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Whose shopping malls and whose shopping streets? Person-environment fit in retail environments

Abstract

Shopping malls and shopping streets are environments frequented by millions of people daily. Malls are purposively built and strictly managed, whereas streets are evolving more spontaneously. Are these different but popular retail environments, out there to meet human needs, a like fit for all of us? Do all of us perceive them in the same way? Do we all feel just as good in them? Use them just as often and enthusiastically? We have set our research in a theoretical frame using one of the key concepts – describing the person-environment fit (P-EF) understood as a mental state giving rise to subsequent positive or negative states or behaviors. We assumed that the possible correlates of P-EF would be the person's personality, temperament, and their system of values. Our cross-sectional correlational study involved 122 people aged 18 to 40. We found the match with retail environments to be influenced by subject traits, among them: consumption style, social affiliation need and openness to experience. Interestingly, it also turned out that the fit with retail environments is but ambiguously connected with hedonism co-variance, and that shopping streets can make for a fit no worse than malls.

Keywords

shopping malls, shopping streets, personal values, compulsive consumption, personality, environmental psychology, consumer satisfaction, consumer studies.

Streszczenie

Galerie i ulice handlowe to środowiska przyciągające na całym świecie, codziennie, miliony konsumentów i spacerowiczów. Czy ewoluująca spontaniczność ulic handlowych jest tak samo atrakcyjna jak „inteligentne projekty" galerii handlowych? Czy dla wszystkich ludzi? Czy wszyscy, bez względu na cechy podmiotowe, spostrzegamy te środowiska jako jednakowo przyciągające? Czy jednakowo dobrze się w nich czujemy? Czy równie często i chętnie z nich korzystamy? Nasz projekt badawczy osadziliśmy w ramach teoretycznych opisujących jedną z kluczowych koncepcji: dopasowanie człowiek-środowisko, rozumiane jako stan mentalny, z którego wynikają kolejne pozytywne lub negatywne stany albo zachowania. W przekrojowych badaniach korelacyjnych wzięły udział 122 osoby w wieku od 18 do 40 lat. Dowiedliśmy, że z dopasowaniem do środowisk handlu i usług mają związek cechy podmiotowe. Istotne w kontekście dopasowania okazały się: styl konsumpcji, potrzeba afiliacji

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społecznej oraz osobowościowa otwartość na doświadczenie. Wyjątkowo ciekawie okazało się też, że w dopasowaniu do środowisk handlu niepewna jest współmienność hedonizmu, a także, że ulice handlowe mogą być dopasowane do ludzi nie gorzej, niż galerie handlowe.

Słowa kluczowe

galerie handlowe, ulice handlowe, wartości osobiste, kompulsywna konsumpcja, zakupoholizm, psychologia środowiskowa, satysfakcja konsumenta, psychologia konsumenta

Introduction

Judging by the immense popularity and expansiveness of shopping malls, not only in Poland but globally, these places allow contemporary people to entirely satisfy their needs. Many not only accept shopping malls but most probably especially like them – for at least three decades there has not been a year without thousands of square meters of this type of objects sprawling the world over. This constant growth has resulted in over seven thousand malls in Europe alone by 2014. This amounted to 154 million square meters of environments designed for millions of people – visiting, shopping, and for employees and other service staff. And so since the 1950s, in other words, since the creation of the noted Southdale Centre in Minnesota, the shopping mall concept is still being perfected by mall owners and managers. Malls are purposely and consciously designed, modified, transformed and perfected by those who run them and try to work out the best environmental fit for their potential (as great as possible) masses of customers.

Shopping streets have been with humans since they settled to a sedentary way of life. Today's shopping streets, in the form we know from their golden age – 18th to 19th-century metamorphoses into elite boulevards (Kotus, 2012; Lane, 2010) – evolved from the older locales and commercial or aristocratic routes (e.g. Dębek, 2014a; Paquet, 2003). This evolution consisted in constantly adjusting the general environment of the shopping street (especially its trade-service offer) to its users. Shopping street significance is illustrated not only by the fact that they are frequented by huge masses every day, but also by the prices there – main shopping streets are the most popular and at the same time priciest human environments (Cushman & Wakefield, 2013, January). Regardless of the fact that under market economic features – lack of central management, planned merchant selection, coordinated promotion etc. (e.g. Teller, Reutterer, & Schnedlitz, 2008) – they can land in occasional crises and lose to shopping malls (e.g. Lane, 2010; Southworth, 2005; Witek, Grzesiuk & Karwowski, 2008).

Despite fundamental differences in origins and development principles , the expansion and popularity of malls and the significance and value of shopping streets are not

accidental. The immense and still growing features shopping malls and the great importance of shopping streets must be a reflection of human needs and preferences. For this reason it is interesting to understand both malls and shopping streets as environments well-adjusted, but also constantly being adjusted (or evolving), to meet the needs of their users and simultaneously shaping those needs. It is telling to inquire into the relations between people and those environments and to research if all people perceive them in the same way, feel equally well inside them, and if they use the environments equally often and enthusiastically. In a word – if malls and shopping streets are equally well suited to people regardless of their specific features.

