra, Pearson, & Villareal, 1997; Markus & Lin, 1999). In contrast, individuals in the United States value self-assertion and personal achievement, as demonstrated in both preferences toward persuasive appeal (Han & Shavitt, 1994) and correlates of life satisfaction (Oishi et al. 1999). Our results indicate that another potential consequence of cultural variation in the emphasis placed on cooperation and harmony relative to individualism and self-assertion involves the emergence of unique configurations in the meaning embedded in commercial brands. For example, the culture-specific status of Ruggedness, with its associations with institutionalized American values such as strength, masculinity, and toughness (Solomon, 1986), seems to align well with the findings on value endorsement, whereby the United States has relatively higher scores on Mastery and lower scores on Egalitarian Commitment as compared with Japan and Spain (Schwartz, 1994).

We now consider the meaning of the Passion dimension. The emergence of this dimension in Spain is supported by recent findings from cultural studies suggesting links between Latin cultures' characteristic higher levels of felt and communicated emotions (Basabe et al., 2000; Zummuner and Fischer, 1995) and several sociocultural and psychological factors such as honor- and

Table 2
Spanish Brand Personality Dimensions

Abbreviated English translation	Varimax-rotated principal factors					Original Spanish (Castillian) term
	Ex	Si	So	Pe	Pa	
Happy	**80**	06	−03	10	16	alegre
Fun	**78**	02	−05	12	20	divertida
Spirited	**75**	05	12	13	07	animosa
Outgoing	**75**	13	−02	16	19	extrovertida
Sharp, shrewd	**73**	10	02	01	19	avispada
Young	**72**	−06	14	05	05	joven
Energetic	**68**	07	26	11	04	llena de vida y energía
Daring	**67**	−09	26	04	24	atrevida
Cool	**67**	00	18	12	10	fresca
Active	**67**	21	07	−06	16	activa
Spirited	**65**	24	14	04	12	viva
Imaginative	**60**	17	19	05	22	creativa
Popular	**58**	10	11	05	−15	popular
Original	**57**	15	24	05	24	original
Contemporary	**55**	08	41	−04	03	contemporánea
Unique	**53**	07	39	10	13	única
Playful	**53**	02	04	11	44	pícara
Familiar	**52**	35	−08	19	−11	familiar
Independent	**47**	17	38	−03	17	independiente
Free	**46**	−01	15	24	12	libre
Likable	**41**	18	41	34	11	simpaticá
Fiesty	37	06	24	14	13	peleona
Considerate	−01	**76**	19	09	14	considerada
Thoughtful	−06	**72**	17	14	19	atenta
Well mannered	00	**72**	20	15	10	correcta
Orderly	−01	**71**	24	11	11	ordenada
Moderate	−06	**70**	19	14	13	moderada
Balanced	01	**67**	27	06	11	equilibrada
Down-to-earth	16	**65**	16	14	00	realista
Trustworthy	10	**64**	17	27	01	honrada
Sincere	31	**57**	11	28	03	sincera
Real	33	**55**	12	11	00	real
Logical	11	**51**	32	25	−01	lógica
Rational	13	**49**	41	17	00	racional
Hardworking	29	**46**	39	11	−01	trabajadora
Practical	28	**42**	27	15	−10	práctica
Flexible	28	**42**	13	29	06	flexible
Good looking	−06	16	**67**	22	21	elegante
Glamorous	05	10	**60**	24	29	glamorosa
Upper class	02	23	**59**	07	15	de clase superior
Strong	19	19	**59**	−02	12	fuerte
Secure	34	37	**55**	−05	00	segura
Tough	09	18	**54**	08	13	dura
Leader	35	22	**53**	−10	05	dirigente
Confident	39	32	**51**	−04	07	segura de si misma
Persistent	38	22	**49**	02	00	persistente
Successful	39	24	**47**	06	08	exitosa
Stylish	27	36	**46**	17	00	moderna
Reliable	26	42	**46**	07	−08	fiable
Reflective	34	33	**42**	18	11	pensativa
Feminine	01	07	**41**	38	21	femenina
Western	13	18	**40**	−01	03	occidental
Masculine	−01	08	36	19	19	masculina
Naive	12	05	03	**64**	07	ingenua
Mild mannered	07	27	19	**61**	−01	apacible
Good-natured	22	39	−06	**60**	14	buenaza
Shy	−05	07	01	**59**	12	tímida
Peaceful	08	34	19	**59**	−06	pacífica
Affectionate	30	36	−02	**58**	19	cariñosa
Sweet	29	26	04	**56**	18	dulce
Docile	05	36	−00	**54**	18	dócil
Calm	10	16	27	**48**	06	tranquila
Childlike	33	−06	−14	**47**	00	infantil
Gentle	27	39	01	**46**	11	amable
Dependent	01	09	08	**41**	12	dependiente

Table 2 (*continued*)

Abbreviated English translation	Varimax-rotated principal factors					Original Spanish (Castillian) terms
	Ex	Si	So	Pe	Pa	
Rugged	−03	−03	10	31	28	áspera
Normal	07	29	06	30	−06	normal
Fervent	34	06	12	11	**68**	fervorosa
Passionate	37	07	16	11	**65**	apasionada
Impulsive	**47**	03	09	03	**62**	impulsiva
Temperamental	36	13	18	00	**61**	temperamental
Emotional	**41**	14	07	13	**56**	emocional
Intense	39	15	19	01	**55**	intensa
Mystical	−06	13	10	**43**	**52**	mística
Spiritual	−05	16	09	**44**	**51**	espiritual
Bohemian	10	04	12	32	**51**	bohemia
Extravagant	25	−07	18	17	**42**	extravagante

Note. N = 692 Spaniards. All loadings multiplied by 100; loadings |.40| or larger are set in bold. Ex = Excitement; Si = Sincerity; So = Sophistication; Pe = Peacefulness; Pa = Passion.

Catholic-related values (Rodriguez, Manstead, & Fischer, 2000; Zubieta, Fernandez, Vergara, Martinez, & Candia, 1998), differences in temperament development (Axia, Prior, & Carelli, 1992), and personality (Benet-Martínez, 1999). Portrayals of Spaniards and Latin individuals as "intense and passionate" abound not only in the social sciences, but also in the popular media. Spain is frequently advertised to the visitor as a land of intense and pleasurable experiences; a country that not only celebrates gastronomy, art, socializing, and risk taking, but also performs them intensely (e.g., http://www.cyberspain.com/passion/; see also McVeagh, 1990). Novelists (Hemingway, 1926), travel journalists (Gibson, 1998), film experts (Pally, 1991), and sociologists (Crow, 1985; Hooper, 1987; Shubert, 1990) call attention to the centrality of passion in Spanish culture. Further, supporting our premise that cultural values penetrate the creation and perception of commercial symbols, we found several Spanish companies that engage in branding efforts and marketing campaigns in which the construct of "passion" is central (e.g., http://www.osborne.es/english/presen/campa.htm).

A particularly interesting feature of Passion is how affective experience (e.g., fervent, passionate, and intense) and spirituality (e.g., spiritual, mystical, and bohemian) are combined in a single construct, an association that, according to anthropologists of religion (Mitchell, 1990), is commonly found in Southern European, Catholic cultures. In Spain, for instance, the association between affective–sensual experiences and religion is captured in the following quote: "Religious events in Spain are celebrated with wine and dance and every excess that goes hand in hand with merriment" (McVeagh, 1990, p. 73). The two components of Passion (emotional intensity and spirituality) can also be interpreted in light of Schwartz's (1994) values, particularly in relation to Affective and Intellectual Autonomy. The unique emphasis on unrestrained affect captured by Passion denotes an orientation toward the enjoyment and exploration of one's emotional life that, according to Schwartz's value theory, is at the core of Affective Autonomy. Not surprisingly, Spain has a remarkably high score on this value dimension, one that is significantly above Japan's and United State's scores and close to other Mediterranean societies
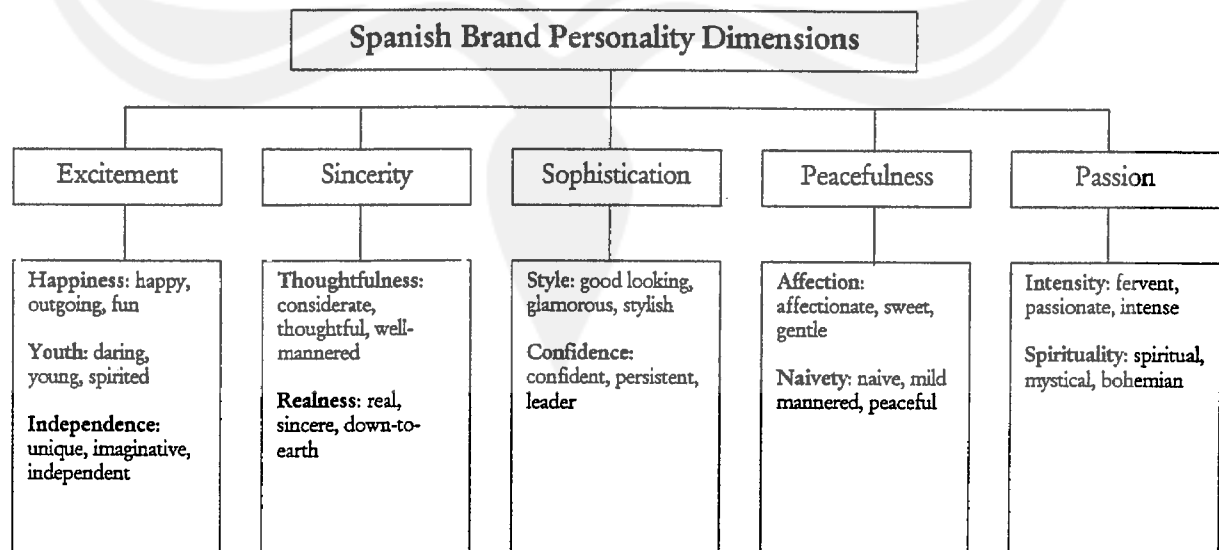
Figure 3. Five Spanish brand personality dimensions, and their facets.

such as France and Greece (Schwartz, 1994). The other emphasis of Passion, spirituality and worldly lifestyle, on the other hand, seems particularly related to Intellectual Autonomy, another value orientation for which Spain scores quite highly, and above Japan and the United States. Note that the emergence of Passion can not be interpreted as an indication that Affective and Intellectual Autonomy are emphasized in Spain only, given that Excitement, which also seems to relate to Affective Autonomy needs, emerged in all three cultures. Most likely, the emergence of Passion reflects culture-specific meanings and needs related to Excitement (i.e., in Spain, fulfilling one's needs for novelty and excitement may be largely achieved by having intense emotional and spiritual experiences) that are powerful enough to define their own dimension and may help to explain Spain's remarkably high scores on Autonomy.

In contrast to Peacefulness, Ruggedness, and Passion, the Sincerity, Excitement, and Sophistication dimensions appear to be more similarly construed across cultures. This suggests that, in addition to potential cultural variance in consumer needs, commercial brands may reflect more universally held individual needs. However, despite the cross-cultural stability of the above dimensions, the results of the cross-cultural correlations in Studies 2 and 4 indicate that the correspondence is not unitary. For example, Excitement is associated with being young, contemporary, spirited, and daring across the cultural contexts. However, it also conveys imaginativeness, uniqueness, and independence in North America and Spain. In contrast, in Japan, it contains a "talkativeness" facet (e.g., talkative, funny, and optimistic). This idiosyncratic meaning is consistent with the relativist argument that constructs shift in meaning when examined in different cultural contexts (Shweder, 1990). This implication is particularly important in the context of Sophistication, for which there is considerable overlap in certain attributes across the cultures (e.g., glamorous, good looking, stylish, smooth). However, unique to Spain was a secondary facet that contains attributes more closely associated with Competence in Japan and the United States. This finding indicates that Sophistication takes on a different meaning in Spain than it does in North America or Japan. In other words, the interpretation of the meaning of a commercial brand must take into consideration the particular cultural lens through which the brand is being seen. This result highlights the notion that absolute equivalents and universals may not be as useful as understanding and investigating the idea of partial equivalents and partial universals (Wierzbicka, 1991). In other words, the dimensions that emerged in these four studies appear to simply vary in the degree to which they contain universal meaning relative to culture-specific meaning.

Our findings also have implications for the understanding of human personality. As discussed earlier, our culture-specific brand personality dimensions (Ruggedness, Passion, and Peacefulness) can be related to particular patterns of human personality traits, emotions, and value orientations characteristic of American, Spanish, and Japanese cultures respectively. These links between brand and human personality differences are to be expected if one acknowledges the inseparability of culture and psyche (Markus & Lin, 1999) and the largely socially constructed nature of personality (Hampson, 1988). Namely, culture can be see as a network of shared meaning that influences how social perception is organized, from the way commercial symbols are seen to how human personality is described and even experienced. Furthermore, it is interesting to note that our work shows that, as with human

personality, brand personality appears to be consistently organized around five dimensions. The robustness of a five-dimensional structure across these two kinds of personality perception suggests that, functionally, social perception may be influenced by cognitive-economy processes similar to those affecting memory (Miller, 1956), in which information is best organized and retrieved around seven "chunks" of information (±2).

The contributions of this research involve a substantive focus on identifying and examining the culturally similar and culture-specific meaning carried and conveyed in consumption symbols, as well as the methodological emphasis on a combined emic–etic procedures to compare this approach. However, despite these contributions, there are limitations that reveal areas for future research. First, from a methodological perspective, this research relied on a limited number of attributes and commercial brands to create the perceptual space of brands. Future research is needed to determine the degree to which the results found in the current research are generalizable across contexts, persons, and brands.

Second, the current research took a single picture of individuals' perceptions of the meaning of commercial brands at a static point in time. Therefore, although the conceptualization of culture put forth in this research is dynamic, the nature of this dynamism was not explored. Future research is needed to determine the degree to which exposure to the constructs represented by the indigenous dimensions, and market globalization efforts more broadly, makes all of us psychologically more similar (Hermans & Kempen, 1998). Shore (1996), for example, comments that as Coke and Pepsi quickly made their way to the recently liberated South Africa, "a global mass culture with Western commodities at its heart was created" (p. 9). To what degree do these Western commodities subsequently shape the new culture in which they are distributed? The answer may depend not only on the meaning of those Western brands (e.g., Coca-Cola), but also on the nature of the interaction between the brand and individuals in the culture (e.g., South Africa). If meaning construction is an ongoing process, one that involves the active interaction with people (Kim & Markus, 1999; Shweder, 1990; Shore 1996), the distribution of these Western commodities may not in fact lead to psychologically more similar individuals. Rather, it may lead to individuals who are exposed to multiple cultural models and a commercial brand whose meaning is jointly created by advertisers and individuals in the culture.

Finally, the current work is a first step toward understanding the link between the culture and psyche in the context of commercial symbols; however, it remains exploratory in nature. Future research is needed to elucidate the specific mechanisms by which commercial symbols are imbued with meaning, as well as how that meaning characterizes perceptions of human attributes and values (Roccas, Sagiv, Schwartz, & Knafo, 2000). In this way, the more dynamic nature of culture may be taken into consideration, and the movement of meaning from culture to the individual may be explored more directly. Conducting longitudinal research is one way to address this question; another is to examine the process of frame shifting. Recent research on biculturalism has shown that individuals have the ability to "frame shift," that is, to view things from different cultural vantage points (Hong et al., 2000). In this light, the culture-as-a-lens metaphor (McCracken, 1986) is extended to one in which multiple glasses with different color lenses can be put on and taken off. Given this perspective, the question arises as to what degree a particular perceptual representation of

brands in consumers' minds leads to different evaluations of brands. That is, what happens when a consumer holds a Japanese perception of the structural space of brands? What are the consequences of holding such a mental representation, particularly as it compares with a situation in which one holds the American (or Spanish) mental representation of brands? To address these questions, a set of priming experiments that manipulate the salience of one cultural frame over another may be conducted. For example, in Japan, *kanji* is perceived as a relatively traditional Japanese writing system, whereas *katakana* is perceived as more modern or westernized. Therefore, one might examine the degree to which brand names or personality attributes written in kanji (or katakana) may evoke a Japanese (or American) perceptual structure, thereby leading to potentially different sets of consequences. In this way, the more dynamic nature of culture may be taken into consideration and the movement of meaning from culture to the individual may be explored more directly.

In conclusion, the work presented here shows that the study of consumption symbols, such as commercial brands, is a useful approach to the understanding of how cultural beliefs and values are represented and institutionalized. In accordance with an ethnopsychological perspective (Wierzbicka, 1991), our results indicate that the meaning embedded in commercial brands has both culturally specific and culturally common elements. Above all, our studies underscore the mobile quality of culture and the bidirectional relationship between the individual and culture.