Although the environments of shopping malls and streets are among the most common in human functioning, and people all over the world spend much time in them daily, the relations mentioned in the paragraph above have so far been given little attention in academia, and especially little in psychology. Save for a few mentions of retail environmental psychology in Glifford's (2007) handbook, a review work by Ng (2003), and Dębek's (2015) article summarizing shopping mall perceptions, psychology has been silent about the relations of millions of people with retail shopping centers. At the same time, as environmental psychologists have shown repeatedly, people-environment relations matter (e.g. Bańka, 2002; Bell, Greene, Fisher, & Baum, 2004; Dębek, 2014b; Gifford, 2007). These relations can at least co-shape people's various mental states, such as sense of life quality, general well-being, satisfaction, exhaustion, and tension, as well as particular behavior.

Given the general disinterest in the topic, especially little is known about the relations between the mall and shopping street experiences and the individual differences and different characteristics of their visitors. Lack of knowledge and suggestion of research in this area was signaled over a decade ago by Ng (2003) in the prestigious *Journal of Environmental Psychology*. Ng held that co-variance of subject traits, personality or temperament, with human well-being in shopping environments and human behavior regarding those environments, required especial research. Despite over a hundred citations (Harzing, 2015) of Ng's (2003) paper, and despite the fact that co-variance of the above mentioned elements seems uncontroversial (np. Dębek, 2014), the research challenge issued by Ng has not been taken up, at least not in the West. The last well-known Western efforts were published about 20 years ago (Roy, 1994; Shim & Eastlick, 1998; Swinyard, 1998). The remaining research, known around the world and at the same time the most recent, come from China, India, and Thailand (Cai & Shannon, 2012a, 2012b, 2012b; Khare, 2011; Kuruvilla & Joshi, 2010), or from the cultural borderland that is Turkey (Telci, 2013). In turn, in Europe, where shopping centers are still being developed and new ones being built (Cushman & Wakefield Research, 2014), and shopping

streets are mired by various crises (Kotus, 2012; Lane, 2010), there has been no fruitful research on the relations between people and these specific environments (at least no such research has been popularized).

In order to fill this void, we undertook perhaps the first attempt at research on the European front in the proposal by Ng in 2003. We intended to establish if there exist relations between subject traits and perceptions and use of shopping malls and streets. Our research plan included temperament (not researched before) and personality traits in the full Big Five model, up to that point limited in research (Cai & Shannon, 2012a, 2012b) to analysis of openness to experience as correlate of perception and use of shopping malls. Our subsequent research goal was to verify earlier reports on the relation between shopping malls and personal value perceptions, published *inter alia* by Shim and Eastlick (1998), Swinyard (1998), Khare (2011), as well as Cai and Shannon (2012a; 2012b). We also wanted to assess the relation, postulated by Telci (2013), between perception and visiting shopping malls and compulsive consumption.

The theoretical frame for our research is constituted by: the eclectic model of relations of people with the surrounding environments by Bell et al. (2004); the conceptual framework for understanding the shopper–environment fit by Ng (2003); and Dębek's person-environment integrative-transactional framework (2014b), dealing with the relation of people and environments in general. Person-environment fit is a key term, whose indicators we sought in the research presented below.

Theoretical and conceptual frame

The theoretical approaches of Bell et al. (2004), Ng (2003) and Dębek (2014), though they framed the person-environment relation differently, shared two features. First, they all assumed that mental characteristics bear significance to environment perception. Second, the approaches assumed either directly or indirectly that the subject-perceived degree of match between his/her current or relatively unchanging needs (need fulfillment) and the environment is key in environment perception.

With Bell et al. (2004), two concepts were central. First was project (environment) perception, which can include two fundamental states: Does the project fulfill or not fulfill user needs? If the environment is perceived as need-fulfilling, satisfaction ensues as the psychological consequence. If it is perceived as unfulfilling, the consequence consists in coping as Bell et al.'s other key term. According to Bell et al. (2004), people can cope with environments unsuited for fulfilling their needs successfully or unsuccessfully. Successful coping leads to the person's adaptation or adjustment and to creating pos-

itive psychological states, while unsuccessful coping results in arousal or stress and negative states.

With Ng (2003), the person's interaction in a given situation with a commercial environment of a specific nature was key. The interaction transpires on an interactive level of multidimensional individual needs (cognitive, physiological, social) with various specific retail environment features (formal, social and strictly commercial). The result of this interaction can be a match (positive mental state) or mismatch (negative mental state) of the consumer and their environment. It is worth mentioning that in this conception human needs towards the environment are not universal; they result from a task or hedonistic orientation. These types of orientation in turn stem from personal traits in collision (here personality-related and demographical) with situational factors (time pressure, company, place etc.).

Dębek (2014) distinguished four mutually related elements of the person-environment relation. First, the individual's given personality, temperament, personal value system, motivation, needs, lifestyle, and so on. Second, the environment with its specific physical, functional and symbolic qualities. Third, the person's mental states, co-variables of the person-environment interaction, with emotional and cognitive components and behavioral intention as theoretical constituents. Fourth, the person's behavior, simultaneously a result and a cause of his aforementioned mental states and the characteristics of the individual and environment. As with Ng (2003), with Dębek (2014) one of these states, *the person-environment fit*, is crucial when considering the person-environment relation and the accompanying mental states.

The explanation runs as follows: If the environment allows one to realize one's needs (that is, the person-environment fit occurs and is perceived), their psychological state will be positive and so, probably, will be their behavior. Thus *person-environment fit* (P-EF) is the key we use henceforth in this paper. In our case this means a fit between person and commerce and service environment. We have based the operational definition of P-EF on a few ideas. One such idea is Stokols's (1979) classic concept of environmental *congruence* for a specific person, that is, the perceived optimal level relation of individual need fulfillment to their actual fulfillment in a given situation. We fine a similar take on P-EF in more recent psychology studies (e.g. Edwards, 2008; Horelli, 2006). The second pillar of our operational P-EF came from Wallenius (1999), according to whom P-EF consists in realized perceived possibilities of personal projects in given behavioral settings. Even though nowadays P-EF is taken to be a process where individuals and environments co-shape one another to find a match, and not as a definitive state (Su, Murdock, & Rounds, 2015) – which in a way corresponds with Bell et al.'s (2004) idea – in our research we took P-EF to be a mental state and not a process.

In the end we defined P-EF as a specific mental state related to the perceived congruence between the situational or relatively stable needs of the individual and recognized affordances (Gibson, 1979) in the particular environment. Direct observation of P-EF is obviously impossible. It can be indexed indirectly, with quantitative or qualitative measurements of people's general well-being in specific environments (e.g. Edwards, 2008) or their attitudes towards specific concrete environmental features (np. Bonaiuto, Aiello, Perugini, Bonnes & Ercolani, 1999; Dębek & Janda-Dębek, 2015; Fornara, Bonaiuto & Bonnes, 2010). Actually, P-EF can be diagnosed in two ways: with surveys (interviews/questionnaires) or observationally. P-EF can be indexed by: 1) people's opinions on a given environment, 2) declarations regarding past and future behavior in that environment, 3) people's actual behavior, and 4) accompanying physiological-emotional reactions, such as irritation, aversion, disgust, suffering, boredom, calm, astonishment, and admiration.

In our research we have used P-EF indicators that have already been used in research or retail environments, albeit not necessarily explicitly in a P-EF context: 1) general appreciation of a shopping environment and 2) frequency of visits in a shopping environment (Roy, 1994; Shim & Eastlick, 1998; Swinyard, 1998).

Research question, literature review, and hypotheses

Let us recall that our research question is: Are malls and shopping streets universally preferred environments and enjoyed by people with given subject traits and needs? Given that our theoretical axis is P-EF, understood as a mental state originating with the person-environment relation, the question reformulated in closer proximity to the P-EF concept is as follows: Do shopping mall and shopping street environments match all people regardless of their psychological characteristics?

Nothing is known about shopping streets in this context. This is why we put forth our directional hypotheses regarding the already-researched shopping malls, and regarding shopping streets we formulated zero hypotheses.

Shopping malls are not mere shops or "commercial-service facilities." They are retail-entertainment centers of social interaction and fun (e.g. Michon, Yu, Smith, & Chebat, 2008; Uzzell, 1995). It seems obvious, then, that they are better suited to entertainment-oriented people (to hedonists) than to goal-oriented and practical people. But empirical support for this hypothesis has so far been thin, mostly in dated research from Roy (1994) and Swinyard (1998), and indirectly in Arnold and Reynolds (2003). More recent studies by Teller, Reutterer, & Schnedlitz (2008) show that hedonists frequented malls in larger numbers than they did shopping streets. The latest studies are inconclu-

sive. Kuruvilla and Joshi (2010) show that people seeking enjoyment and entertainment through immediate gratification rated shopping malls higher than others and visited them more often. On the other hand Khare (2011) has demonstrated there is no connection between hedonism-utilitarianism, understood as personal values, and attitudes towards malls. Which led us to state the following hypotheses:

H1A: shopping malls suit people equally well whatever their level of hedonism.
H1B: shopping streets suit people equally well whatever their level of hedonism.

Shopping malls are places of social interaction, spaces inviting and – in imitating actual public spaces – that present relatively egalitarian environments. According to more dated studies by Shim and Eastlick (1998) as well as Swinyard (1998), shopping malls were liked by people who especially needed social affiliation – the feeling of belonging to a community. So we formulated this hypotheses:

H2A: shopping malls better suit people who strongly value social affiliation than others.
H2B: shopping streets suit people equally well no matter what their needs are for social affiliation.

Shopping malls are not only environments usually teeming with social life but also highly stimulating places. Most often they are crowded and filled with music of different kinds (every boutique creates a distinct atmosphere among other ways through its musical background) and various other loud noises – e.g. employee communication, and audio commercials. A person visiting a mall can undertake various activities – shopping, cultural, physical – in dozens of various kinds of commercial-service outlets. This is why malls probably better suit people who are lively, active, persistent, open to experience, and stimulation-seeking (or at least tolerant of strong sensory stimulation). In recent studies Cai and Shannon (2012a; 2012b) demonstrated that among the Chinese and the Thai attitudes towards shopping malls were positively correlated to the need for self-transcendence, self-enhancement and openness to change. It would be interesting to replicate such research in the West.