References

Aaker, J. (1997). Dimensions of brand personality. *Journal of Marketing Research, 34*, 342–352.

Aaker, J., & Maheswaran, D. (1997). The effect of cultural orientation on persuasion. *Journal of Consumer Research, 24*, 315–328.

Axia, G., Prior, M., & Carelli, M. G. (1992). Cultural influences on temperament: A comparison of Italian, Italio-Australian, and Anglo-Australian toddlers. *Australian Psychologist, 27*, 52–56.

Basabe, N., Paez, D., Valencia, J., Bernard, R., Pennebaker, J., Diener, E., & Gonzalez, J. L. (2000). Sociocultural factors predicting subjective experience of emotion: A collective level analyses. *Psicothema, 12*, 55–69.

Belk, R. W., & Pollay, R. W. (1985). Images of ourselves: The good life in twentieth century advertising. *Journal of Consumer Research, 11*, 887–898.

Benet-Martínez, V. (1999). Exploring indigenous Spanish personality constructs with a combined emic–etic approach. In J. C. Lasry, J. G. Adair, & K. L. Dion, (Eds.), *Latest contributions to cross-cultural psychology* (pp. 151–175). Lisse, The Netherlands: Swets and Zeitlinge.

Benet-Martínez, V., & John, O. P. (1998). "Los Cinco Grandes" across cultures and ethnic groups: Multitrait-multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology, 75*, 729–750.

Benet-Martínez, V., & Waller, N. G. (1997). Further evidence for the cross-cultural generality of the Big Seven Factor model: Indigenous and imported Spanish constructs. *Journal of Personality, 65*, 567–598.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*, 238–246.

Berry, J. W. (1969). On cross-cultural comparability. *International Journal of Psychology, 4*, 119–128.

Berry, J. W., Poortinga, Y. H., Segall, M. H., & Dasen, P. R. (1992). *Cross-cultural psychology: Research and applications.* New York: Cambridge University Press.

Bond, M. H. (1994a). Into the heart of collectivism: A personal and scientific journey. In U. Kim, H. C. Triandis, C. Kagitcizbasi, S. Choi,

& G. Yoon (Eds.), *Cross cultural research and methodology series: Vol. 18. Individualism and collectivism: Theory, method, and applications* (pp. 66–84). Thousand Oaks, CA: Sage.

Bond, M. H. (1994b). Trait theory and cross-cultural studies of person perception. *Psychological Inquiry, 5*, 114–117.

Briley, D., Morris, M. W., & Simonson, I. (2000). Culture, reasons, and compromise in a choice dilemma: Chinese and American cultures bring different reasons to mind. *Journal of Consumer Research, 27*(2), 157–178.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 3*, 185–216.

Church, T., & Katigbak, M. (1988). The emic strategy in the identification and assessment of personality dimensions in a non-Western culture. *Journal of Cross-Cultural Psychology, 9*, 140–163.

Cooper, C. R., & Denner, J. (1998). Theories linking culture and psychology: Universal and community-specific processes. *Annual Review of Psychology, 49*, 559–584.

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory and NEO Five-Factor inventory professional manual.* Odessa, FL: Psychological Assessment Resources.

Cross, S., & Markus, H. R. (1999). The cultural constitution of personality. In L. Pervin & O. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 378–396). New York: Guilford Press.

Crow, J. A. (1985). *Spain: The root and the flower.* Berkeley, CA: University of California Press.

DiMaggio, P. (1997). Culture and cognition. *Annual Review of Sociology, 23*, 263–287.

Douglas, M., & Isherwood, B. (1978). *The world of goods: Towards an anthropology of consumption.* New York: Norton.

Enriquez, V. (1979). Towards cross-cultural knowledge through cross-indigenous methods and perspectives. *Hong Kong Psychological Society Bulletin, 3*, 7–21.

Fiske, A., Kitayama, S., Markus, H. R., & Nisbett, R. (1998). The cultural matrix of social psychology. In D. T. Gilbert & S. Fiske (Eds.), *The handbook of social psychology* (pp. 915–981). Boston: McGraw-Hill.

Gabrielidis, C., Stephan, W. G., Ybarra, O., Pearson, V. M., & Villareal, L. (1997). Preferred styles of conflict resolution: Mexico and the United States. *Journal of Cross-Cultural Psychology, 28*, 661–677.

Gibson, V. (1998). Zest for life: From flamenco to flirting, Spain sizzles. *Travel Canoe.* Retrieved September 10, 2000 from the World Wide Web: http://www.canoe.ca/TravelEurope/spain.html

Gouvenia, V. V., & Ross, M. (2000). Hofstede and Schwartz's models for classifying individualism at the cultural level: Their relation to macro-social and macro-economic variables. *Psicothema, 12*, 25–33.

Hampson, S. E. (1988). *The construction of personality: An introduction.* New York: Routledge and Kegan Paul.

Han, S., & Shavitt, S. (1994). Persuasion and culture: Advertising appeals in individualistic and collectivistic societies. *Journal of Experimental Social Psychology, 30*, 326–350.

Hemingway, E. (1926). *The sun also rises.* New York: Grosset & Dunlap.

Hermans, J. M., & Kempen, H. J. G. (1998). Moving cultures: The perilous problems of cultural dichotomies in a globalizing society. *American Psychologist, 53*, 1111–1120.

Hofstede, G. (1980). *Culture's consequences.* Beverly Hills, CA: Sage.

Hong, Y., Morris, M., Chiu, C., & Benet-Martínez, V. (2000). Multicultural minds: A dynamic constructivist approach to culture and cognition. *American Psychologist, 55*, 709–720.

Hooper, J. (1987). *The Spaniards: A portrait of the new Spain.* London: Penguin Books.

Hsu, J. (1983). Asian family interaction patterns and their therapeutic implications. *International Journal of Family Psychiatry, 4*, 307–320.

Hui, C. H., & Triandis, H. C. (1985). Measurement in cross-cultural psychology: A review and comparison of strategies. *Journal of Cross-Cultural Psychology, 16*, 131–152.

Kim, H., & Markus, H. R. (1999). Deviance or uniqueness, harmony or

conformity? A cultural analysis. *Journal of Personality and Social Psychology, 77,* 785–796.

Kitayama, S., Markus, H. R., Matsumoto, H., & Norasakkunkit, V. (1997). Individual and collective processes in the construction of the self: Self-enhancement in the United States and self-criticism in Japan. *Journal of Personality and Social Psychology, 72,* 1245–1267.

Kwan, V. S. Y., Bond, M. H., & Singelis, T. M. (1997). Pancultural explanations for life satisfaction: Adding relationship harmony to self-esteem. *Journal of Personality and Social Psychology, 73,* 1038–1051.

Lannon, J. (1993). Asking the right questions: What do people do with advertising? In D. Aaker & A. Biel (Eds.), *Brand equity and advertising* (pp. 163–176). Hillsdale, NJ: Erlbaum.

Leung, K., & Bond, M. H. (1989). On the empirical identification of dimensions for cross-cultural comparisons. *Journal of Cross-Cultural Psychology, 20,* 133–151.

Levi-Strauss, C. (1966). *The savage mind.* Chicago: University of Chicago Press.

Marín, G., & Marín, B. V. (1991). Research with Hispanic populations. In *Applied social research methods series* (Vol. 23). Newbury Park, CA: Sage.

Marín, G., & Triandis, H. C. (1985). Allocentrism as an important characteristic of the behavior of Latin Americans and Hispanics. In R. D. Guerrero (Ed.), *Cross-cultural and national studies in social psychology* (pp. 85–104). Oxford, England: Elsevier Science.

Markus, H. R., & Lin, L. R. (1999). Conflictways: Cultural diversity in the meanings and practices of conflict. In D. A. Prentice & D. T. Miller (Eds.), *Cultural divides: Understanding and overcoming group conflict* (pp. 302–333). New York: Russell Sage Foundation.

Matsumoto, D. (1999). Culture and self: An empirical assessment of Markus and Kitayama's theory of independent and interdependent self-construal. *Asian Journal of Social Psychology, 2,* 289–310.

McCracken, G. (1986). Culture and consumption: A theoretical account of the structure and movement of the cultural meaning of consumer goods. *Journal of Consumer Research, 13,* 71–84.

McCrae, R. R, & Costa, P. T., Jr. (1997). Personality attribute structure as a human universal. *American Psychologist, 52,* 509–516.

McCrae, R. R., Costa, P. T., Ostedorf, F., Angleitner, A., Hrebickova, M., Avia, M., Sanz, J., Sanchez-Bernardos, M. L., Kusdil, E., Woodfield, R., Saunders, P. R., & Smith, P. B. (2000). Nature over nurture: Temperament, personality, and life span development. *Journal of Personality and Social Psychology, 78.* 173–196.

McVeagh, V. (1990). People. In K. Wheaton (Ed.), *Inside guides: Spain.* Singapore: APA.

Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review, 63,* 81–97.

Mitchell, T. (1990). *Passional culture: Emotion, religion, and society in southern Spain.* Philadelphia: University of Pennsylvania Press.

Oishi, S., Diener, E. F., Lucas, R. E., & Suh, E. M. (1999). Cross-cultural variations in predictors of life satisfaction: Perspectives from needs and values. *Personality and Social Psychology Bulletin, 25,* 980–990.

Pally, M. (1991). The politics of passion: Pedro Almodovar and the camp esthetic. *Cineaste Magazine, 12,* 32–39.

Park, B. (1986). A method for studying the development of impressions in real people. *Journal of Personality and Social Psychology, 51,* 907–917.

Plummer, J. T. (1985). How personality makes a difference. *Journal of Advertising Research, 24,* 27–31.

Ratchford, B. (1987). New insights about the FCB grid. *Journal of Advertising Research, 27,* 24–26.

Richins, M. L. (1994). Valuing things: The public and private meaning of possessions. *Journal of Consumer Research, 21,* 504–521.

Roccas, S., Sagiv, L., Schwartz, S., & Knafo, A. (2000). *The Big Five personality factors and personal values.* Unpublished manuscript.

Rodriguez, P. M., Manstead, A. S., & Fischer, A. H. (2000). The role of honor-related values in the elicitation, experience, and communication of pride, shame, and anger: Spain and the Netherlands compared. *Personality and Social Psychology Bulletin, 26,* 833–844.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1–65). Orlando, FL: Academic Press.

Schwartz, S. H. (1994). Beyond individualism/collectivism: New cultural dimensions of values. In U. Kim, H. C. Triandis, C. Kagitcibasi, S. Choi, & G. Yoon (Eds.), *Cross cultural research and methodology series: Vol. 18. Individualism and collectivism: Theory, method, and applications* (pp. 85–119). Thousand Oaks, CA: Sage.

Schwartz, S. H. (1999). A theory of cultural values and some implications for work. *Applied Psychology: An International Review, 48,* 23–47.

Schwartz, S. H., & Bilsky, W. (1990). Toward a theory of the universal content and structure of values: Extensions and cross-cultural replications. *Journal of Personality and Social Psychology, 58,* 878–891.

Schwartz, S. H., & Ross, M. (1995). Value priorities in West European nations: A cross-cultural perspective. *Studies in Psychology in Honor of Solomon Kugelmass, 36,* 322–347.

Schwartz, S. H., & Sagiv, L. (1995). Identifying culture-specifics in the content and structure of values. *Journal of Cross-Cultural Psychology, 26,* 92–116.

Shavitt, S. (1990). The role of attitude objects in attitude functions. *Journal of Experimental Social Psychology, 26,* 124–148.

Shore, B. (1996). *Culture in mind: Cognition, culture and the problem of meaning.* New York: Oxford University Press.

Shubert, A. (1990). *A social history of modern Spain.* Boston, MA: Unwin Hyman.

Shweder, R. A. (1990). Cultural psychology: What is it? In J. Stigler, R. Shweder, & G. Herdt (Eds.), *Cultural psychology* (pp. 1–43). Cambridge, England: Cambridge University Press.

Shweder, R. A., & Sullivan, M. A. (1990). The semiotic subject of cultural psychology. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (pp. 399–416). New York: Guilford Press.

Solomon, M. (1986). Deep-seated materialism: The case of Levi's 501 jeans. *Advances in Consumer Research, 13,* 619–622.

Takano, Y., & Osaka E. (1999). An unsupported common view: Comparing Japan and the U. S. on individualism/collectivism. *Asian Journal of Social Psychology, 2,* 311–411.

Triandis, H. C. (1989). The self and behavior in differing cultural contexts. *Psychological Review, 96,* 506–552.

Triandis, H. C., Marín, G., Lisansky, J., & Betancourt, H. H. (1984). *Simpatía* as a cultural script of Hispanics. *Journal of Personality and Social Psychology, 47,* 1363–1375.

Vacker, B. (1992). The Marlboro Man as a twentieth century David: A philosophical inquiry into the Aristotelian aesthetic of advertising. *Advances in Consumer Research, 19,* 746–755.

Wierzbicka, A. (1991). Japanese key words and core cultural values. *Language in Society, 20,* 333–385.

Yang, K., & Bond, M. H. (1990). Exploring implicit personality theories with indigenous or imported constructs: The Chinese case. *Journal of Personality and Social Psychology, 58,* 1087–1095.

Zubieta, E., Fernandez, I., Vergara, A. I., Martinez, M. D., & Candia, L. (1998). Cultura y emocion en America [Culture and emotion in America]. *Boletin de Psicologia, 61,* 65–89.

Zummuner, V. L., & Fischer, A. H. (1995). The social regulation of emotions in jealousy situations: A comparison between Italy and the Netherlands. *Journal of Cross-Cultural Psychology, 26,* 189–208.

LAMPIRAN 3

Case Summaries[a]

	Umur	J_Kelamin	T_Pend_Trakhir	EKS1	EKS2	EKS3	EKS4	EKS5	EKS6
1	20	2	1	5	4	5	5	5	5
2	20	1	1	5	6	5	6	6	6
3	20	1	1	5	5	5	5	5	6
4	21	1	3	5	6	6	5	6	5
5	21	1	3	5	6	6	5	5	5
6	21	1	3	5	6	7	6	6	5
7	22	1	3	7	7	7	7	7	7
8	21	2	2	5	5	5	5	5	5
9	20	2	1	5	5	5	5	6	5
10	21	1	2	5	5	5	6	6	6
11	21	2	3	7	6	7	3	6	6
12	22	2	3	7	7	7	7	7	6
13	20	2	1	6	5	5	6	6	5
14	19	2	1	5	5	5	5	5	6
15	20	2	1	6	5	5	5	5	5
16	22	1	2	5	5	5	6	5	5
17	19	2	1	6	6	5	5	7	6
18	22	1	3	3	7	3	7	4	5
19	21	1	2	2	5	3	5	4	4
20	19	2	1	5	6	5	6	6	5
21	22	1	2	5	5	5	6	6	5
22	19	2	1	6	6	5	6	7	7
23	20	1	1	5	6	5	5	7	6
24	20	1	2	5	6	6	6	7	5
25	20	1	1	5	6	5	6	6	6
26	21	2	3	5	6	7	6	6	5
27	22	2	3	5	5	6	6	7	6
28	21	2	3	5	5	6	6	7	5
29	19	2	1	5	4	5	5	5	5
30	20	2	1	5	5	5	5	5	5
31	20	2	1	6	6	6	6	6	7
32	22	2	3	4	5	4	5	5	4
33	21	1	3	1	7	1	7	3	4
34	20	2	2	5	5	5	5	5	5

Case Summaries[a]

EKS7	KER1	KER2	KER3	KER4	KER5	KER6	KER7	KES1
5	5	5	4	6	7	7	5	5
5	7	5	6	6	7	7	7	7

3	6	5	4	6	7	7	7	7
5	5	5	4	5	6	6	6	6
6	6	5	5	6	7	7	7	6
6	7	2	5	6	7	7	6	5
7	7	7	7	7	7	7	7	7
4	7	6	5	6	7	7	6	6
5	7	5	3	5	7	7	6	6
5	5	5	4	7	7	7	6	6
5	7	5	5	7	7	7	6	5
5	7	7	6	7	7	7	7	7
5	6	5	5	6	7	7	6	6
5	6	3	4	6	7	7	6	6
5	6	5	4	6	7	7	6	5
5	5	5	4	6	7	7	6	5
5	5	6	4	6	7	7	6	5
4	7	4	4	7	7	7	7	6
4	7	6	4	7	7	7	7	6
7	7	7	5	6	7	7	7	7
4	6	5	4	6	6	6	5	5
5	6	5	4	6	7	7	6	6
5	7	6	5	6	7	7	6	5
5	6	5	4	6	7	7	6	4
5	7	6	6	7	7	7	7	7
5	6	5	5	7	7	7	7	7
5	7	5	4	6	7	7	7	5
6	7	6	4	6	6	6	5	5
5	6	5	4	5	6	6	2	5
5	7	6	4	6	7	7	6	6
6	7	6	4	7	7	7	7	7
4	5	5	4	5	5	5	5	5
4	7	5	4	7	7	7	7	3
5	6	5	4	5	5	7	5	4

Case Summaries[a]

KES2	KES3	KES4	KES5	KES6	KES7	S_EMOS1	S_EMOS2
5	5	5	5	4	4	3	4
7	6	6	5	4	6	2	3
6	6	6	6	6	5	2	5
6	5	6	5	5	5	3	3
5	4	5	5	5	5	3	2
5	6	5	6	5	5	3	3
7	7	7	7	7	7	1	1
6	5	5	6	5	5	2	3

6	5	5	6	4	6	3	2
6	5	5	5	5	5	3	3
5	5	6	5	4	6	3	2
7	7	7	7	7	7	1	1
6	5	6	5	4	5	3	3
6	6	6	5	6	6	3	3
6	6	6	5	5	5	3	1
5	5	5	5	5	5	3	3
5	5	5	4	5	5	3	3
5	5	6	5	4	6	3	1
6	4	4	4	4	5	3	4
7	6	7	5	5	6	2	1
5	5	5	5	4	6	3	3
6	7	7	5	4	6	2	2
4	5	5	5	4	5	3	3
4	5	5	4	4	4	4	4
7	6	7	6	4	5	2	1
7	6	7	5	4	6	2	2
5	5	6	6	5	5	2	3
5	5	5	5	4	5	3	3
5	5	5	5	4	4	3	3
6	5	6	5	5	5	2	3
7	5	6	6	5	6	2	1
5	5	4	5	4	5	3	4
3	4	3	3	3	3	3	5
4	5	5	5	5	4	3	3

Case Summaries[a]

S_EMOS3	S_EMOS4	S_EMOS5	S_EMOS6	KTER1	KTER2	KTER3	KTER4
3	4	4	4	4	4	4	5
2	2	2	2	5	6	5	6
5	5	3	3	5	5	5	6
3	3	3	3	5	5	5	5
3	3	1	3	5	5	4	6
3	3	3	3	6	6	5	5
1	1	1	1	7	7	6	7
2	2	2	2	4	5	5	6
2	1	3	4	5	5	5	5
3	3	2	2	5	5	5	6
3	2	1	2	4	5	4	4
1	1	1	1	6	7	5	7
3	3	3	2	5	7	5	5
2	3	3	3	5	5	5	6

3	3	2	1	5	7	5	7
3	3	3	3	5	6	5	6
3	3	2	3	5	5	5	6
3	1	2	3	5	5	5	5
4	4	3	4	4	5	4	5
1	1	1	1	6	7	5	6
3	2	2	3	4	6	5	6
2	3	3	2	5	5	5	6
3	3	2	3	5	5	5	5
3	3	3	3	5	5	5	6
2	1	1	1	5	6	5	7
2	2	1	2	5	5	5	5
2	3	3	3	4	5	5	6
3	4	4	4	4	4	4	5
3	3	3	3	4	4	4	5
3	3	3	3	5	6	5	6
2	1	1	1	7	7	6	6
3	4	3	3	4	4	4	3
5	5	3	5	4	4	4	5
3	3	2	3	4	5	4	5

Case Summaries[a]

KTER5	KTER6	KTER7	KTER8	KEG1	KEG2	KEG3	KEG4	KOM1
4	4	4	4	2	2	2	5	2
5	4	3	4	5	5	5	5	4
5	5	3	5	5	4	5	5	3
5	5	3	5	4	4	5	5	4
4	5	4	5	3	2	3	4	3
4	5	3	5	2	3	3	5	3
5	5	2	5	4	4	6	7	4
5	4	4	4	2	3	3	5	3
6	5	6	5	3	3	5	5	6
7	5	6	5	6	4	5	5	4
4	4	3	4	3	3	3	5	5
7	7	1	4	7	7	1	6	2
4	5	3	5	4	4	4	5	5
5	5	3	5	3	3	5	6	3
5	5	2	5	5	3	5	5	3
5	5	3	5	2	3	5	4	3
5	5	3	4	3	3	3	5	3
5	4	4	4	2	3	6	6	3
4	4	4	4	2	3	2	5	3
4	5	2	5	3	3	5	5	3

5	5	4	4	3	3	5	5	3
5	5	3	5	3	3	5	7	4
4	5	4	6	5	5	5	5	3
4	4	4	4	5	4	5	5	3
5	5	3	5	2	2	5	6	3
4	6	4	4	1	2	2	7	3
4	4	3	3	4	4	4	6	4
4	4	4	4	2	2	3	5	4
5	5	3	5	4	4	4	6	4
5	6	3	5	1	2	5	5	4
6	6	2	6	2	2	2	7	3
5	5	4	4	2	2	5	5	2
4	4	4	4	2	2	5	6	3
5	5	4	5	2	5	5	5	2

Case Summaries[a]

KOM2	KOM3	KED1	KED2	KTUL	KEC1	KEC2	LOYAL1	LOYAL2
2	5	2	2	1	6	7	4	5
4	5	3	3	3	6	7	3	4
3	5	3	3	3	6	7	7	7
4	5	4	4	4	6	7	5	5
3	4	3	4	4	6	6	3	4
3	5	3	2	3	6	7	4	5
4	6	3	3	2	6	7	5	5
3	5	2	2	1	6	7	4	5
6	6	5	6	5	6	7	5	5
4	5	4	4	4	6	7	5	5
3	5	2	3	3	6	7	5	5
2	6	2	1	2	6	7	5	5
4	5	4	4	5	6	7	5	5
3	6	3	3	3	6	7	5	5
2	6	4	3	2	6	7	5	5
3	5	2	3	3	5	6	4	5
3	5	2	2	4	6	7	4	5
3	5	3	3	3	6	7	5	4
3	5	1	1	1	5	5	3	3
3	6	1	2	4	6	7	5	5
3	5	3	3	3	5	6	4	4
4	7	4	1	1	7	7	5	6
3	5	3	3	2	6	6	4	5
2	5	1	2	2	6	7	3	3
2	6	1	2	1	6	7	5	5
4	3	1	3	2	7	6	5	4

4	6	1	2	1	6	7	5	5
4	5	2	2	1	6	7	4	3
4	5	4	3	5	7	7	5	5
4	6	4	4	4	7	7	5	5
3	7	2	2	2	7	7	5	5
3	6	2	2	2	6	6	4	5
3	6	2	2	2	6	6	3	3
2	6	3	2	2	6	6	4	5

Case Summaries[a]

LOYAL3	LOYAL4
5	5
4	5
7	7
5	5
3	3
5	5
6	5
5	5
5	4
5	5
5	5
7	6
6	5
5	5
5	4
5	3
5	5
5	5
3	3
5	5
5	4
7	7
5	5
4	2
5	5
5	5
6	6
3	3
5	6
5	6
5	5
4	5

		3		3
		5		5

Case Summaries[a]

	Umur	J_Kela min	T_Pend_T rakhir	EKS1	EKS2	EKS3	EKS4	EKS5	EKS6
35	20	2	1	7	5	7	7	7	7
36	22	1	3	5	5	5	5	5	5
37	22	2	3	3	5	5	5	5	3
38	22	2	3	5	5	5	6	5	4
39	21	2	3	5	4	5	5	5	5
40	22	1	3	3	5	5	5	5	5
41	21	1	3	5	4	7	4	3	5
42	20	1	1	3	5	3	5	5	4
43	21	2	3	5	6	7	6	6	6
44	22	2	3	5	6	6	6	5	5
45	20	1	1	5	5	6	6	6	6
46	21	2	1	3	5	3	5	3	3
47	20	2	1	6	5	5	5	5	5
48	19	2	1	5	7	5	7	3	6
49	20	2	2	3	6	6	2	4	4
50	19	2	2	3	5	3	5	3	5
51	21	1	3	5	5	5	5	5	5
52	20	1	1	6	6	5	4	5	5
53	19	2	1	6	7	7	3	3	6
54	25	2	1	7	7	7	5	7	7
55	19	1	1	5	5	4	6	5	5
56	18	1	1	4	4	4	3	2	5
57	20	1	2	4	4	4	4	3	4
58	20	2	1	5	5	5	6	5	6
59	23	2	3	6	5	5	6	5	6
60	18	2	1	2	7	5	7	1	5
61	19	2	1	5	7	4	6	3	5
62	18	1	1	6	7	6	6	3	5
63	18	1	1	4	6	5	3	5	4
64	18	1	1	4	4	4	5	2	6
65	18	2	1	3	7	3	5	1	3
66	18	2	1	4	6	5	6	5	5
67	18	2	1	6	7	4	4	6	7
68	18	2	1	3	7	3	7	1	7

Case Summaries[a]

EKS7	KER1	KER2	KER3	KER4	KER5	KER6	KER7	KES1

7	7	4	4	7	7	7	7	7
4	6	5	4	5	6	6	5	5
4	6	5	4	6	7	7	6	6
4	6	5	4	5	6	6	6	5
4	6	5	4	6	7	7	5	5
5	6	5	4	5	6	6	5	6
5	6	6	4	7	4	5	4	4
4	6	5	5	5	7	7	5	5
5	7	6	4	7	7	7	7	6
6	7	6	4	5	7	7	6	5
5	7	6	4	7	7	7	7	6
3	6	5	4	5	7	7	5	5
6	6	5	4	5	7	7	5	6
6	7	6	4	7	7	7	6	7
3	5	5	4	5	7	3	6	4
3	6	5	5	6	7	7	6	5
5	6	5	4	5	7	7	6	6
5	6	5	4	6	7	7	6	6
3	6	3	3	3	4	5	6	4
1	7	1	7	7	7	7	5	7
4	5	3	1	6	6	6	7	4
4	5	6	2	5	3	7	7	4
3	4	4	3	4	5	4	5	3
4	5	5	3	6	6	7	6	6
4	6	5	5	5	7	7	6	5
7	7	4	1	6	7	7	3	2
4	6	4	4	5	6	7	6	5
6	5	4	2	4	6	6	4	2
4	3	7	1	4	6	6	6	4
5	7	5	4	5	4	4	7	4
4	5	2	7	4	6	7	6	2
4	6	5	4	6	5	6	5	3
6	7	2	3	7	7	7	7	2
5	5	3	5	7	7	6	7	6

Case Summaries[a]

KES2	KES3	KES4	KES5	KES6	KES7	S_EMOS1	S_EMOS2
7	7	7	7	7	7	1	1
5	5	5	5	5	5	3	3
6	5	5	5	5	5	3	3
5	5	5	5	4	5	3	5
5	5	5	5	5	3	3	3
6	5	4	5	5	4	3	4

6	5	6	7	7	2	6	2
6	5	5	5	5	4	3	3
6	6	5	6	5	5	3	3
6	6	6	5	5	5	3	3
7	7	7	6	7	7	1	1
5	3	5	5	5	4	3	5
6	5	5	5	5	4	3	3
7	6	6	6	5	5	3	5
4	3	4	5	5	4	5	3
5	5	6	6	5	5	3	5
6	5	5	5	4	5	3	3
6	5	5	5	4	5	2	3
5	3	5	4	5	3	4	5
7	7	7	7	7	7	4	7
4	6	6	5	5	5	1	6
4	4	4	4	4	4	2	3
3	4	2	6	5	3	4	4
6	5	5	6	5	4	3	5
5	6	5	5	5	5	2	3
6	6	4	7	7	1	1	7
5	5	4	6	6	4	3	4
3	5	5	4	3	3	2	6
4	3	4	3	3	4	5	4
3	7	4	4	5	2	1	5
4	4	5	4	4	5	7	5
2	4	3	5	4	5	3	4
7	5	3	5	6	4	2	5
4	5	6	7	7	5	2	6

Case Summaries[a]

S_EMOS3	S_EMOS4	S_EMOS5	S_EMOS6	KTER1	KTER2	KTER3	KTER4
1	1	1	1	7	7	7	7
3	3	3	3	5	5	5	6
3	4	4	5	4	4	5	5
5	5	4	5	4	3	3	6
3	3	3	3	4	5	4	6
4	5	3	3	4	3	4	5
5	2	4	4	6	7	5	5
5	5	3	3	4	4	4	4
3	2	2	2	4	5	5	6
2	3	3	3	4	3	4	4
1	1	1	1	7	7	6	7
5	5	5	5	2	3	3	5

2	3	3	3	4	4	4	6
2	2	2	2	5	4	4	5
4	5	5	5	3	5	3	4
3	3	5	3	4	4	4	6
3	3	2	3	4	5	4	6
3	3	3	3	4	3	4	5
5	3	5	4	3	4	4	4
5	7	1	1	2	7	1	1
3	7	4	3	6	6	6	7
4	3	3	1	7	7	6	3
2	4	4	5	4	3	4	4
3	3	3	3	4	4	4	6
3	3	3	3	4	4	4	6
5	6	3	3	6	7	4	7
3	4	2	2	4	7	3	3
2	6	4	4	6	5	2	7
4	2	3	3	4	7	3	5
4	4	4	5	6	5	6	5
4	4	1	1	5	7	5	3
2	6	4	3	6	6	5	2
3	5	3	2	2	3	2	7
2	4	2	2	7	7	7	6

Case Summaries[a]

KTER5	KTER6	KTER7	KTER8	KEG1	KEG2	KEG3	KEG4	KOM1
7	7	1	7	1	1	7	7	1
4	4	4	4	2	2	5	5	2
4	5	4	5	3	4	4	5	4
4	4	4	4	3	3	5	5	3
4	4	4	5	3	3	6	6	3
5	5	4	4	2	2	5	6	4
5	3	2	4	6	5	6	5	5
3	3	3	3	1	5	5	5	3
5	6	3	5	2	3	3	3	5
5	5	3	4	1	1	5	5	5
7	7	1	6	1	1	7	7	1
3	3	5	3	1	1	5	6	1
5	5	3	5	2	2	3	5	5
5	5	3	5	3	3	5	5	3
3	3	5	3	5	5	5	5	5
5	5	3	5	5	5	5	5	5
5	5	4	4	4	4	3	3	3
4	5	4	4	4	4	6	5	4

3	3	5	4	6	5	6	4	5
3	2	1	3	6	7	7	7	6
6	6	3	6	5	6	7	7	6
3	4	5	5	7	6	5	6	3
4	5	4	4	5	4	5	4	5
5	4	3	4	6	5	5	5	5
5	4	5	5	5	5	5	6	5
7	5	2	6	4	6	7	7	6
4	5	2	5	5	5	5	6	6
6	5	2	6	6	5	6	4	6
6	3	7	5	4	4	4	4	4
5	4	2	6	6	6	6	6	6
2	2	6	2	5	2	5	4	5
3	3	4	2	5	4	5	4	5
5	6	3	5	6	6	7	7	7
5	5	3	6	5	3	7	7	7

Case Summaries[a]

KOM2	KOM3	KED1	KED2	KTUL	KEC1	KEC2	LOYAL1	LOYAL2
1	7	1	1	1	7	7	5	5
4	6	1	1	4	6	7	4	5
4	5	4	4	6	5	7	5	5
3	6	1	1	1	6	6	4	4
3	5	3	3	3	6	7	5	5
4	6	4	3	3	6	7	4	5
6	5	4	4	6	6	7	7	7
3	6	1	1	1	7	7	4	5
6	3	1	1	1	7	6	5	6
4	6	1	1	6	7	6	4	5
1	7	1	1	1	7	7	5	6
1	6	1	1	5	6	7	3	3
3	6	1	2	3	6	7	4	4
3	5	3	3	2	6	7	4	4
5	5	5	5	5	5	6	6	6
3	5	3	3	5	5	5	5	5
3	5	2	2	2	6	7	5	5
5	5	2	3	3	6	7	5	5
4	4	4	4	4	4	4	6	6
7	7	6	5	7	5	4	1	7
6	5	7	3	6	5	3	4	4
4	3	2	4	5	5	2	7	6
5	5	5	4	4	4	4	4	3
5	6	5	5	5	6	6	6	5

5	5	5	5	5	6	6	6	6
7	7	7	2	6	6	7	5	4
5	6	6	4	6	5	3	5	4
4	4	5	5	4	5	6	4	2
4	4	4	4	4	4	4	2	2
6	6	6	5	6	5	3	3	3
4	5	6	2	5	4	3	4	4
4	3	5	5	4	2	5	5	5
6	6	7	6	7	4	7	7	7
7	7	6	3	7	7	7	7	5