Since the above characteristics describe shopping malls as highly stimulating environments, we assumed the spaces were not to well-suited for neurotics, introverts, calm people, people with low activity levels or endurance, or those sensorially sensitive and emotionally reactive. Meanwhile, to the best of our knowledge, no research results have been reported that employ established psychometric tools such as NEO-FFI (McCrae & Costa, 2010) or the Sensation Seeking Scale (Zuckerman, 1994) to study the fit between shopping malls and people in the context of their temperament or personality. As we noted above, this was a gap in research found over a decade ago during studies done

on those environments (Fan Ng, 2003). This is why we formulated a range of hypotheses on temperament and personality in the context of fit with shopping mall environments:

H3A: shopping malls are better suited to sensation seekers than to others.

H3B: shopping streets are equally well suited to sensation seekers and others.

H4A: shopping malls are better suited to people resistant to stimulation than to others.

H4B: shopping streets are suited equally well to people whatever their resistance to stimulation.

H5A: shopping malls are better suited to generally resilient people than to others.

H5B: shopping streets are suited equally well to people despite their resilience.

H6A: shopping malls are better suited to active and brisk people than to others.

H6B: shopping streets are suited equally well to people whatever their activity and briskness.

H7A: shopping malls are suited better to people who are highly open to new experiences than to others.

H7B: shopping malls are suited equally well to people despite their openness to new experiences.

H8A: shopping malls are better suited to people low on neuroticism than to neurotics.

H8B: shopping streets are suited equally well to people despite their level of neuroticism.

H9A: shopping malls are better suited to extroverts than to introverts.

H9B: shopping streets are suited equally well to people no matter their level of extraversion.

All other characteristics notwithstanding, shopping malls are environments conducive to all sorts of consumption. The latest study from Telci (2013) reveals, among other things, a positive correlation between materialism and compulsive consumption on the one hand, and on the other the frequency of visits to shopping malls perceived as successful by mall-goers. We verified these findings on Western cultural territory. Hence the following hypotheses:

H10A: shopping malls are better suited to materialistic shoppers than to others.

H10B: shopping streets are suited equally well to materialistic and other people.

H11A: shopping malls are better suited to compulsive buyers than to others.

H11B: shopping streets are suited equally well to people whatever their level of compulsiveness in shopping.

It seems, in connection with the consumerist foundations of shopping malls, that the wealthier the people, at least in the sense that in their own perception they can be bigger

spenders, the better these environments are suited to them. This is why we formulated an additional hypothesis related to materialism:

H12A: shopping malls are suited to people positively in relation to their self-assessed financial status.

H12B: shopping streets are suited equally to people whatever their self-assessed financial status.

The next hypothesis has to do with predictability and physical and psychological security granted by shopping mall environments. Malls are fully controlled environments (np. Uzzell, 1995), designed for a sense of full security, so that nothing interferes with consumption (e.g. Makowski, 2004). Furthermore, malls are similar in design, often originating with the same designers and investors, despite being built in different countries and on different continents. Further still, many of the same shopping brands operate within their confines, no matter the geographical locale.

Thus, security seekers – those for whom security, calm and world predictability are especially valuable – probably highly value the fit that mall environments make with their needs. Swinyard (1998) has shown that security as a personal value is positively correlated with the frequency of visits to shopping malls. To our knowledge, no reports have yet confirmed these findings. So our next hypotheses states:

H13A: shopping malls are better suited to people who strongly value security than to others.

H13B: shopping streets are suited equally well to people no matter their valuation of security.

The last assumption we made stems not from subject literature review but from our observation of controversies surrounding international shopping malls as objects eradicating local objects and shopping environments (np. Bartoszewicz, 2004; Witek et al., 2008). We wanted to see that since shopping malls are owned almost exclusively by international holdings and financial institutions if this global network has any bearing on people's perception who are highly patriotic-nationalistic or high on consumerist ethnocentrism. We assumed that people who value patriotism and nationalism would rate shopping malls lower and would visit them more seldom than others. We then formulated the following hypotheses:

H14A: shopping malls are better suited to people low on patriotism-nationalism than others.

H14B: shopping streets are suited equally well to people no matter their patriotism-nationalism.

Methods

In Wrocław we conducted a cross-sectional correlational study from November 2014 to April 2015 intended to verify the hypotheses.

We used two authored questionnaires for the study: 1) Assessment of Commercial Environments (ACE), created for this very research project, and 2) Consumer Behavior & Values Survey (CBVS). Detailed information on these tools can be found in appendices A and B. We also used five commonly known questionnaires from other authors: 1) List of Values LOV (Kahle, 1983) in our translation, (2) Compulsive Buying Index – CBI (Ridgway, Kukar-Kinney & Monroe, 2008) in our translation, (3) a temperament questionnaire – Formal Behavior Characteristic (Formalna Charakterystyka Zachowania FCZ-KT) (Strelau & Zawadzki, 1997), (4) NEO-FFI (McCrae & Costa, 2010) in the certified Polish edition by Zawadzki, Strelau, Szczepaniak, and Śliwińska (1998) to diagnose personality, (5) Sensation Seeking Scale (SSS) based on Zuckerman's (1994) idea and Zuckerman's related questionnaire translated into Polish by Oleszkiewicz-Zsurzs (1985).