Case Summaries[a]

LOYAL3	LOYAL4
5	5
5	5
6	5
3	4
5	5
5	5
7	7
5	5
6	6
5	5
6	6
3	3
5	4
4	5
6	6
5	4
5	5
5	5
6	2
4	1
4	4
3	3
5	5
6	5
6	6
6	4
4	3
2	1
2	2
3	5

3	1
5	3
7	7
5	4

Case Summaries[a]

	Umur	J_Kela min	T_Pend_T rakhir	EKS1	EKS2	EKS3	EKS4	EKS5	EKS6
69	18	2	1	4	4	2	3	6	6
70	18	2	1	3	6	6	5	6	4
71	17	2	1	4	6	6	4	5	4
72	18	1	1	7	7	2	4	5	6
73	18	1	1	6	6	6	6	6	6
74	24	1	3	5	3	1	4	7	7
75	18	1	1	5	4	5	5	6	6
76	18	1	1	2	4	2	4	5	4
77	19	2	1	5	5	4	4	4	5
78	23	2	1	7	7	4	4	3	6
79	22	2	3	4	6	4	5	4	4
80	24	1	1	3	5	3	6	4	5
81	21	1	3	3	6	6	4	6	5
82	27	1	1	1	7	3	5	4	4
83	23	1	1	4	7	7	6	6	6
84	23	1	3	1	7	1	7	1	7
85	17	2	1	5	5	4	5	4	3
86	20	1	1	5	3	4	2	4	4
87	18	1	1	2	7	1	7	7	7
88	19	1	1	3	4	3	4	5	4
89	19	1	1	4	6	6	6	6	6
90	21	1	1	1	5	2	3	6	4
91	19	1	1	6	6	7	4	4	5
92	26	2	3	2	4	3	5	3	3
93	23	2	3	3	7	3	5	3	5
94	24	2	3	5	6	6	4	6	5
95	19	1	1	5	6	4	5	3	7
96	25	1	3	6	5	6	6	5	6
97	23	1	3	4	4	3	5	2	5
98	19	1	1	5	4	3	5	2	6
99	20	1	1	4	4	7	6	7	7
100	23	2	3	7	6	6	4	4	6
101	24	1	3	5	6	2	6	3	6
102	24	2	2	4	6	6	4	5	6

Case Summaries[a]

EKS7	KER1	KER2	KER3	KER4	KER5	KER6	KER7	KES1
3	6	7	1	5	2	2	3	5
3	6	4	6	5	6	6	5	6
4	4	3	5	5	4	6	2	3
5	6	2	5	5	5	5	6	3
6	6	6	2	7	4	6	6	2
7	7	4	1	7	4	7	7	3
6	4	4	2	6	4	5	5	4
3	6	5	4	4	4	4	7	3
5	7	6	3	7	5	6	4	5
7	7	7	1	4	4	6	4	5
4	6	5	4	7	7	5	5	4
6	6	5	4	5	6	6	5	4
4	5	4	2	4	5	6	3	4
3	4	3	5	5	7	7	7	4
5	7	1	4	6	7	7	7	4
7	7	1	7	7	7	7	7	7
3	6	4	4	6	5	5	6	4
3	3	4	4	3	3	1	5	3
7	7	7	1	7	7	7	7	5
5	4	5	5	5	4	5	5	4
6	6	3	4	5	6	6	2	3
6	4	2	2	3	4	3	4	5
3	3	5	7	5	6	7	5	2
3	5	5	2	5	5	6	5	5
3	5	4	5	6	4	7	6	3
5	5	5	6	4	4	6	4	4
5	4	6	2	5	3	7	4	3
5	5	5	5	5	5	5	5	2
4	4	5	2	5	4	5	5	3
4	5	3	3	6	5	5	6	4
6	6	2	1	6	6	6	6	7
4	6	6	6	5	5	6	6	3
6	6	6	3	6	7	7	5	2
6	5	1	6	4	6	5	4	2

Case Summaries[a]

KES2	KES3	KES4	KES5	KES6	KES7	S_EMOS1	S_EMOS2
5	3	1	5	6	4	6	7
6	4	6	4	4	5	2	3
2	4	4	3	4	3	3	4
3	6	2	7	5	5	4	4

2	7	3	6	6	1	1	2
2	7	3	7	7	1	3	6
5	5	5	5	5	5	3	3
4	5	4	4	5	2	3	3
6	5	4	6	5	4	4	5
5	5	6	4	6	4	1	7
4	6	6	7	6	6	2	3
4	4	5	5	6	3	1	2
4	4	5	4	5	3	2	4
4	4	5	4	5	3	4	4
6	6	6	6	6	7	1	1
7	7	7	7	7	7	1	1
3	4	4	4	5	5	3	4
5	3	2	1	3	4	4	4
6	4	7	7	4	1	1	7
5	4	3	3	4	3	3	4
5	6	4	4	4	3	2	2
3	1	5	2	3	4	1	1
5	4	4	4	5	5	4	3
5	5	5	5	5	4	2	5
6	6	7	6	7	3	5	5
4	5	6	4	5	5	4	4
4	5	3	5	5	2	2	6
5	6	5	5	5	6	3	4
6	4	5	5	4	2	2	4
4	5	3	4	4	3	2	6
7	6	7	7	6	5	1	2
5	4	4	4	4	5	3	5
5	6	7	6	6	4	2	4
3	4	4	4	5	2	2	5

Case Summaries[a]

S_EMOS3	S_EMOS4	S_EMOS5	S_EMOS6	KTER1	KTER2	KTER3	KTER4
5	7	7	7	7	7	6	7
2	2	1	1	5	7	6	4
4	4	4	3	3	5	7	3
4	4	3	2	6	7	7	6
1	5	3	3	6	6	6	7
3	5	4	4	7	7	7	7
3	3	3	3	5	5	5	4
4	3	2	1	4	7	4	7
4	4	4	4	5	5	5	5
4	6	3	2	4	6	4	5

3	4	1	1	4	6	3	6
2	5	1	2	6	7	7	6
3	4	3	5	5	5	4	5
4	3	5	4	4	7	6	7
4	6	1	1	5	7	4	7
1	1	1	1	7	1	7	7
3	4	2	2	3	4	3	6
4	4	4	5	2	6	3	1
1	7	3	2	5	7	4	7
5	4	3	5	4	4	4	5
6	6	2	5	5	7	5	5
5	4	5	6	7	2	5	4
5	3	2	1	1	4	2	4
3	3	4	5	5	5	5	4
4	5	2	5	5	7	3	5
4	2	2	2	5	6	5	5
3	6	6	5	6	7	6	6
4	4	4	4	6	5	5	6
3	6	6	6	6	5	5	5
2	6	5	5	2	5	3	5
2	2	3	4	1	7	4	6
4	6	5	2	4	5	4	6
3	5	4	3	6	3	4	6
3	4	5	4	5	6	4	6

Case Summaries[a]

KTER5	KTER6	KTER7	KTER8	KEG1	KEG2	KEG3	KEG4	KOM1
4	3	7	3	2	3	5	4	4
3	4	5	2	4	4	4	4	5
5	4	3	6	5	5	5	4	4
4	4	5	6	4	4	5	5	5
4	4	4	4	7	6	4	6	6
7	7	1	7	5	5	5	7	7
4	5	4	5	5	5	5	5	5
5	4	5	7	4	7	5	5	5
5	4	3	5	6	5	5	5	6
4	4	5	6	7	5	7	7	6
5	4	3	6	4	3	6	5	5
5	5	2	4	6	6	6	6	5
3	3	3	4	3	5	5	5	4
5	5	3	5	5	5	5	5	4
5	5	4	6	4	6	6	6	5
7	7	7	7	7	7	7	7	7

4	4	4	7	6	6	6	4	4
2	2	5	2	2	2	2	1	1
4	4	5	4	7	7	7	7	4
4	5	4	5	3	5	4	3	5
6	4	5	5	5	5	5	6	6
3	2	7	5	1	2	3	4	5
4	2	6	2	4	4	3	5	5
5	5	2	6	5	5	4	5	3
6	6	2	3	5	5	6	6	6
4	4	4	5	3	5	5	5	3
6	6	2	5	5	6	6	5	4
5	5	5	6	6	6	6	6	3
4	5	2	3	4	5	6	6	3
5	4	4	6	4	5	6	6	6
4	6	1	7	6	6	6	6	4
3	3	5	5	3	6	6	6	5
6	5	4	6	3	4	5	4	5
4	5	3	5	5	5	5	4	5

Case Summaries[a]

KOM2	KOM3	KED1	KED2	KTUL	KEC1	KEC2	LOYAL1	LOYAL2
2	5	3	3	4	2	1	7	7
4	6	6	4	7	5	5	3	2
4	3	4	3	6	7	7	2	4
4	6	6	4	5	3	5	2	1
4	6	5	6	4	5	6	5	5
7	7	7	5	5	7	7	2	1
5	4	5	3	5	4	4	3	3
4	4	6	5	5	4	3	1	2
6	5	4	5	6	6	4	6	6
5	3	7	2	7	7	4	4	3
4	4	5	2	6	5	3	2	3
5	5	5	6	5	5	7	5	3
5	3	5	2	4	2	2	3	2
4	4	4	4	4	4	4	1	4
4	5	4	1	4	4	6	5	4
7	7	7	1	7	7	1	1	7
4	6	4	4	6	5	5	2	3
2	3	4	5	3	5	4	3	5
5	4	4	3	2	7	7	1	7
4	3	5	4	5	3	4	4	5
6	7	2	2	6	7	7	5	5
6	7	6	5	4	3	2	1	2

5	6	3	3	4	7	7	5	5
3	3	3	5	5	3	5	4	4
6	5	6	5	5	6	3	6	5
3	3	3	3	5	5	2	2	3
5	6	4	4	4	4	7	1	1
5	5	4	5	4	6	6	5	5
4	3	3	5	4	6	6	5	3
6	4	4	3	4	5	6	2	2
4	3	4	5	5	6	7	6	6
4	3	5	5	5	5	5	2	2
5	4	4	5	5	4	3	5	4
5	5	2	4	2	2	5	5	4

Case Summaries[a]

LOYAL3	LOYAL4
7	3
2	1
3	3
2	1
5	7
1	1
3	4
2	1
6	6
2	1
1	1
3	2
1	2
4	2
4	4
7	1
3	2
5	6
7	7
4	5
5	5
3	5
4	4
4	4
3	2
2	2
1	1
5	2

		3			3
		2			2
		6			6
		2			1
		3			3
		2			1

Case Summaries[a]

	Umur	J_Kelamin	T_Pend_Trakhir	EKS1	EKS2	EKS3	EKS4	EKS5	EKS6
103	20	2	2	4	7	4	6	3	6
104	18	2	1	3	4	1	7	1	4
105	23	2	3	3	6	6	4	5	4
106	19	2	1	1	7	7	2	5	4
107	19	1	1	3	6	4	2	4	6
108	18	2	1	4	3	5	4	4	5
109	18	1	1	2	6	3	6	5	3
110	18	2	1	7	4	6	3	4	7
111	20	2	1	4	7	7	3	4	4
112	18	1	1	3	7	5	4	6	2
113	18	2	1	5	5	6	2	5	3
114	19	2	1	4	7	2	2	2	3
115	18	1	1	3	4	6	3	6	3
116	18	2	1	6	7	6	5	3	5
117	18	2	1	4	7	5	6	4	5
118	19	1	1	4	7	5	4	1	4
119	18	1	1	4	7	3	4	1	4
120	17	2	1	4	7	7	4	3	5
121	18	2	1	7	4	4	3	5	6
122	18	2	1	5	7	7	6	4	5
123	19	1	1	1	3	2	5	3	4
124	18	1	1	2	7	5	1	2	6
125	28	1	3	4	6	4	6	5	6
126	18	2	1	4	6	6	4	4	4
127	18	1	1	3	4	5	4	4	4
128	18	1	1	5	6	5	5	5	5
129	18	1	1	1	7	7	7	6	7
130	18	1	1	6	6	4	6	3	5
131	18	2	1	5	6	7	4	3	4
132	18	2	1	5	7	4	5	4	4
133	18	1	1	6	7	4	4	4	5
134	18	1	1	3	6	3	7	7	7
135	18	2	1	7	7	4	4	2	6

136	22	1	3	3	6	6	4	6	4

Case Summaries[a]

EKS7	KER1	KER2	KER3	KER4	KER5	KER6	KER7	KES1
6	6	5	4	7	7	7	6	6
5	5	4	5	5	5	5	5	4
4	4	5	2	5	4	5	5	1
5	3	7	1	4	4	3	2	1
6	3	5	5	1	1	5	5	5
4	4	6	2	5	5	6	6	3
7	7	4	3	6	7	7	7	4
6	4	4	3	4	3	4	5	2
4	6	6	5	5	7	7	7	3
3	4	2	7	3	7	6	5	6
2	4	7	2	4	3	5	6	1
2	7	5	2	6	6	7	6	2
4	3	2	7	2	3	1	3	4
5	6	3	3	5	5	7	6	4
3	5	3	4	5	7	7	5	4
3	7	4	2	4	5	7	7	4
3	6	4	6	2	6	7	1	7
4	7	3	4	6	7	7	6	2
6	6	6	3	6	6	7	7	3
4	4	3	1	7	6	7	6	4
3	6	3	1	5	6	7	4	4
4	5	7	1	5	5	7	5	1
6	6	3	2	5	6	6	6	4
4	4	3	4	4	6	6	4	4
4	5	4	4	5	6	6	6	4
6	6	5	2	7	6	7	7	2
7	7	2	6	7	7	7	7	4
6	6	3	7	7	7	7	7	5
3	3	6	1	3	3	4	2	2
4	5	3	3	6	5	7	7	6
5	5	4	4	4	5	7	7	4
6	7	3	5	1	6	7	3	6
6	7	6	2	7	7	7	7	2
5	5	3	6	5	3	4	3	5

Case Summaries[a]

KES2	KES3	KES4	KES5	KES6	KES7	S_EMOS1	S_EMOS2
6	4	2	6	6	4	2	7
4	6	4	7	7	5	3	4

2	4	3	4	5	3	4	3
4	1	5	4	2	5	4	5
4	5	4	4	5	1	4	3
3	4	3	4	5	2	2	7
2	5	3	3	3	5	2	6
2	3	3	5	3	4	5	6
5	4	5	6	5	4	4	4
6	2	7	4	4	4	5	3
3	4	4	5	5	4	7	6
5	5	5	7	7	4	6	5
4	3	4	3	1	5	5	4
5	4	3	5	5	4	4	4
4	4	7	2	4	6	2	3
5	5	5	4	4	4	5	3
7	3	7	2	2	4	4	6
2	3	4	3	5	3	4	5
3	6	2	7	5	3	2	6
5	5	5	5	6	3	4	4
3	4	5	5	5	1	1	6
1	3	2	6	2	2	1	6
6	6	5	6	6	2	2	2
6	3	4	3	4	4	4	4
6	4	6	4	4	5	4	4
7	4	2	5	6	6	2	3
7	7	5	7	7	5	1	6
5	7	6	6	7	4	1	6
4	6	6	6	3	2	7	7
6	4	5	7	7	3	1	4
4	4	4	5	4	4	4	5
7	6	6	7	7	5	6	3
6	7	4	7	7	3	3	5
6	6	6	5	6	6	3	2

Case Summaries[a]

S_EMOS3	S_EMOS4	S_EMOS5	S_EMOS6	KTER1	KTER2	KTER3	KTER4
6	3	3	1	6	7	6	6
2	7	3	3	3	4	7	7
4	4	2	2	5	6	4	6
5	4	5	5	4	5	3	4
4	5	4	1	7	4	6	2
3	6	7	5	3	5	3	5
2	6	3	1	3	6	3	5
3	5	5	3	6	7	3	6

4	3	3	3	4	7	4	5
6	1	1	1	2	5	1	5
7	5	6	6	2	3	2	4
5	6	4	5	2	2	2	2
4	3	3	2	4	4	5	3
4	4	4	4	4	5	3	5
4	3	4	5	3	7	2	6
4	4	4	4	4	4	1	4
5	7	4	4	3	4	4	2
7	7	3	3	6	7	5	5
3	5	2	2	6	6	2	5
5	6	6	6	4	6	2	5
4	6	6	5	1	1	1	7
1	2	2	2	7	7	7	7
2	2	2	2	6	6	6	6
4	2	4	2	2	5	2	5
5	5	3	4	5	6	3	6
2	3	3	3	7	6	6	6
4	3	3	2	7	7	1	6
1	4	1	1	7	7	7	7
7	7	7	7	6	7	6	6
3	4	1	1	7	7	7	6
3	4	3	3	3	6	2	4
3	3	2	1	1	1	1	5
5	5	1	1	7	7	5	7
3	3	2	2	5	6	3	5