Assessment of the commercial environments – measures of P-EF fit

The ACE questionnaire comprised two sections, each assessing one type of retail environment: shopping malls and shopping streets. In each section participants were asked to answer five questions: one about frequency of visiting a particular type of retail environment (five-point ordinal scale, from "never or hardly ever" to "once a week or more"), one about the name of the most frequently visited venue (open question), and three about their attitudes toward that type of environment (seven-item Likert-type positions); the latter three questions formed a reliable Shopping Environment Appreciation Index (SEAI). SEAI, along with frequency of visits, were assumed to be indicators of P-EF for the particular environment. The complete list of items used in the questionnaire, as well as detailed statistics of indexes, are given in appendix A.

To avoid a possible bias emerging from assessment sequence, two variants of this questionnaire were applied, differing in their order of environments to be assessed. Every participant had the same chance to draw a questionnaire starting with the assessment of shopping malls or shopping streets. The questionnaire also included six questions about a respondent's particulars including gender, age and domicile, as well as his or her self-assessed financial situation.

Consumer Behavior & Values Survey

In our opinion the generally acclaimed tools also used in this research project to measure personal values, such as LOV or CBI, while validated and reliable, were not perfectly tailored to our goals. They were either too brief – therefore not including values highly relevant to consumer research, for example, consumer ethnocentrism or materialism

(LOV) – or too focused (CBI). Therefore in one of the trials we decided to combine items most relevant to our goals from a few different tools. This led to the development of the Consumer Behavior & Values Survey (CBVS).

The tool comprised 17 Likert-type items, where participants agree or disagree with particular statements on six point Likert-type positions (anchored by "not agree at all" and "agree completely"). These items were intended to diagnose five general concepts: compulsiveness in buying, hedonistic materialism, patriotism-nationalism, and sense of belonging. The complete description of the tool, including its theoretical grounds, the list of items used in the questionnaire, as well as detailed statistics of indexes, are shown in appendix B.

The measurement of values, personality, compulsive buying, and temperament

List of Values – LOV (Kahle, 1983), Compulsive Buying Index – CBI (Ridgway et al., 2008), and NEO-FFI (McCrae & Costa, 2010) used in this study are universally known tools; therefore there is no need to discuss them in detail. The LOV and CBI were translated into Polish by three translators and then back-translated by another three to check validity. Because of our cultural background and our stated hypothesis, we augmented the original LOV by personal values related to patriotism.

The diagnosis of temperament was performed with the Polish temperament questionnaire FCZ-KT (Strelau & Zawadzki, 1997), a tool certified by the Polish Psychological Association. This questionnaire comprises 120 statements describing oneself as agreeing or disagreeing (a participant can answer "yes" or "no"); the temperament is then broken down into six indexes: briskness, perseverance, sensorial sensitivity, reactivity, resilience and activity. Sensation seekers and impulsive individuals (those whom we targeted for this research) are simultaneously high on activity, briskness, resilience, and low on reactivity. In Polish psychological parlance these people are classified as low-activated individuals.

Participants and sampling

One hundred and twenty-seven people (117 women and 10 men) took part in the study, aged 18 to 44 ($M = 21$, SD = 3.73). They constituted a sample of convenience, comprised by full-time, evening, and weekend students from the Faculty of Historical and Pedagogical Sciences at the University of Wrocław.

Procedure

The study was conducted in lecture rooms at the University. Participation was entirely voluntary. No physical incentives were used. Due to a significant research burden, in order to ensure response validity the survey was carried out in two groups having similar

demographic characteristics. All the participants filled out an ACE for shopping malls and streets, while group A (77 people) also filled out an FCZ-KT, LOV, NEO-FFI, as well as CBI (in sequence), and group B (50 people) a CBVS and SSS. The procedure lasted nine weeks in group A and six in group B; the participants filled out one question-naire every two weeks. Each stage lasted 5 to 40 minutes, depending on the tool used.

The hypothetical correlates

We assumed that the subject traits would remain in hypothetical relation to the ACE for shopping malls and streets, including frequency of visits and SEAI.

Results

We discovered weak and vague relationships between some of the hypothesized corre-lates. The only significant correlations are shown in Tables 1 and 2.