Case Summaries[a]

KTER5	KTER6	KTER7	KTER8	KEG1	KEG2	KEG3	KEG4	KOM1
6	4	2	5	5	5	7	6	5
6	5	2	6	7	6	4	5	7
5	4	5	5	5	4	4	5	3
5	4	4	6	1	6	2	3	5
5	4	1	7	4	5	5	5	3
5	5	4	6	4	4	5	6	6
7	5	6	3	3	7	6	7	7
6	4	2	6	3	4	6	6	3
6	5	3	5	5	5	5	5	5
3	2	5	4	3	2	3	2	2
4	2	4	3	5	5	5	5	4
1	1	2	1	7	7	6	4	6
3	3	6	2	3	3	2	2	3
5	5	3	5	4	5	5	5	5

5	4	2	5	4	4	7	7	6
4	4	4	4	5	4	7	5	5
2	1	4	4	4	5	5	4	4
3	4	3	5	4	5	5	4	6
5	4	3	5	2	6	6	6	3
3	4	5	4	5	5	5	5	4
7	6	2	6	5	5	5	5	6
2	2	6	7	7	7	7	7	4
6	5	4	6	6	6	6	6	6
5	4	5	6	4	4	6	4	5
5	4	5	4	4	3	6	7	5
4	5	2	6	2	4	3	2	5
5	7	1	7	2	7	7	7	7
7	7	4	4	7	7	7	7	7
4	4	6	2	5	4	4	6	5
5	4	4	5	5	5	6	4	4
4	4	5	6	5	4	5	5	6
5	4	2	5	4	4	4	7	2
7	4	4	4	7	7	7	7	7
6	6	4	7	6	5	6	6	6

Case Summaries[a]

KOM2	KOM3	KED1	KED2	KTUL	KEC1	KEC2	LOYAL1	LOYAL2
4	3	3	3	4	5	6	2	5
6	7	7	4	4	5	3	4	5
3	4	3	3	5	5	6	4	5
5	3	2	1	3	3	6	2	6
2	1	6	3	4	4	6	2	6
6	4	5	5	5	5	6	4	4
7	7	7	3	3	7	2	4	7
3	3	3	5	4	3	3	6	6
5	5	5	4	5	5	3	1	1
3	3	2	1	3	3	4	3	3
4	4	4	4	4	4	5	4	4
3	5	6	5	3	4	5	1	6
4	4	2	4	2	3	5	4	3
4	3	5	4	5	5	3	3	2
6	5	6	6	6	5	6	6	5
4	4	4	5	4	5	4	4	6
4	5	6	5	6	6	5	3	2
5	4	6	4	6	2	5	2	1
3	3	3	6	6	4	7	2	2
4	4	5	3	4	4	5	4	4

6	3	4	3	5	4	6	4	2
4	7	7	7	7	7	7	4	4
6	6	2	2	6	6	4	2	6
4	4	4	2	3	2	2	4	2
1	1	1	5	5	2	7	2	2
5	5	3	5	5	2	2	2	2
7	7	7	1	7	1	1	4	5
7	7	7	7	7	7	7	7	7
5	4	4	4	5	6	7	2	2
2	1	1	1	4	3	4	3	5
5	5	3	4	4	7	7	1	1
5	6	3	4	5	2	7	2	2
7	7	7	3	7	7	6	6	3
4	6	2	2	7	7	7	4	5

Case Summaries[a]

LOYAL3	LOYAL4
4	4
3	3
4	1
4	3
3	4
4	4
2	1
4	3
1	1
2	2
4	3
3	1
4	2
2	1
5	4
4	4
2	1
1	1
2	2
3	2
2	6
4	4
2	2
2	2
2	1
2	2

5	2
7	4
2	4
4	1
1	1
2	2
3	2
2	3

Case Summaries[a]

	Umur	J_Kelamin	T_Pend_Trakhir	EKS1	EKS2	EKS3	EKS4	EKS5	EKS6
137	27	1	3	3	6	4	6	4	5
138	25	2	3	4	7	4	5	4	6
139	25	1	1	6	3	7	6	3	6
140	26	1	3	7	2	1	7	1	7
141	26	1	3	7	4	7	5	2	7
142	26	1	3	4	5	3	5	3	6
143	25	2	3	5	5	5	5	4	5
144	24	1	3	5	6	5	3	2	5
145	24	1	1	4	4	4	5	3	5
146	25	1	3	3	6	3	4	4	5
147	34	1	3	5	6	4	6	4	5
148	27	2	3	3	5	4	6	5	6
149	23	2	3	5	6	6	3	5	5
150	25	1	3	2	6	7	5	5	7
151	27	1	3	4	4	5	4	3	5
152	17	1	1	4	4	3	4	3	4
153	18	2	1	6	6	5	7	6	6
154	18	2	1	3	6	4	3	5	4
155	22	2	3	7	7	7	4	7	7
156	18	2	1	4	5	3	6	2	6
157	18	1	1	7	7	7	5	7	7
158	18	1	1	3	5	5	4	3	4
159	18	1	1	5	6	7	4	5	5
160	18	1	1	3	7	3	5	5	6
161	18	1	1	3	7	3	4	5	4
162	19	1	1	2	7	1	7	1	7
163	18	2	1	5	7	4	5	2	5
164	19	1	1	2	4	7	7	6	7
165	18	2	1	3	5	5	5	4	4
166	19	2	1	4	7	4	4	3	4
167	18	1	1	2	4	2	5	4	7

168	18	2	1	4	7	5	4	2	5
169	18	2	1	4	6	6	4	6	4
170	18	2	1	4	4	3	5	4	4

Case Summaries[a]

EKS7	KER1	KER2	KER3	KER4	KER5	KER6	KER7	KES1
4	6	4	4	5	5	5	6	4
5	5	1	4	5	7	7	1	4
6	6	3	4	4	6	7	4	3
7	7	7	2	7	7	7	6	1
6	7	4	1	6	4	7	4	4
4	5	3	2	6	5	7	7	5
6	7	3	4	6	5	7	7	4
6	7	2	3	5	6	5	5	4
5	5	5	3	5	5	5	5	4
5	7	5	4	6	6	7	7	4
5	5	3	4	4	5	6	5	4
6	6	3	1	5	5	6	5	6
4	5	5	4	4	6	6	4	2
6	6	3	5	4	7	7	7	6
6	6	3	1	5	4	5	7	4
3	3	4	4	4	5	5	4	3
5	7	5	5	6	6	6	7	4
4	5	3	4	4	5	7	7	4
7	7	7	6	7	6	6	6	1
6	5	6	4	5	2	2	6	2
6	7	4	3	5	7	7	7	3
3	3	2	3	3	5	6	4	4
5	6	4	4	7	5	5	5	4
3	7	5	5	5	6	7	1	4
3	6	4	3	5	5	6	6	3
5	7	1	1	6	7	7	7	4
4	6	6	2	4	6	6	6	5
6	7	4	2	7	6	6	7	7
3	5	4	2	4	5	4	5	4
4	5	3	5	4	6	6	6	4
7	6	1	2	7	7	7	7	4
4	6	2	4	6	6	6	4	3
4	5	3	5	5	6	7	5	4
5	6	4	5	4	5	6	4	3

Case Summaries[a]

KES2	KES3	KES4	KES5	KES6	KES7	S_EMOS1	S_EMOS2

5	5	5	6	4	3	3	4
7	6	7	6	6	6	4	4
4	5	4	6	6	3	2	5
4	7	1	5	6	1	1	4
3	5	6	6	6	1	1	7
6	5	5	6	6	5	2	3
5	4	5	3	5	6	4	2
2	5	5	4	6	6	1	3
4	4	4	4	5	3	3	5
4	5	6	6	6	3	4	3
3	6	3	4	5	4	4	4
6	5	6	5	6	6	2	2
2	5	2	4	4	4	4	6
6	4	7	6	5	5	1	7
5	7	7	6	6	1	5	6
3	4	3	4	4	3	4	6
7	6	6	7	6	4	2	2
4	4	4	4	5	3	4	5
1	6	4	6	5	2	5	6
2	3	6	1	3	4	3	5
4	5	3	4	5	3	6	3
5	4	4	4	3	3	5	6
5	5	5	5	5	5	5	3
7	7	7	6	5	6	3	1
3	5	2	3	4	5	4	3
6	7	4	6	6	3	1	6
4	5	4	3	3	4	6	2
6	7	6	6	6	2	1	3
5	5	4	4	4	2	4	4
3	4	3	4	4	3	5	5
2	7	4	4	5	6	1	4
3	3	4	3	2	6	6	3
5	4	7	5	4	7	3	2
4	4	6	7	5	3	4	5

Case Summaries[a]

S_EMOS3	S_EMOS4	S_EMOS5	S_EMOS6	KTER1	KTER2	KTER3	KTER4
3	4	4	4	6	5	5	6
4	2	2	2	4	6	4	5
2	3	3	3	7	7	7	7
2	5	5	6	4	4	4	7
4	4	2	6	6	7	4	7
2	3	3	3	6	6	4	5

3	1	1	3	3	5	3	5
2	6	5	3	6	6	5	7
4	4	4	4	6	6	6	5
3	4	3	2	7	7	7	6
3	5	4	4	5	4	4	6
2	3	2	2	4	5	3	6
3	6	6	6	6	6	5	5
2	5	2	4	6	7	1	6
4	7	7	6	5	4	3	6
3	5	4	4	4	4	3	4
2	5	3	5	6	6	6	6
5	5	4	3	4	5	4	4
6	2	3	4	4	4	4	6
3	4	5	5	5	3	5	4
2	3	4	2	2	1	5	6
4	5	4	4	4	4	4	4
4	3	2	3	3	6	2	7
6	3	2	3	3	6	1	7
4	5	4	5	5	6	3	5
2	4	2	2	5	6	4	7
5	4	4	3	3	6	4	4
1	3	2	2	6	6	6	6
3	4	6	6	4	6	4	6
5	5	4	3	4	6	4	4
2	4	2	2	7	7	7	7
5	4	2	2	2	6	3	3
2	1	1	1	4	7	4	4
5	5	4	2	4	6	4	5

Case Summaries[a]

KTER5	KTER6	KTER7	KTER8	KEG1	KEG2	KEG3	KEG4	KOM1
6	5	5	5	4	4	5	5	6
5	5	4	4	4	4	5	6	4
5	6	2	4	4	4	4	4	4
7	4	4	6	5	5	5	7	6
4	2	7	5	4	4	6	6	6
5	4	4	6	3	5	3	4	3
5	4	4	4	4	5	5	5	3
7	6	6	7	5	6	7	6	7
5	5	4	4	5	5	5	5	5
4	4	3	4	6	6	6	6	5
6	5	5	5	5	5	5	5	3
6	6	4	6	5	5	5	5	5

4	3	2	2	5	5	5	5	3
5	5	3	6	5	6	6	6	6
6	4	5	5	3	5	5	6	6
3	3	4	3	4	5	5	4	4
6	5	1	6	6	5	6	5	6
4	4	4	4	3	3	3	3	3
7	6	4	4	7	7	7	7	4
5	5	4	5	6	6	6	6	6
5	5	3	5	6	6	6	6	4
3	4	5	5	5	3	3	3	1
5	5	4	3	5	5	4	6	5
6	4	2	4	4	4	6	4	1
4	5	5	3	2	4	3	2	3
6	6	3	6	2	3	4	5	4
5	4	4	4	5	4	5	5	5
6	6	2	2	2	2	5	2	2
4	4	5	3	4	4	3	3	3
4	3	5	4	4	4	5	5	4
7	7	4	6	4	7	7	5	5
4	3	6	4	5	5	6	6	4
3	3	5	4	4	4	5	4	4
5	5	3	3	5	4	6	5	5

Case Summaries[a]

KOM2	KOM3	KED1	KED2	KTUL	KEC1	KEC2	LOYAL1	LOYAL2
5	4	5	4	5	3	4	4	5
4	4	4	4	4	4	2	2	2
4	4	4	4	4	4	4	3	2
6	4	6	4	6	6	6	4	4
6	6	6	4	5	7	7	7	4
3	3	3	5	3	3	5	3	5
3	3	3	2	4	4	4	4	4
6	5	7	6	5	6	4	5	5
5	5	4	4	4	4	5	3	2
5	4	4	3	5	5	7	5	5
4	3	3	3	5	4	5	5	5
6	4	4	2	4	4	3	5	5
4	3	4	4	4	4	4	5	4
5	5	5	1	5	2	5	5	5
6	4	4	4	5	5	5	3	3
4	5	5	4	4	4	4	2	3
4	6	3	6	5	4	6	6	5
4	3	3	3	4	2	3	1	1

6	4	2	4	7	3	5	6	6
5	5	4	5	6	6	5	7	6
5	5	6	4	5	6	6	3	3
2	2	2	3	2	2	4	2	1
4	5	4	3	5	5	5	3	1
1	2	3	3	3	4	3	3	3
4	3	3	5	5	3	4	3	3
4	4	3	2	4	5	6	3	3
4	5	5	5	4	5	5	5	5
2	2	2	6	2	4	7	3	3
4	4	4	5	5	4	4	6	5
4	4	4	4	4	5	5	5	4
6	4	5	3	6	5	7	4	4
4	3	6	4	6	4	5	3	3
4	4	4	4	4	4	4	4	4
5	4	5	5	5	4	4	4	2

Case Summaries[a]

LOYAL3	LOYAL4
4	3
2	2
2	1
4	2
4	2
3	1
1	1
5	1
2	3
5	4
4	4
5	4
3	3
5	4
2	3
3	2
3	5
1	1
6	6
6	6
2	1
1	1
1	1
1	1

2	1
2	1
5	5
3	2
5	3
4	4
4	1
2	1
3	2
3	2

Case Summaries[a]

	Umur	J_Kelamin	T_Pend_Trakhir	EKS1	EKS2	EKS3	EKS4	EKS5	EKS6
171	24	1	3	5	5	5	6	5	6
172	22	2	3	6	5	5	6	5	5
173	18	2	1	4	7	7	7	6	4
174	18	2	1	4	6	6	3	4	7
175	18	2	1	5	6	6	5	4	6
176	20	1	1	6	7	3	5	5	6
177	21	2	3	6	7	4	6	7	7
178	19	2	1	7	4	4	4	1	5
179	20	2	1	6	7	3	6	3	7
180	21	2	2	5	7	6	7	4	3
181	20	2	2	4	4	5	4	3	7
182	20	2	1	7	7	6	7	6	6
183	20	2	1	7	7	5	7	4	5
184	20	2	1	4	7	4	5	5	6
185	18	1	1	4	5	4	6	4	6
186	23	2	3	4	5	1	5	4	6
187	21	1	2	4	5	5	5	5	5
188	24	1	2	6	5	5	5	5	5
189	23	1	2	5	4	5	5	5	5
190	20	2	2	5	6	6	5	6	5
191	20	2	2	7	6	5	7	6	7
192	19	2	2	4	3	3	5	5	5
193	22	2	2	7	7	7	7	7	7
194	18	1	1	7	1	1	7	1	4
195	22	2	3	1	7	2	7	7	7
196	20	2	2	7	5	7	5	2	5
197	23	1	3	6	5	6	5	6	6
198	25	2	4	5	5	5	5	4	6
199	19	2	1	5	5	5	6	5	5

200	23	1	3	5	6	5	5	5	5
201	27	1	3	5	5	4	5	3	4
202	19	2	1	7	7	4	5	2	7
203	20	2	1	3	6	2	4	2	4
204	20	1	1	6	7	7	6	6	6

Case Summaries[a]

EKS7	KER1	KER2	KER3	KER4	KER5	KER6	KER7	KES1
6	6	4	5	4	5	6	6	3
5	5	4	5	6	4	4	5	5
5	4	1	7	4	6	7	1	1
5	7	5	4	7	4	5	7	3
4	4	5	3	5	4	7	4	2
7	7	7	4	7	4	7	6	3
6	7	7	4	6	6	7	7	7
5	5	6	5	4	2	4	5	1
6	7	7	1	7	7	7	7	5
4	2	2	6	5	7	7	6	7
7	7	6	5	7	2	4	7	3
6	7	1	7	6	7	7	5	6
4	7	3	4	7	7	7	7	6
7	7	4	6	7	6	7	6	6
7	7	3	6	5	6	7	7	5
6	6	6	5	5	5	5	6	5
5	5	5	5	4	5	5	6	5
5	6	6	4	6	7	7	6	5
5	6	6	4	7	7	7	5	5
4	6	5	4	6	7	7	6	5
6	6	3	2	7	7	7	7	5
5	5	4	4	6	5	5	7	5
6	6	2	3	6	7	7	6	6
7	7	3	6	7	7	7	7	6
7	7	3	5	7	7	7	7	7
7	7	5	1	7	5	6	7	4
5	5	6	4	5	7	7	6	6
6	6	5	3	6	5	7	6	4
4	7	5	5	6	7	7	7	5
4	7	6	4	5	5	6	6	4
4	5	5	4	5	5	5	5	3
7	7	5	4	7	7	7	5	6
5	6	5	2	6	7	7	7	3
5	6	2	3	6	7	7	7	6

Case Summaries[a]

KES2	KES3	KES4	KES5	KES6	KES7	S_EMOS1	S_EMOS2
2	4	3	4	3	4	3	4
5	4	6	6	4	3	3	3
2	4	6	7	4	1	7	1
4	4	5	4	7	1	4	4
2	5	3	5	5	2	6	6
4	6	5	7	7	6	1	5
7	7	7	7	7	7	1	1
1	4	2	5	5	1	1	7
7	7	6	6	6	3	1	4
7	6	7	7	7	2	4	2
6	6	1	4	6	1	5	6
7	3	6	3	6	5	2	3
7	2	7	7	6	5	4	1
7	5	6	6	4	5	4	5
4	6	6	6	7	4	2	2
5	5	6	5	5	5	4	4
4	5	5	5	5	4	4	3
5	5	5	5	5	4	2	3
5	5	5	6	5	6	3	2
5	5	6	5	4	4	3	4
7	5	6	5	6	6	2	4
5	5	5	6	6	5	4	4
6	5	6	3	2	6	4	2
6	7	7	7	7	6	1	1
7	7	7	7	7	7	1	1
5	6	5	3	3	3	1	6
6	5	5	5	5	5	3	3
5	6	6	6	6	5	2	2
4	5	7	5	4	4	2	5
4	5	6	5	5	4	3	3
3	5	4	5	5	4	4	4
7	1	7	7	7	2	3	1
7	4	2	6	6	6	2	5
7	4	6	4	3	6	3	5

Case Summaries[a]

S_EMOS3	S_EMOS4	S_EMOS5	S_EMOS6	KTER1	KTER2	KTER3	KTER4
4	4	4	4	4	5	4	6
4	3	3	3	4	4	4	5
7	2	1	1	3	5	1	7
3	7	3	3	5	6	2	7

4	5	4	3	3	2	2	7
1	4	4	5	7	7	7	7
1	1	1	1	7	7	7	6
3	7	7	6	3	3	4	5
2	5	5	6	7	3	4	5
6	2	4	3	1	3	1	5
5	6	4	4	2	1	7	5
5	2	1	1	4	7	1	4
3	4	1	3	3	5	3	7
4	2	1	3	3	4	2	2
3	3	1	4	4	7	4	6
4	3	3	4	6	2	6	6
4	3	3	4	5	4	5	5
3	3	3	3	5	6	5	5
3	2	2	3	4	4	4	4
4	3	3	4	3	3	3	5
1	3	2	4	4	6	3	7
4	3	3	3	4	3	5	5
4	2	1	2	2	3	1	7
2	1	1	1	7	7	7	5
1	1	1	1	7	7	7	3
5	7	4	3	3	5	3	6
3	3	2	3	5	6	5	5
2	2	1	2	6	6	4	6
2	3	1	2	4	4	4	7
2	2	4	3	4	4	4	6
4	4	4	4	5	3	5	5
7	1	3	2	7	7	4	7
1	5	2	5	5	2	2	7
2	2	1	2	3	4	2	7

Case Summaries[a]

KTER5	KTER6	KTER7	KTER8	KEG1	KEG2	KEG3	KEG4	KOM1
3	4	4	3	4	4	5	5	5
5	6	3	4	5	5	6	4	4
7	1	4	7	7	3	5	5	7
7	3	5	7	5	3	5	7	4
6	5	3	5	5	6	6	6	5
7	7	1	7	7	7	7	7	6
7	7	1	7	7	7	6	6	7
4	6	3	4	5	6	4	5	4
7	7	3	7	7	7	7	7	6
5	4	4	1	2	4	5	5	5

6	4	5	7	6	2	7	7	7
4	3	2	6	6	5	6	7	6
4	2	4	3	4	4	7	7	7
5	3	4	5	4	2	3	4	6
5	4	4	6	6	6	7	7	7
4	4	4	4	4	4	5	5	4
4	3	4	4	5	4	4	4	3
5	5	3	5	5	4	4	5	4
5	6	3	6	3	3	2	5	4
4	4	4	4	2	2	5	5	4
4	3	4	4	5	4	5	6	5
5	4	3	5	4	4	5	5	4
5	2	3	1	6	3	6	7	6
7	7	1	7	7	7	7	7	7
7	7	7	7	7	7	7	7	7
4	3	5	3	7	5	7	6	6
6	5	2	5	1	2	1	5	5
5	6	5	6	6	4	6	6	6
5	5	3	4	5	5	6	6	5
5	5	3	4	5	5	5	6	5
5	5	3	5	1	2	2	5	5
6	5	4	5	5	6	6	7	7
1	1	4	2	5	4	7	5	6
4	2	4	2	5	4	6	6	5

Case Summaries[a]

KOM2	KOM3	KED1	KED2	KTUL	KEC1	KEC2	LOYAL1	LOYAL2
5	4	4	4	4	4	3	4	3
5	4	5	4	4	5	5	4	4
7	4	2	1	7	7	6	3	2
4	3	4	7	4	4	4	5	7
6	6	6	6	6	4	6	5	5
6	6	6	6	6	6	6	6	5
6	5	5	6	7	7	6	7	1
5	4	6	7	5	7	7	5	6
5	7	6	6	6	7	7	5	5
5	4	5	5	5	5	5	5	5
7	6	5	7	6	4	6	4	7
7	6	7	1	6	6	6	2	2
6	6	6	5	5	6	5	6	5
5	6	5	3	4	4	4	4	4
7	6	5	2	6	7	4	3	3
4	5	4	4	4	5	6	5	5

4	5	5	3	4	5	5	4	5
5	6	1	1	1	7	7	5	5
4	5	1	1	2	7	6	4	4
3	5	3	2	1	7	7	4	5
5	5	3	2	4	5	4	4	4
4	6	5	5	5	6	6	5	6
5	6	2	2	7	2	2	6	6
7	7	7	7	7	7	7	3	3
7	7	7	7	7	7	7	2	5
5	6	3	3	6	7	7	6	7
2	5	1	1	6	7	7	5	4
5	5	4	5	6	6	6	5	5
5	6	5	3	6	6	6	5	6
5	5	4	3	3	5	6	5	5
5	5	1	2	5	6	7	5	5
6	4	5	4	5	6	7	7	7
5	3	5	5	7	6	7	6	6
4	5	4	2	7	4	3	5	4

Case Summaries[a]

LOYAL3	LOYAL4
4	1
4	4
1	1
5	1
3	3
6	6
1	1
5	5
5	4
5	5
7	4
2	1
5	6
4	2
4	3
5	5
5	4
5	5
4	4
4	5
3	2
5	5

6	6
3	3
3	4
4	3
5	5
5	2
5	4
5	4
5	5
7	7
4	2
2	2

Case Summaries[a]

	Umur	J_Kelamin	T_Pend_Trakhir	EKS1	EKS2	EKS3	EKS4	EKS5	EKS6
205	24	1	2	5	5	5	6	5	5
206	24	2	3	6	6	7	6	6	6
207	24	2	3	4	6	5	5	4	4
208	20	2	2	7	3	5	4	5	5
209	22	2	3	6	5	5	4	5	6
210	22	2	3	4	5	5	5	5	5
211	24	2	3	3	5	3	4	3	3
212	20	2	1	3	7	2	6	2	6
213	26	2	3	3	5	4	6	3	6
214	23	2	2	6	6	6	6	5	5
215	21	1	2	3	6	3	6	3	6
216	23	2	3	3	5	3	5	3	3
217	25	2	3	6	6	6	6	6	6
218	20	2	1	5	5	6	7	5	4
219	20	2	2	6	6	5	6	5	5
220	19	2	2	4	6	3	4	5	4
221	22	2	3	6	6	3	5	4	6
222	19	2	2	6	3	4	3	5	5
223	25	2	3	3	6	5	7	5	4
224	26	2	3	3	4	5	5	5	4
225	20	1	2	6	3	5	6	6	6
226	25	1	3	2	6	6	5	2	6
227	23	2	3	4	6	6	4	2	6
228	22	1	3	4	6	5	5	5	4
229	23	1	2	5	5	5	5	6	5
230	25	2	3	2	4	2	4	2	3
231	31	2	3	7	7	7	7	7	7

232	24	2	3	5	5	5	4	5	5
233	19	2	3	3	4	5	5	5	4
234	25	2	3	4	4	4	5	5	5
235	22	1	3	4	5	5	5	5	5
236	22	1	3	7	7	7	1	7	7
237	21	2	1	3	7	5	7	3	7
238	22	1	3	4	6	6	4	6	6

Case Summaries[a]

EKS7	KER1	KER2	KER3	KER4	KER5	KER6	KER7	KES1
4	6	6	4	6	7	7	6	3
5	7	6	6	7	7	7	7	6
5	5	5	4	6	7	7	5	4
4	5	5	5	5	5	5	6	4
6	6	4	4	6	5	5	6	2
5	5	5	5	5	5	5	6	5
4	6	7	3	6	7	7	5	5
5	6	2	2	7	7	7	7	6
5	7	6	2	6	7	7	7	2
5	6	5	4	6	7	7	6	5
4	5	3	5	5	5	5	5	4
3	6	5	4	6	7	7	5	5
5	5	6	4	7	7	7	6	4
5	4	3	7	6	7	6	4	6
5	7	3	4	7	7	7	5	5
3	4	4	3	4	7	7	5	6
5	6	3	6	4	7	7	7	4
5	4	3	6	4	6	5	4	5
6	7	3	5	7	6	6	7	5
5	6	5	5	5	7	6	6	4
7	6	6	4	4	7	7	4	7
6	6	2	7	6	7	7	6	4
4	3	3	3	4	4	3	3	1
3	5	3	6	6	5	4	5	5
4	6	5	5	6	7	7	7	5
2	7	7	3	7	7	7	6	5
7	4	4	7	4	4	4	7	1
5	5	5	5	5	5	5	5	4
4	4	4	5	5	5	5	6	5
3	7	7	5	7	7	7	5	5
5	5	5	5	5	5	5	3	5
4	1	7	7	7	7	7	7	7
6	7	3	5	7	6	7	7	6

5	7	4	6	7	6	6	7	6

Case Summaries[a]

KES2	KES3	KES4	KES5	KES6	KES7	S_EMOS1	S_EMOS2
3	5	5	5	5	4	3	4
6	5	6	6	5	4	2	2
4	4	3	4	4	4	4	4
5	5	5	5	5	4	4	3
2	5	2	4	5	4	2	3
5	4	5	5	5	5	4	4
5	4	5	5	5	5	4	5
7	4	6	4	2	6	3	2
2	6	6	7	7	4	4	5
5	5	5	5	5	5	3	3
5	5	5	4	5	4	5	3
5	5	5	5	4	4	4	5
4	6	5	5	5	4	2	2
4	5	7	4	5	5	5	3
6	6	5	6	7	4	2	4
5	3	5	4	4	3	4	4
5	7	7	6	6	4	4	4
6	3	4	5	4	5	4	4
6	6	7	7	7	5	1	3
4	4	5	5	5	3	3	4
6	6	7	7	5	4	3	6
3	4	5	5	5	4	2	3
2	4	3	4	5	3	4	5
4	6	5	5	6	5	3	3
5	5	5	5	5	5	3	3
5	4	5	5	5	5	5	4
5	7	7	7	7	6	2	2
4	5	4	5	5	3	3	4
4	5	5	5	4	5	4	3
5	5	7	5	5	5	3	3
5	3	5	5	5	5	3	4
1	7	7	7	7	1	1	1
6	7	5	5	5	5	2	3
4	4	6	5	5	5	3	3

Case Summaries[a]

S_EMOS3	S_EMOS4	S_EMOS5	S_EMOS6	KTER1	KTER2	KTER3	KTER4
4	3	3	3	4	4	4	4
2	2	2	3	5	3	5	7

4	4	4	4	3	3	4	4
4	4	4	4	5	5	4	4
2	3	3	3	6	5	6	6
3	3	3	3	5	4	4	5
5	5	5	5	3	2	3	5
3	3	2	4	2	3	3	7
4	4	4	2	6	6	3	6
3	3	3	3	4	4	4	6
3	3	3	5	3	3	4	5
4	5	5	5	3	2	3	5
3	2	2	1	5	7	5	6
4	3	1	1	4	6	2	5
2	5	3	2	4	4	4	5
5	5	5	5	5	4	2	6
4	2	2	1	7	7	4	5
5	3	3	3	4	4	4	3
1	2	1	3	3	6	3	7
3	3	3	3	4	4	4	5
2	2	3	4	7	1	7	7
3	2	1	1	6	5	3	6
5	5	3	5	3	3	3	5
2	1	3	1	6	6	5	7
3	3	3	3	4	6	5	6
3	4	3	4	3	3	3	6
4	6	4	4	7	7	6	7
3	5	4	4	4	4	4	5
2	3	3	3	5	3	4	5
2	3	3	3	4	4	4	6
4	3	3	3	4	4	4	4
1	4	4	1	4	4	4	4
3	3	2	2	5	7	5	3
4	4	4	3	6	6	6	6

Case Summaries[a]

KTER5	KTER6	KTER7	KTER8	KEG1	KEG2	KEG3	KEG4	KOM1
5	5	3	4	4	3	5	5	3
5	6	3	6	1	1	3	6	3
5	4	3	4	1	1	1	4	3
4	5	5	5	4	3	5	5	4
6	6	5	6	4	5	5	5	4
5	4	3	4	5	5	5	5	4
3	3	4	4	1	1	1	2	1
3	2	4	2	3	4	5	6	6

6	5	2	6	1	1	5	5	3
4	4	4	4	3	3	5	5	5
4	3	5	3	4	3	5	5	3
4	3	3	4	1	2	5	5	4
5	4	3	4	5	4	5	6	5
6	5	4	3	3	4	3	5	4
5	4	4	4	6	4	6	7	6
3	2	3	6	6	5	6	7	7
6	5	3	3	1	2	5	5	1
2	3	4	5	5	6	5	6	5
6	5	1	7	3	2	7	7	7
4	6	3	5	5	5	5	5	5
7	6	1	7	7	7	7	5	4
4	4	5	5	6	6	5	4	4
4	3	6	5	3	6	3	6	5
5	6	6	6	2	4	5	3	6
5	4	3	5	1	2	2	5	5
4	4	3	4	3	3	5	5	5
7	7	7	7	7	4	7	7	7
5	5	4	4	5	5	6	7	5
5	5	3	4	3	5	5	4	4
5	4	3	4	3	3	5	6	6
4	4	4	4	5	5	5	5	5
7	4	4	4	7	7	7	7	7
5	5	5	5	4	6	5	5	5
6	4	3	5	5	5	6	5	5

Case Summaries[a]

KOM2	KOM3	KED1	KED2	KTUL	KEC1	KEC2	LOYAL1	LOYAL2
4	5	1	1	1	7	7	4	4
5	6	1	1	1	7	7	5	5
2	4	1	1	1	5	5	3	2
4	5	5	5	5	5	5	5	6
4	5	2	2	5	7	7	5	5
4	4	4	3	5	6	6	4	4
1	3	1	1	1	5	6	3	2
3	4	5	3	6	7	2	4	4
5	6	1	1	1	7	7	5	5
5	5	2	1	1	7	6	4	4
4	5	4	3	4	5	6	6	7
4	5	3	2	1	6	7	4	4
6	5	3	1	5	7	7	5	5
5	4	3	3	4	3	2	7	6