Group A

Table 1

Correlations between CBI,FCZ-KT, NEO-FFI, LOV and both SEAI and frequency of visits
for particular environments

	Shopping malls		Shopping streets	
	FRQ	SEAI	FRQ	SEAI
Compulsive buying	ns	.25**	.34**	.22**
Temperamental Activity	.20*	ns	.24*	ns
Openness to experience	ns	−.24**	ns	ns
Pursuit of social-affiliation	.19*	ns	ns	ns
Financial situation	ns	ns	.19*	ns

Note. N = 77. Intercorrelations of indexes (Spearman's Rho's) are presented in the table.
CBI = Compulsive Buying Index; FCZ-KT = temperament; FRQ = Frequency of visits,
NEO-FFI = Big Five, LOV = List of Values; SEAI = Shopping Environment Appreciation Index.
Only the significant correlations are shown to improve readability.
** $p \leq .01$, * $p \leq .05$

Hypothesis H1A and H1B came across as plausible. We did not find evidence for a rela-tion between hedonism and fit of people with malls or shopping streets. The validity of H2A was also established as plausible. People seeking social belonging rated malls slightly higher than others did; shopping malls seemed a special environment in this re-gard – a relation between the need for social belonging and a higher environment rating was not observed for shopping streets. H11A turned out to be plausible as well – com-pulsive consumption correlated positively with SEAI for shopping malls. One should not forget, however, that it also correlated with the entire environment fit (i.e. SEAI and

visit frequency) for shopping streets (the falsified H11B). This trait seems especially significant, then, for the fit between people and retail environments.

We found no support for H13A on the relation between security as a fit between people and retail environments (H13B plausible). No link was evidenced for the fit between those environments and people relative to patriotism-nationalism; H14A was falsified (making H14B plausible).

We found no support for a link between temperament in H3A (malls suit sensation seekers better) – no relation was observed between resistance to stimulation, resilience, or liveliness as a fit with either malls or shopping streets (H3B plausible). Temperamental activity correlated positively with the rating of both malls and streets. Thus temperament seems to have a bearing on the fit to retail environments and it can be a universal relation to the person-environment interaction for both shopping malls and streets.

Hypotheses H7A, H8A and H9A, relating to personality traits, were falsified for shopping malls; H7B, H8B, H9B were plausible for shopping streets. Moreover, the verification of H7A bore results opposite to theoretical assumptions – personality-based openness to experience correlated negatively with the shopping mall fit.

H12A was not plausible for shopping malls: self-assessment of participant financial situations had no bearing on the fit with malls. It is worth pointing out, however, that material standing is probably somehow related to the fit with retail environments – in observing a significant positive relation of this trait for visiting shopping streets, we falsified H12B.

Group B

Table 2

Correlations between CBVS, SSS, SEAI and frequency of visits to shopping environments

	Shopping malls		Shopping streets	
	FRQ	SEAI	FRQ	SEAI
Compulsive buying	.36*	*ns*	.39*	*ns*
Sense of belonging	.32*	*ns*	.41**	*ns*

Note. N = 50. Inter-correlations of indexes (Spearman's Rho's) are presented.
FRQ = Frequency of visits, SEAI = Shopping Environment Appreciation Index
Only the significant correlations are shown to improve readability.
** $p \leq .01$, * $p \leq .05$

We observed results that supported three hypotheses. As in group A, H1A and H1B came out as plausible – so it turned out that hedonism had no bearing on fit with shopping environments; H2A, on the relation between need for social belonging and shopping environment fit was also plausible. This time, however, it turned out that the need for social belonging mattered also to shopping streets (H2B falsified). As in group A, hypotheses H11A

was plausible and H11B was falsified, both relating to the link between compulsive consumption and fit with shopping galleries and shopping streets.

No empirical support was found for the plausibility of the remaining directional hypotheses related to shopping malls. Specifically, we found no evidence for the plausibility of H3 (temperament), H12 (financial self-assessment), or H15 (nationalism). At the same time we found the other zero hypotheses regarding shopping streets to be plausible.

Conclusions

In our research project we broadly intended to verify if subject traits are related to P-EF. We defined the fit as a sense of potential or actual realization of individual needs in a given environment. Results indicate clearly that subject traits indeed matter to P-EF, at least for shopping and service environments. The relations, though, in the cases we verified for shopping malls and streets, are not as numerous as we had assumed. Still, in light of the results, the theoretical approaches from Bell et al. (2004), Ng (2003) and Dębek (2014b), which assumed a link between subject traits and perception of environment and its functioning in it, seem reasonable and promising.

More specifically, our goal consisted in answering the question: Are shopping mall and shopping street environments suited to people in general, regardless of their psychological characteristics? Our study suggests that they probably are not. While we falsified a significant proportion of directional hypotheses on the relation between temperament and personality on the one hand, and environment fit on the other (to name just a few most important ones from a psychologist's viewpoint), consumption style and the need for social affiliation and personality-based openness to experience seem significant to fit with shopping malls.

These relations seemed immensely interesting. It appeared there could be no environment better suited to people who shop compulsively than a shopping mall, built intentionally and in its entirety for consumption. However, it turned out that – despite the relation between compulsive consumption and shopping gallery fit being evident – the consumption model is slightly more strongly co-variable with the fit between people and shopping streets. If, then, the literature sheds negative light on shopping malls, pointing to their sacralization of consumption – or at least provoking excessive shopping (np. Makowski, 2004) – it bears pointing out that shopping streets, immanent to modern-era human settlements, can be equally provocative and consumption-sacrilizing. This is especially so given that, regardless of the participants' subject traits , in a P-EF sense streets seem to be suited to people no worse than malls – in group B the difference on evaluation of malls and streets was not even statistically relevant.