5	4	6	5	5	6	4	6	3
5	7	4	2	6	5	4	4	5
1	5	1	2	5	6	7	5	5
6	5	4	4	5	4	5	6	5
7	7	7	2	7	7	2	2	3
6	5	1	1	1	6	7	3	5
5	4	5	4	6	7	7	6	5
4	4	4	3	5	6	7	4	4
4	4	3	4	4	6	6	3	4
5	5	2	1	6	6	7	5	5
5	5	1	1	1	6	7	4	5
5	1	1	1	1	7	7	5	5
7	4	1	1	7	1	7	7	7
3	6	4	3	3	7	7	5	5
4	3	4	3	4	5	5	3	3
5	6	1	1	5	7	7	5	5
5	5	4	4	5	5	5	4	4
7	7	7	1	7	4	7	7	7
5	5	5	5	5	5	5	3	3
5	3	3	3	5	5	5	5	7

Case Summaries[a]

LOYAL3	LOYAL4
4	5
5	4
3	3
7	7
5	5
4	4
3	3
3	2
6	5
4	4
7	6
4	4
5	5
6	6
1	1
4	3
5	4
4	3
5	2
4	2

4	3
4	3
2	3
2	2
5	5
3	2
4	7
4	5
3	3
5	5
5	4
7	7
3	2
7	5

Case Summaries[a]

	Umur	J_Kelamin	T_Pend_Trakhir	EKS1	EKS2	EKS3	EKS4	EKS5	EKS6
239	23	2	3	3	5	3	4	3	4
240	25	2	4	5	7	4	4	5	5
241	25	1	4	5	5	4	6	3	5
242	27	1	3	7	7	7	7	7	7
243	25	1	3	7	7	7	7	7	7
244	23	1	3	1	7	1	1	7	1
245	25	2	3	6	7	6	6	2	7
246	26	1	3	1	7	7	4	7	6
247	28	2	4	7	5	5	4	5	7
248	24	1	3	7	6	6	7	6	7
249	24	1	3	5	7	7	6	6	7
250	24	2	3	7	7	4	4	7	7
251	23	1	3	4	6	4	4	6	6
252	22	2	3	5	7	5	3	7	4
253	24	1	3	2	4	3	4	4	5
254	23	1	3	1	4	6	7	6	6
255	24	2	4	5	6	6	4	3	5
256	21	2	3	5	7	6	3	7	7
257	21	2	3	6	6	6	5	6	5
258	20	2	1	5	4	4	5	3	4
259	22	1	1	6	7	6	6	6	6
260	21	1	1	3	5	3	4	5	4
261	20	1	3	4	7	3	6	5	5
262	20	1	1	3	7	1	5	3	4
263	23	1	3	6	4	5	4	5	5

264	26	1	3	4	4	4	4	4	5
265	25	1	3	7	6	6	6	6	6
266	25	1	3	7	7	7	7	7	7
267	23	1	3	1	7	1	1	7	1
268	24	1	3	7	6	6	7	6	7
269	24	1	3	5	7	7	6	6	7
270	21	2	3	6	6	6	5	6	5
271	22	2	3	4	6	4	5	4	4
272	24	1	1	3	5	3	6	4	5

Case Summaries[a]

EKS7	KER1	KER2	KER3	KER4	KER5	KER6	KER7	KES1
4	6	6	2	7	6	6	7	5
4	4	4	5	4	6	7	6	4
6	5	5	1	5	6	6	5	4
4	7	4	7	7	4	4	7	7
5	7	2	7	7	7	7	7	7
1	1	1	7	1	7	7	1	1
6	7	7	4	7	7	7	4	4
1	6	1	7	4	7	7	7	7
5	7	7	6	6	6	5	7	3
7	7	4	3	7	7	7	6	6
5	6	3	5	4	7	7	5	6
7	7	6	6	6	3	3	7	1
5	7	4	6	5	7	7	7	7
5	6	4	4	6	7	7	7	5
4	6	3	4	5	5	5	6	3
4	7	5	4	6	6	7	5	4
5	6	4	4	5	6	6	6	4
4	5	3	6	4	7	7	7	6
7	6	5	7	6	5	6	7	2
4	5	4	2	6	6	6	5	4
6	6	2	6	2	6	6	6	2
2	5	1	5	3	5	7	6	3
5	7	3	6	5	6	7	7	5
7	5	7	4	4	1	7	1	3
4	5	5	5	5	5	6	5	5
5	5	4	4	5	4	4	5	4
6	6	4	6	6	5	5	7	6
5	7	2	7	7	7	7	7	7
1	1	1	7	1	7	7	1	1
7	7	4	3	7	7	7	6	6
5	6	3	5	4	7	7	5	6

7	6	5	7	6	5	6	7	2
4	6	5	4	7	7	5	5	4
6	6	5	4	5	6	6	5	4

Case Summaries[a]

KES2	KES3	KES4	KES5	KES6	KES7	S_EMOS1	S_EMOS2
5	6	6	6	5	4	4	5
6	4	7	4	4	5	4	3
2	5	4	6	5	6	1	4
7	7	7	4	4	1	4	4
1	7	7	7	7	5	1	1
1	1	7	7	1	7	1	1
4	7	7	3	6	4	1	1
7	6	7	6	4	1	3	5
5	5	6	5	6	6	2	2
6	6	6	6	6	4	4	5
5	4	6	4	6	5	1	1
1	7	2	4	5	5	3	5
7	5	4	4	4	5	4	3
6	3	4	5	4	4	4	5
3	5	5	5	5	4	3	4
3	5	6	4	6	3	3	4
5	6	6	6	5	5	3	3
7	6	7	6	4	1	4	4
6	6	4	7	7	3	4	6
3	4	4	4	4	5	3	3
2	6	6	6	6	2	2	6
1	4	3	2	3	2	1	2
5	4	5	4	5	2	1	3
4	3	4	3	4	2	5	6
4	4	6	5	5	3	4	4
4	4	4	4	5	4	4	4
6	6	6	6	6	6	1	2
1	7	7	7	7	5	1	1
1	1	7	7	1	7	1	1
6	6	6	6	6	4	4	5
5	4	6	4	6	5	1	1
6	6	4	7	7	3	4	6
4	6	6	7	6	6	2	3
4	4	5	5	6	3	1	2

Case Summaries[a]

S_EMOS3	S_EMOS4	S_EMOS5	S_EMOS6	KTER1	KTER2	KTER3	KTER4

5	5	6	5	6	6	6	6
5	3	1	1	3	4	1	5
2	3	3	3	7	7	7	7
4	1	1	1	6	2	4	6
1	4	1	1	5	7	4	7
7	1	1	7	1	1	7	7
3	5	4	4	7	7	7	6
3	7	7	7	1	3	5	7
2	3	3	3	3	1	3	6
5	5	5	2	6	6	4	5
2	1	1	1	7	7	6	7
3	5	1	1	4	7	2	7
5	3	3	2	3	6	3	6
3	5	4	3	7	7	5	6
3	4	4	4	6	6	4	5
3	5	3	4	5	6	1	6
3	3	3	3	4	4	4	5
2	4	4	2	3	6	4	6
2	5	6	6	7	7	7	6
4	4	2	3	4	6	4	4
1	2	2	2	6	6	6	6
6	3	3	2	5	3	5	6
4	3	1	1	5	6	2	3
4	4	2	2	4	7	7	5
2	3	3	3	6	6	5	5
3	4	4	4	4	4	4	4
1	2	2	2	4	4	4	6
1	4	1	1	5	7	4	7
7	1	1	7	1	1	7	7
5	5	5	2	6	6	4	5
2	1	1	1	7	7	6	7
2	5	6	6	7	7	7	6
3	4	1	1	4	6	3	6
2	5	1	2	6	7	7	6

Case Summaries[a]

KTER5	KTER6	KTER7	KTER8	KEG1	KEG2	KEG3	KEG4	KOM1
7	4	3	5	5	6	4	5	4
4	4	4	2	4	4	4	4	4
7	6	4	7	4	5	5	5	6
4	4	4	6	7	4	7	7	7
6	5	1	7	7	7	7	7	7
5	1	7	7	7	7	6	6	5

6	4	1	1	7	7	7	7	7
6	5	1	4	1	4	1	1	5
6	5	3	7	3	6	6	6	6
4	4	2	4	6	6	2	6	6
4	7	5	6	5	5	6	6	5
6	5	7	4	1	2	2	2	2
5	5	4	5	5	4	5	5	4
4	3	3	4	4	5	7	7	7
6	5	4	5	5	5	5	6	4
5	5	4	4	4	5	5	6	4
4	5	4	5	6	6	6	5	4
7	5	1	3	5	4	6	7	5
7	7	2	6	6	6	6	5	5
4	3	4	4	5	5	5	4	6
6	6	2	6	6	6	6	6	6
5	4	4	4	5	6	6	6	5
2	3	5	4	4	3	6	5	5
4	3	2	6	4	6	5	3	1
4	4	2	6	7	7	7	6	6
5	4	4	4	4	4	4	4	4
5	5	2	4	7	7	5	5	5
6	5	1	7	7	7	7	7	7
5	1	7	7	7	7	6	6	5
4	4	2	4	6	6	2	6	6
4	7	5	6	5	5	6	6	5
7	7	2	6	6	6	6	5	5
5	4	3	6	4	3	6	5	5
5	5	2	4	6	6	6	6	5

Case Summaries[a]

KOM2	KOM3	KED1	KED2	KTUL	KEC1	KEC2	LOYAL1	LOYAL2
6	4	6	4	6	6	6	6	6
4	4	4	3	4	4	4	6	6
4	4	4	4	4	5	5	4	4
7	4	4	4	7	7	7	7	7
7	7	7	1	7	5	7	1	7
7	5	7	3	7	6	6	7	7
7	7	7	4	7	7	7	7	7
5	4	4	4	7	7	1	1	4
5	4	2	2	4	4	6	5	4
6	2	3	3	6	5	5	5	4
5	6	4	4	4	5	6	5	4
2	2	2	2	2	2	2	1	1

5	6	5	5	5	4	4	3	3
7	7	7	7	7	5	5	4	3
5	3	3	5	2	2	5	4	4
5	6	5	2	4	7	7	6	4
4	4	3	3	5	4	6	5	5
6	4	6	5	4	6	6	6	6
6	6	4	4	5	6	6	6	6
4	5	5	3	4	4	4	4	4
6	2	2	2	6	6	6	6	6
5	4	6	6	5	4	5	3	4
4	2	3	4	3	1	3	4	3
1	2	1	2	3	3	5	4	3
5	2	2	2	4	6	6	4	5
4	4	4	4	4	4	5	4	4
5	4	4	4	5	6	6	7	6
7	7	7	1	7	5	7	1	7
7	5	7	3	7	6	6	7	7
6	2	3	3	6	5	5	5	4
5	6	4	4	4	5	6	5	4
6	6	4	4	5	6	6	6	6
4	4	5	2	6	5	3	2	3
5	5	5	6	5	5	7	5	3

Case Summaries[a]

LOYAL3	LOYAL4
5	5
6	6
4	4
7	7
1	1
6	5
7	7
1	1
4	4
4	4
4	1
1	1
2	2
4	4
4	2
4	5
5	5
6	4

6	5
3	2
6	6
4	2
3	1
3	1
5	5
4	4
7	7
1	1
6	5
4	4
4	1
6	5
1	1
3	2

Case Summaries[a]

	Umur	J_Kela min	T_Pend_T rakhir	EKS1	EKS2	EKS3	EKS4	EKS5	EKS6
273	19	2	1	4	7	4	4	3	4
274	18	1	1	2	4	2	5	4	7
275	26	1	3	7	2	1	7	1	7
276	28	1	3	2	7	7	7	7	7
277	26	1	3	4	7	7	4	6	4
278	23	1	3	5	6	5	5	5	5
279	24	2	3	4	6	5	5	4	4

Case Summaries[a]

EKS7	KER1	KER2	KER3	KER4	KER5	KER6	KER7	KES1
4	5	3	5	4	6	6	6	4
7	6	1	2	7	7	7	7	4
7	7	7	2	7	7	7	6	1
7	7	4	4	7	7	7	7	4
4	6	4	4	4	4	7	7	4
4	7	6	4	5	5	6	6	4
5	5	5	4	6	7	7	5	4

Case Summaries[a]

KES2	KES3	KES4	KES5	KES6	KES7	S_EMOS1	S_EMOS2
3	4	3	4	4	3	5	5
2	7	4	4	5	6	1	4
4	7	1	5	6	1	1	4

7	7	7	7	7	3	3	3
4	6	4	6	4	4	4	4
4	5	6	5	5	4	3	3
4	4	3	4	4	4	4	4

Case Summaries[a]

S_EMOS3	S_EMOS4	S_EMOS5	S_EMOS6	KTER1	KTER2	KTER3	KTER4
5	5	4	3	4	6	4	4
2	4	2	2	7	7	7	7
2	5	5	6	4	4	4	7
4	4	7	7	7	7	7	7
6	4	4	4	2	4	4	5
2	2	4	3	4	4	4	6
4	4	4	4	3	3	4	4

Case Summaries[a]

KTER5	KTER6	KTER7	KTER8	KEG1	KEG2	KEG3	KEG4	KOM1
4	3	5	4	4	4	5	5	4
7	7	4	6	4	7	7	5	5
7	4	4	6	5	5	5	7	6
7	2	3	7	7	7	7	7	7
3	2	1	4	6	6	6	6	4
5	5	3	4	5	5	5	6	5
5	4	3	4	1	1	1	4	3

Case Summaries[a]

KOM2	KOM3	KED1	KED2	KTUL	KEC1	KEC2	LOYAL1	LOYAL2
4	4	4	4	4	5	5	5	4
6	4	5	3	6	5	7	4	4
6	4	6	4	6	6	6	4	4
6	6	6	4	6	3	2	4	4
5	3	5	1	5	4	5	4	6
5	5	4	3	3	5	6	5	5
2	4	1	1	1	5	5	3	2

Case Summaries[a]

LOYAL3	LOYAL4
4	4
4	1
4	2
4	4
6	6
5	4

	3		3

a. Limited to first 279 cases.

LAMPIRAN 4

Frequencies

Umur

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	17	4	1.4	1.4	1.4
	18	59	21.1	21.1	22.6
	19	32	11.5	11.5	34.1
	20	43	15.4	15.4	49.5
	21	26	9.3	9.3	58.8
	22	28	10.0	10.0	68.8
	23	24	8.6	8.6	77.4
	24	23	8.2	8.2	85.7
	25	19	6.8	6.8	92.5
	26	10	3.6	3.6	96.1
	27	6	2.2	2.2	98.2
	28	3	1.1	1.1	99.3
	31	1	.4	.4	99.6
	34	1	.4	.4	100.0
	Total	279	100.0	100.0	

Umur

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 22 tahun	164	58.8	58.8	58.8
	=> 22 tahun	115	41.2	41.2	100.0
	Total	279	100.0	100.0	

Jenis kelamin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Laki-laki	133	47.7	47.7	47.7
	Perempuan	146	52.3	52.3	100.0
	Total	279	100.0	100.0	

Pendidikan terakhir

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SMA/sederajat	133	47.7	47.7	47.7
	D1/D3	31	11.1	11.1	58.8
	S1/D4	110	39.4	39.4	98.2
	S2	5	1.8	1.8	100.0
	Total	279	100.0	100.0	

LAMPIRAN 5

Reliability

Case Processing Summary

		N	%
Cases	Valid	279	100,0
	Excluded[a]	0	,0
	Total	279	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,649	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EKS1	30,05	22,436	,408	,597
EKS2	28,95	27,638	,151	,665
EKS3	29,86	22,044	,425	,590
EKS4	29,53	25,430	,300	,629
EKS5	30,00	23,406	,327	,625
EKS6	29,32	23,303	,548	,564
EKS7	29,72	24,434	,382	,607

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
34,57	30,987	5,567	7

Reliability

Case Processing Summary

		N	%
Cases	Valid	279	100,0
	Excluded[a]	0	,0
	Total	279	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,597	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
KER1	31,63	19,298	,540	,487
KER2	33,03	23,780	,018	,670
KER3	33,31	24,746	-,048	,694
KER4	31,92	18,544	,574	,469
KER5	31,53	19,279	,478	,502
KER6	31,18	20,438	,453	,519
KER7	31,74	19,178	,443	,512

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
37,39	26,469	5,145	7

Reliability

Case Processing Summary

		N	%
Cases	Valid	279	100,0
	Excluded[a]	0	,0
	Total	279	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,772	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
KER1	23,19	14,289	,577	,720
KER4	23,47	13,653	,607	,708
KER5	23,09	13,985	,543	,731
KER6	22,73	14,958	,530	,736
KER7	23,29	14,129	,475	,757

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
28,94	20,997	4,582	5

Reliability

Case Processing Summary

		N	%
Cases	Valid	279	100,0
	Excluded[a]	0	,0
	Total	279	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,744	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
KES1	29,00	26,748	,553	,689
KES2	28,66	26,673	,550	,690
KES3	28,41	30,883	,407	,724
KES4	28,37	27,709	,555	,690
KES5	28,29	30,320	,463	,713
KES6	28,39	31,131	,402	,725
KES7	29,21	31,165	,291	,752