The relevance of personality-based openness to experience, correlated negatively with fit with essentially uniform shopping malls, indicates that malls are environments better suited for those who tolerate stability and predictability well, and who are perhaps cognitively undemanding. Those curious about the world, valuing their things peculiar and varied, though not necessarily seeking stimulation in the sense of experiencing strong psychophysical impressions (the hypothesis on the relation between stimulation seeking and mall fit was falsified) feel worse in malls. In our opinion the problem is well worth further study within retail environmental psychology.

The results regarding hedonism and retail environments are also interesting. Though hedonism would seem to be straightforwardly linked to material-hedonistic needs realized by people in shopping malls, in our study it did not come across as a clear correlate of people's fit with retail environments. This ambiguity of hedonism with regard to shopping preferences and behaviors, already apparent in earlier studies, seems to be a fact.

Larger implications

Our research has both theoretical and practical significance. From the basic research standpoint we have empirically enriched the existing theories concerning people and their environments; especially with retail environments seldom-studied by psychologists and at the same time those which are more commonplace in people's lives. From an applied research viewpoint our results suggest that shopping streets do not have to be less attractive than malls. The potential to draw people to traditional streets seems significant; their attractiveness and fit with human needs may not differ from analogous indicators for shopping malls – at least when we concern ourselves with concepts and not specific facilities and spaces. This knowledge can be used by planners and managers of contemporary urban spaces.

Limitations

Our study conducted has obvious limitations. First, the samples used were not representative. We do think, however, that, in correlational studies aiming to establish the co-variability of personality or temperament traits with other phenomena, it is not a problem of especial importance; among the participants we observed normal variability ranges for the mentioned traits, so establishing the in/significance of their relations is meaningful; even if one cannot extrapolate these relations strictly to other populations. Another limitation is general in nature – the questionnaire methods used to diagnose subject traits have their own obvious imperfections, especially when connected with the participants' limited possibilities or willingness for introspection. Third, the methods used required from the participants to remember both impressions and experiences related to the environments studied, as well as in estimating the frequency of their visits there, which additionally burdens the essentially imperfect introspection-reliant methods.

Future research

Two notions are worth taking up in future studies. First, it is worth inquiring if the above regularities occur also for specific facilities (objects) and spaces. As is known from the Construal Level Theory (Trope & Liberman, 2010), psychological distance to the object is co-variable with perceived concreteness or abstractness of that object. This distance and abstraction level can in turn be related to the rating/assessment of the object. Concerning the research discussed in this paper, this means that the fit level of a real person to shopping galleries in the abstract could be different from their fit with a concrete, named shopping gallery which they actually know. As was recently shown (Dębek & Janda-Dębek, 2013), these relations may occur also in architectural objects. Likewise interesting would be research into how P-EF is shaped for people of given traits with specific retail environments if one were to pose more detailed questions about those environments' various dimensions , for example, about the atmosphere, the perceived social setting, crowding, noise, or retail offer. Of course it would be good to conduct these studies on at least quota-level samples from different communities, including those besides Poland.

Appendix A. Methodological details: the questionnaire of retail environments' assessment

Table A1

Shopping Environment Appreciation Index (SEAI); group A.

	R$_{cc}$
1 malls [streets] are generally cool places	.66 [.83]
2 malls [streets] are places for people like me	.83 [.83]
3 malls [streets] are positive elements of the modern world	.72 [.79]
Cronbach's α	.85 [.90]

Note. Valid N=77;
Rcc – corrected item-total correlation (item-rest correlations)

Table A2

Key statistics of Shopping Environment Appreciation Index (SEAI); group A.

	Environment	Min	Max	M	SD	Sk	Ku	K-S	K-Sp	α
1	Shopping malls	3	18	11.44	3.49	−.43	−.14	.93	.34	.85
2	Shopping streets*	0	18	10.38	3.91	−.81	.83	1.55	.01	.90

Note. Valid N=77; * non-normal distributed data;
Min = minimum, Max = maximum, M = mean, Sk = skewness, Ku = kurtosis,
K-S = Kolmogorov-Simirnov Z, K-S*p* where H0 states that the distribution is normal; α = Cronbach's α

Table A3

Shopping Environment Appreciation Index (SEAI); group B.

	R$_{cc}$
1 malls [streets] are generally cool places	.82 [.74]
2 malls [streets] are places for people like me	.81 [.77]
3 malls [streets] are positive elements of the modern world	.74 [.61]
Cronbach's α for malls [streets]	.89 [.84]

Note. Valid N=47[46]; Rcc – corrected item-total correlation (item-rest correlations);
K-S = Kolmogorov-Simirnov Z, K-S*p* = *p* statistics where H0 states that the distribution is normal

Table A4

Key statistics of Shopping Environment Appreciation Index (SEAI); group B.

	Site	Min	Max	M	SD	Sk	Ku	K-S	K-Sp	α
1	Shopping malls	1.33	5.33	3.87	.97	−.60	.44	.81	.51	.89
2	Shopping streets	1.33	5.33	3.70	.95	−.45	.03	.95	.30	.84

Note. Valid N=47[46];
Min = minimum, Max = maximum, M = mean, Sk = skewness, Ku = kurtosis, K-S = Kolmogorov-Simirnov Z, K-Sp where H0 states that the distribution is normal; α = Cronbach's α

Appendix B. Methodological details: the Consumer Behavior & Values Survey

Below we present the theoretical basis and logic of design behind the CBVS along with the most important statistics describing the tool, derived from the study discussed in this paper.

Compulsiveness in buying was defined after Ridgway et al. (2008) as "a consumer's tendency to be preoccupied with buying that is revealed through repetitive buying and a lack of impulse control over buying" (2008, p. 622). We used three items from the widely known measurement of the concept – a six-item compulsive-buying index (CBI) by Ridgway et al. (2008). The internal consistency of such a simplified index was good ($\alpha = 75$, see tab. B1 and B2, versus $\alpha = 83$ in the six-itemed version).

We defined materialism after Richins (1987, p. 352) as "the idea that goods are a means to happiness; that satisfaction in life is not achieved by religious contemplation or social interaction, or a simple life, but by possession and interaction with goods." In this view, materialism is a force significantly determining an individual's life. We include three indicators of materialism in our CBVS, deriving from the simplified version of the Material Values Scale (Richins, 2004).

We constructed the hedonism indicators based on the philosophical approach by Onfray (2015), who concluded that hedonism is an attitude manifested in seeking pleasure for oneself and giving pleasure to others, at the same time excluding harming oneself or others. Nonetheless, the results of pilot studies indicated that the indicators of hedonism oriented toward self-satisfaction (e.g. in the answer "Comfort and ease are the goals of many of my actions") correlated but minimally with the hedonistic levels oriented towards others (e.g. "I often think about how to make other people feel good"). Furthermore, it turned out that materialism indicators strongly correlate with hedonism indicators. This is why ultimately we decided to use a single index of materialistic hedonism in CBVS (tab. B1).

We defined nationalism after Giddens (2005, p. 726) as "a range of convictions and symbols expressive of a sense of identity with a given national community." We took nationalism indicators from nationalism and patriotism scales by Skarżyńska (2005). In the end CBVS included three mentions of these issues (tab. B1)

Religiosity was measured using items found in the centrality of religiosity scale by Zarzycka (2007). In the first stage we chose one item of the greatest discrimination power from each of the five subscales: interest in religious matters, religious conviction, prayer, religious experience, and participation in mass. Next we transformed the content of the items to make them compatible with the Likert response format. Following pilot studies, we decided not to include the – redundant, as it turned out – religious conviction subscale. Thus we arrived at a four-item, reliable general religiosity index (tab B1).

As regards social affiliation as a personal value we were inspired by the Sense of Belonging Instrument (SOBI) by Hagerty, Bonnie M. K. & Patusky (1995). The au-

thors defined belonging as an experience of the individual's commitment in a system or environment that offers her/him a sense of belonging to that system or environment. SOBI includes two subscales, SOBI-P, measuring the perceived degree of belonging, and SOBI-A, measuring the need to belong as a personal value. In CBVS we relied on items from SOBI-A and adapted them to our measurement system (tab. B1).

Table B1

Final indexes in Consumer Behavior & Values Survey

Index	Items	α	R_{CC}
1 Compulsive buying		.75	
	I purchase things impulsively		.52
	I sometimes buy things I don't really need		.65
	I often do shopping I didn't plan for		.56
2 Hedonistic materialism		.76	
	I usually do much to feel satisfied quickly		.43
	Comfort and ease are the goals of many of my actions		.57
	I admire people who own expensive apartments, cars, and clothing		.54
	I value glamor and luxury in life		.58
	I would be happier if I could afford more things		.59
3 Nationalism		.74	
	I am proud of being Polish		.62
	I think a Pole should respect national symbols: our flag, crest, and anthem in any situation		.58
	I think other countries could learn much from Poland		.49
4 Religiosity		.86	
	I seek out information on religious matters		.51
	I often pray		.84
	I go to church regularly and attend mass		.74
	There are situations in which I feel the presence of God		.78
5 Sense of belonging		.72	
	I want to be accepted by others – that is very important to me		.56
	I work to fit in with the surrounding world and the people who live in it		.56

Note. α = Cronbach's α; Rcc – corrected item-total correlation (item-rest correlations);

Table B2

Key statistics of indexes in Consumer Behavior & Values Survey

	Index	№	Min	Max	M	SD	Sk	Ku	K-S	K-Sp	α
1	Compulsive buying	3	1.33	6.00	3.20	.98	.42	.14	.75	.61	.75
2	Hedonistic materialism	5	1.33	5.20	3.48	.83	.28	−.22	.50	.96	.76
3	Nationalism	3	1.67	5.67	4.18	.80	−.86	1.04	1.04	.22	.74
4	Religiosity	4	1.00	5.50	2.69	1.36	.62	−.90	1.21	.10	.86
5	Sense of belonging	2	1.50	6.00	3.79	.99	−.07	.00	.89	.39	.72

Note. N=44
№ = number of items
Min = minimum, Max = maximum, M = mean, Sk = skewness, Ku = kurtosis, K-S = Kolmogorov-Simirnov Z, K-Sp = H0 states that the distribution is normal
α = Cronbach's α

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