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
33,39	38,159	6,177	7

Reliability

Case Processing Summary

		N	%
Cases	Valid	279	100,0
	Excluded[a]	0	,0
	Total	279	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,774	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
S_EMOS1	16,79	29,131	,353	,779
S_EMOS2	16,04	25,394	,539	,736
S_EMOS3	16,44	28,679	,392	,770
S_EMOS4	16,07	25,107	,583	,724
S_EMOS5	16,71	24,084	,699	,693
S_EMOS6	16,67	25,525	,559	,731

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
19,74	36,264	6,022	6

Reliability

Case Processing Summary

		N	%
Cases	Valid	279	100,0
	Excluded[a]	0	,0
	Total	279	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,674	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
KTER1	32,53	26,315	,621	,572
KTER2	32,02	29,827	,335	,653
KTER3	32,86	28,053	,483	,612
KTER4	31,69	31,523	,379	,641
KTER5	32,31	29,948	,506	,614
KTER6	32,73	29,278	,519	,608
KTER7	33,56	40,456	-,232	,769
KTER8	32,42	29,986	,440	,626

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
37,16	38,280	6,187	8

Reliability

Case Processing Summary

		N	%
Cases	Valid	279	100,0
	Excluded[a]	0	,0
	Total	279	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,769	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
KTER1	28,93	27,956	,636	,707
KTER2	28,42	31,439	,357	,773
KTER3	29,27	29,879	,489	,742
KTER4	28,09	33,315	,396	,758
KTER5	28,71	31,336	,552	,730
KTER6	29,13	30,365	,586	,722
KTER8	28,82	31,764	,453	,748

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
33,56	40,456	6,360	7

Reliability

Case Processing Summary

		N	%
Cases	Valid	279	100,0
	Excluded^a	0	,0
	Total	279	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,802	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
KEG1	14,83	11,093	,706	,707
KEG2	14,69	12,438	,646	,738
KEG3	14,07	13,355	,641	,742
KEG4	13,82	15,709	,495	,806

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
19,14	21,931	4,683	4

Reliability

Case Processing Summary

		N	%
Cases	Valid	279	100,0
	Excluded[a]	0	,0
	Total	279	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,725	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
KOM1	9,24	5,027	,675	,468
KOM2	9,34	5,032	,701	,436
KOM3	9,09	7,442	,309	,887

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
13,84	11,539	3,397	3

Reliability

Case Processing Summary

		N	%
Cases	Valid	279	100,0
	Excluded[a]	0	,0
	Total	279	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,680	2

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
KED1	3,36	2,419	,519	.
KED2	3,88	3,086	,519	.

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
7,24	8,341	2,888	2

Reliability

Case Processing Summary

		N	%
Cases	Valid	279	100,0
	Excluded[a]	0	,0
	Total	279	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,686	2

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
KEC1	5,45	2,486	,524	.
KEC2	5,17	2,078	,524	.

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
10,62	6,948	2,636	2

Reliability

Case Processing Summary

		N	%
Cases	Valid	279	100,0
	Excluded[a]	0	,0
	Total	279	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,878	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
LOYAL1	11,88	19,086	,661	,872
LOYAL2	11,73	18,455	,722	,850
LOYAL3	12,08	16,425	,856	,796
LOYAL4	12,59	16,423	,725	,852

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
16,09	30,063	5,483	4

LAMPIRAN 6

Correlations

		Ekstraversi	Keramahan	Kesadaran	Stabilitas_Emosi
Ekstraversi	Pearson Correlation	1	,410**	,461**	-,413**
	Sig. (2-tailed)		,000	,000	,000
	N	279	279	279	279
Keramahan	Pearson Correlation	,410**	1	,574**	-,428**
	Sig. (2-tailed)	,000		,000	,000
	N	279	279	279	279
Kesadaran	Pearson Correlation	,461**	,574**	1	-,536**
	Sig. (2-tailed)	,000	,000		,000
	N	279	279	279	279
Stabilitas_Emosi	Pearson Correlation	-,413**	-,428**	-,536**	1
	Sig. (2-tailed)	,000	,000	,000	
	N	279	279	279	279
Keterbukaan	Pearson Correlation	,337**	,272**	,314**	-,364**
	Sig. (2-tailed)	,000	,000	,000	,000
	N	279	279	279	279
Kegembiraan	Pearson Correlation	,181**	,101	,107	-,091
	Sig. (2-tailed)	,002	,091	,073	,127
	N	279	279	279	279
Kompetensi	Pearson Correlation	,209**	,222**	,176**	-,099
	Sig. (2-tailed)	,000	,000	,003	,100
	N	279	279	279	279
Kedamaian	Pearson Correlation	-,147*	-,101	-,129*	,154**
	Sig. (2-tailed)	,014	,091	,032	,010
	N	279	279	279	279
Ketulusan	Pearson Correlation	,047	-,067	,014	,030
	Sig. (2-tailed)	,438	,265	,815	,613
	N	279	279	279	279
Kecanggihan	Pearson Correlation	,169**	,296**	,237**	-,246**
	Sig. (2-tailed)	,005	,000	,000	,000
	N	279	279	279	279
Loyalitas_Merek	Pearson Correlation	,202**	,121*	,227**	-,111
	Sig. (2-tailed)	,001	,043	,000	,063
	N	279	279	279	279

Correlations

		Keterbukaan	Kegembiraan	Kompetensi	Kedamaian
Ekstraversi	Pearson Correlation	,337**	,181**	,209**	-,147*
	Sig. (2-tailed)	,000	,002	,000	,014
	N	279	279	279	279
Keramahan	Pearson Correlation	,272**	,101	,222**	-,101
	Sig. (2-tailed)	,000	,091	,000	,091
	N	279	279	279	279
Kesadaran	Pearson Correlation	,314**	,107	,176**	-,129*
	Sig. (2-tailed)	,000	,073	,003	,032
	N	279	279	279	279
Stabilitas_Emosi	Pearson Correlation	-,364**	-,091	-,099	,154**
	Sig. (2-tailed)	,000	,127	,100	,010
	N	279	279	279	279
Keterbukaan	Pearson Correlation	1	,310**	,254**	,083
	Sig. (2-tailed)		,000	,000	,164
	N	279	279	279	279
Kegembiraan	Pearson Correlation	,310**	1	,584**	,530**
	Sig. (2-tailed)	,000		,000	,000
	N	279	279	279	279
Kompetensi	Pearson Correlation	,254**	,584**	1	,449**
	Sig. (2-tailed)	,000	,000		,000
	N	279	279	279	279
Kedamaian	Pearson Correlation	,083	,530**	,449**	1
	Sig. (2-tailed)	,164	,000	,000	
	N	279	279	279	279
Ketulusan	Pearson Correlation	,157**	,590**	,550**	,568**
	Sig. (2-tailed)	,009	,000	,000	,000
	N	279	279	279	279
Kecanggihan	Pearson Correlation	,200**	,079	,146*	-,165**
	Sig. (2-tailed)	,001	,186	,014	,006
	N	279	279	279	279
Loyalitas_Merek	Pearson Correlation	,090	,167**	,168**	-,058
	Sig. (2-tailed)	,132	,005	,005	,333
	N	279	279	279	279

Correlations

		Ketulusan	Kecanggihan	Loyalitas_Merek
Ekstraversi	Pearson Correlation	,047	,169**	,202**
	Sig. (2-tailed)	,438	,005	,001
	N	279	279	279
Keramahan	Pearson Correlation	-,067	,296**	,121*
	Sig. (2-tailed)	,265	,000	,043
	N	279	279	279
Kesadaran	Pearson Correlation	,014	,237**	,227**
	Sig. (2-tailed)	,815	,000	,000
	N	279	279	279
Stabilitas_Emosi	Pearson Correlation	,030	-,246**	-,111
	Sig. (2-tailed)	,613	,000	,063
	N	279	279	279
Keterbukaan	Pearson Correlation	,157**	,200**	,090
	Sig. (2-tailed)	,009	,001	,132
	N	279	279	279
Kegembiraan	Pearson Correlation	,590**	,079	,167**
	Sig. (2-tailed)	,000	,186	,005
	N	279	279	279
Kompetensi	Pearson Correlation	,550**	,146*	,168**
	Sig. (2-tailed)	,000	,014	,005
	N	279	279	279
Kedamaian	Pearson Correlation	,568**	-,165**	-,058
	Sig. (2-tailed)	,000	,006	,333
	N	279	279	279
Ketulusan	Pearson Correlation	1	-,121*	-,008
	Sig. (2-tailed)		,044	,888
	N	279	279	279
Kecanggihan	Pearson Correlation	-,121*	1	,374**
	Sig. (2-tailed)	,044		,000
	N	279	279	279
Loyalitas_Merek	Pearson Correlation	-,008	,374**	1
	Sig. (2-tailed)	,888	,000	
	N	279	279	279

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Regression

Variables Entered/Removed [b]

Model	Variables Entered	Variables Removed	Method
1	Kesadaran, Ekstraversi, [a] Keramahan	.	Enter

a. All requested variables entered.

b. Dependent Variable: Kegembiraan

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.184[a]	.034	.023	4.62819

a. Predictors: (Constant), Kesadaran, Ekstraversi, Keramahan

ANOVA [b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	206.291	3	68.764	3.210	.024[a]
	Residual	5890.533	275	21.420		
	Total	6096.824	278			

a. Predictors: (Constant), Kesadaran, Ekstraversi, Keramahan

b. Dependent Variable: Kegembiraan

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.229	2.108		6.274	.000
	Ekstraversi	.137	.057	.163	2.384	.018
	Keramahan	.025	.075	.024	.325	.745
	Kesadaran	.014	.058	.019	.244	.807

a. Dependent Variable: Kegembiraan

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Kesadaran, Ekstraversi,[a] Keramahan	.	Enter

a. All requested variables entered.

b. Dependent Variable: Kompetensi

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.258[a]	.066	.056	3.30002

a. Predictors: (Constant), Kesadaran, Ekstraversi, Keramahan

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	212.952	3	70.984	6.518	.000[a]
	Residual	2994.790	275	10.890		
	Total	3207.742	278			

a. Predictors: (Constant), Kesadaran, Ekstraversi, Keramahan

b. Dependent Variable: Kompetensi

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.262	1.503		4.831	.000
	Ekstraversi	.082	.041	.134	2.005	.046
	Keramahan	.112	.054	.152	2.088	.038
	Kesadaran	.015	.041	.027	.357	.722

a. Dependent Variable: Kompetensi

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Kesadaran, Ekstraversi,[a] Keramahan	.	Enter

a. All requested variables entered.

b. Dependent Variable: Ketulusan

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.113[a]	.013	.002	1.69648

a. Predictors: (Constant), Kesadaran, Ekstraversi, Keramahan

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.264	3	3.421	1.189	.314[a]
	Residual	791.464	275	2.878		
	Total	801.728	278			

a. Predictors: (Constant), Kesadaran, Ekstraversi, Keramahan

b. Dependent Variable: Ketulusan

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.479	.773		5.795	.000
	Ekstraversi	.023	.021	.075	1.083	.280
	Keramahan	-.047	.028	-.128	-1.715	.088
	Kesadaran	.015	.021	.053	.691	.490

a. Dependent Variable: Ketulusan

Regression

Variables Entered/Removed [b]

Model	Variables Entered	Variables Removed	Method
1	Keterbukaan, Keramahan, Ekstraversi, Stabilitas_ Emosi, Kesadaran [a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: Loyalitas Merek

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.256[a]	.066	.048	5.34849

a. Predictors: (Constant), Keterbukaan, Keramahan, Ekstraversi, Stabilitas_Emosi, Kesadaran

ANOVA [b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	548.051	5	109.610	3.832	.002[a]
	Residual	7809.526	273	28.606		
	Total	8357.577	278			

a. Predictors: (Constant), Keterbukaan, Keramahan, Ekstraversi, Stabilitas_Emosi, Kesadaran

b. Dependent Variable: Loyalitas Merek

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.720	4.036		1.417	.158
	Ekstraversi	.136	.069	.138	1.982	.048
	Keramahan	-.043	.088	-.036	-.488	.626
	Kesadaran	.181	.071	.204	2.561	.011
	Stabilitas_Emosi	.037	.067	.041	.562	.574
	Keterbukaan	.004	.056	.004	.069	.945

a. Dependent Variable: Loyalitas Merek

Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.417[a]	.174	.159	5.02947

a. Predictors: (Constant), Kecanggihan, Kegembiraan, Kedamaian, Kompetensi, Ketulusan

ANOVA [b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1451.882	5	290.376	11.479	.000[a]
	Residual	6905.696	273	25.296		
	Total	8357.577	278			

a. Predictors: (Constant), Kecanggihan, Kegembiraan, Kedamaian, Kompetensi, Ketulusan

b. Dependent Variable: Loyalitas Merek

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.185	1.790		2.897	.004
	Kegembiraan	.213	.090	.182	2.364	.019
	Kompetensi	.167	.119	.103	1.404	.161
	Kedamaian	-.203	.136	-.107	-1.485	.139
	Ketulusan	-.237	.250	-.073	-.949	.343
	Kecanggihan	.662	.123	.318	5.399	.000

a. Dependent Variable: Loyalitas Merek

LAMPIRAN 7

TABEL DISTRIBUSI
r satu sisi (one tail)

Df	5%	DF	5%	DF	5%	DF	5%
201	0.090	251	0.081	301	0.074	351	0.068
202	0.090	252	0.081	302	0.074	352	0.068
203	0.090	253	0.081	303	0.074	353	0.068
204	0.090	254	0.080	304	0.073	354	0.068
205	0.089	255	0.080	305	0.073	355	0.068
206	0.089	256	0.080	306	0.073	356	0.068
207	0.089	257	0.080	307	0.073	357	0.068
208	0.089	258	0.080	308	0.073	358	0.068
209	0.089	259	0.080	309	0.073	359	0.068
210	0.088	260	0.079	310	0.073	360	0.068
211	0.088	261	0.079	311	0.073	361	0.067
212	0.088	262	0.079	312	0.073	362	0.067
213	0.088	263	0.079	313	0.072	363	0.067
214	0.088	264	0.079	314	0.072	364	0.067
215	0.087	265	0.079	315	0.072	365	0.067
216	0.087	266	0.079	316	0.072	366	0.067
217	0.087	267	0.078	317	0.072	367	0.067
218	0.087	268	0.078	318	0.072	368	0.067
219	0.087	269	0.078	319	0.072	369	0.067
220	0.086	270	0.078	320	0.072	370	0.067
221	0.086	271	0.078	321	0.071	371	0.067
222	0.086	272	0.078	322	0.071	372	0.066
223	0.086	273	0.078	323	0.071	373	0.066
224	0.086	274	0.077	324	0.071	374	0.066
225	0.085	275	0.077	325	0.071	375	0.066
226	0.085	276	0.077	326	0.071	376	0.066
227	0.085	277	0.077	327	0.071	377	0.066
228	0.085	278	0.077	328	0.071	378	0.066
229	0.085	279	0.077	329	0.071	379	0.066
230	0.084	280	0.077	330	0.071	380	0.066
231	0.084	281	0.076	331	0.070	381	0.066
232	0.084	282	0.076	332	0.070	382	0.066
233	0.084	283	0.076	333	0.070	383	0.065
234	0.084	284	0.076	334	0.070	384	0.065
235	0.084	285	0.076	335	0.070	385	0.065
236	0.083	286	0.076	336	0.070	386	0.065
237	0.083	287	0.076	337	0.070	387	0.065
238	0.083	288	0.075	338	0.070	388	0.065
239	0.083	289	0.075	339	0.070	389	0.065
240	0.083	290	0.075	340	0.069	390	0.065
241	0.082	291	0.075	341	0.069	391	0.065
242	0.082	292	0.075	342	0.069	392	0.065
243	0.082	293	0.075	343	0.069	393	0.065
244	0.082	294	0.075	344	0.069	394	0.065
245	0.082	295	0.075	345	0.069	395	0.064
246	0.082	296	0.074	346	0.069	396	0.064
247	0.081	297	0.074	347	0.069	397	0.064
248	0.081	298	0.074	348	0.069	398	0.064
249	0.081	299	0.074	349	0.069	399	0.064
250	0.081	300	0.074	350	0.068	400	0.064

Sumber: Singgih Santoso (2002:390).
Buku Latihan SPSS Statistik Parametrik;
Jakarta: PT. Elex Media Komputindo