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Should I stay or should I go?"

Exploring the influence of individual factors on attachment, identity and commitment in a post-socialist city

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Abstract

Although literature suggests that high attached and identified individuals are more prone to cooperate and remain in their environment, the influence of place attachment and place identity on place commitment has not been investigated yet. The main purpose of the present study was to assess such influence. Questionnaires were administered to residents ($n = 466$) in the city of Belgrade, a post-socialist context which is largely understudied in prior research. The effect of

socio-demographic characteristics that may predict place attachment and place identity was examined as well. Results showed that both place attachment and place identity were strongly associated with place commitment. Elderly people revealed higher levels of attachment and identity, whereas low educated individuals scored higher only on place identity. Surprisingly, participants born in Belgrade scored lower on attachment and identity. Findings are discussed in the light of the peculiar situation of the context, i.e., the capital city of a post-socialist country (Serbia) which had to face very significant changes in the last thirty years. Significant implications for policy makers and academics are underlined.

Keywords: Place attachment; Place identity; Place commitment; Socio-demographics; post-socialist context; Serbia

“Should I stay or should I go?”

Exploring the influence of individual factors on attachment, identification and commitment in a post-socialist city

1. Introduction

During the last two and a half decades, Central and Eastern European (CEE) countries have experienced the welfares but also the disenchantments related to the democratization process as well as the uncertainties of a new economic system (Balázs, 2014). Because of the high urbanization level reached by post-socialist and post-communist countries, their cities are at the forefront of these changes in attracting people from the hinterlands in search of more educational options, while mitigating outbound migration flows.

How post-socialist cities have been affected by transition to democracy, a market-oriented and/or decentralized governance system, has been explored in various studies (e.g. Keresztsely & Scott, 2012; Sagan & Grabowska, 2012). Moreover, Mykhnenko and Turok (2008) have shown that, from 1960 to 2005, the population trajectories of Eastern European cities have seen their fortunes badly changing (mainly) because of the joint effect of declining birth rates and international out-migration, rather than specific urban attributes. Other scholars have emphasized the plurality of the outcomes of the interaction of both internal local and/or national processes and regional-international processes across post-socialist cities (Hamilton et al., 2005; Tsenkova, 2006) thus leaving space for further investigation.

Prior literature in urban and planning studies has investigated how various factors such as demographic, employment, housing, and climate influence population change (Barreira et al., 2017), and the respective effects of economic aspects and availability of amenities on the one hand, and psychological constructs (social ties and place attachment) on the other hand on residents' intention to stay in their place of living (Guimaraes et al., 2016). Few studies have empirically

addressed such issues in post-socialist and post-communist cities with the exception of Lewicka (2008, 2013): the author has examined the relationships between place attachment and/or place identity and different socio-demographic and psychological profiles in Polish and Ukrainian cities. Nevertheless, so far researchers have not studied how a combination of both individual and psychological factors (place attachment and place identification) interacts and may drive residents' intention to stay, that is to say their commitment to their place of living, in a post-socialist context.

Consequently, the focus of the present study is on examining how inhabitants of a post-socialist city 1) feel about their current place of residence, 2) how they identify with it, and finally 3) to what extent the emotional bonds they have developed shape their willingness to build enduring relationships with their place of living, i.e. their commitment to that place. It has been argued that an individual committed to a place is likely to cooperate more actively and will less likely be attracted by other places (Lee, 2011). To do so, a set of hypotheses are derived from prior studies about the relationships between socio-demographic variables and place-related psychological constructs that are attachment and identification with the place, to explain residents' level of commitment. As such, we aim to investigate the main factors affecting inhabitants' commitment to their place of residence in the specific context of a post-socialist city. The research setting is Belgrade, the capital city of Serbia. Among the Central and Eastern European countries that faced the collapse of communism, Serbia holds a distinctive position regarding the socio-political and economic transition processes (Vujošević et al., 2012). Indeed, Serbia's citizens have faced the break-up of Yugoslavia and post-civil war consequences, which may have affected the bonds they have developed with their place of living and their commitment to it. Accordingly, Belgrade underwent profound changes since the collapse of Yugoslavia in 1991, which may have generated psychological discontinuities in residents' life and may have also created new social identities (see Lewicka, 2008).

The sections below develop the hypotheses and supporting literature. Next, we describe the materials and methods with emphasis on the study context, participants and data collection, and the

measurement instruments. Then, we discuss the findings in light of prior literature which opens up several future research directions. Finally, the public policy implications of the study are addressed as well as its limitations.

2. Theoretical background and hypothesized relationships

Since the end of the so-called Communist Block, the activities of everyday life have highlighted the complexities and dissimilarities, as much as the common histories of post-socialist and post-communist cities (Barnfield & Plyushteva, 2015). It then became evident that post-socialist societies do not merely consist of physical, political, and/or economic changes in the urban environment but also in socio-cultural aspects that may affect people's daily routines and willingness to remain in a certain place in the future. Indeed, places influence human activities furnishing resources and setting limits, but also have psychological effect triggering relevant feelings and providing a basis for cognitive elaboration (Tartaglia & Rollero, 2010).

Recently, the analysis of the individual's experience with places has been increasing from diverse areas of study, demonstrating the relevance of this issue in a global and rapidly changing world (Lewicka, 2011). This could be even more prevalent in post-socialist and post-communist countries that are struggling to prevent urban decline while facing the consequences of the geographical, political, economic and social discontinuities they have experienced in the past 30 years.

Previous literature has shown that the relationship between individuals and their environment has two related but different aspects: an affective dimension, i.e., place attachment, that is the emotional bond toward places, and a cognitive dimension, i.e., place identity or place identification, related to the cognitions about the self as a member of a physical space (Hernández et al., 2007; Rollero & De Piccoli, 2010).

With regard to the Balkan region and particularly Serbia, prior studies have extensively investigated migration movements and their relationships with development policies and/or

demographic challenges (e.g. Bobic & Jankovic, 2017 ; Nikitovic, 2013 ; Rasevic, 2016). Because the relationship between migration and development is complex and deserves more in-depth examinations, scholars have also considered micro-level variables such as human-place bonds. Using multiple case studies, Backovic and Spasic (2014) found that city identities are mainly described in terms of their symbolic content ('modern', 'traditional', etc.) ; within an overall hierarchy of spatial identities - city, region, Serbia, Europe -, participants expressed stronger attachment to their very place of living. Petrovic et al. (2017) showed that (middle sized) cities with higher migration predispositions are also the cities to which residents less attached. Their findings also revealed that the correlation between migration inclinations and place attachment is stronger than between migration inclinations and any respondents' socio-demographic characteristics, in all examined cities. Besides their respective contributions, additional work is needed to gain an holistic understanding of the causal chain that relates socio-demographic characteristics, attachment to the place, identification with the place, and commitment to the place.

Below, we elaborate on each concept and develop a set of hypotheses with regards to the existing literature.

2.1. Place attachment, place identification, and place commitment

Place attachment refers to the affective bond that individuals develop toward specific environments, where they tend to remain and where they feel at ease and safe (Hidalgo & Hernández, 2001). It is a bond to a meaningful setting that fosters freedom of exploration, comfort and affective responsiveness within the local community (Fried, 2000; Scannell & Gifford, 2017). Psychological literature has demonstrated that place attachment is connected to the perception of the environment as a good place to live in: individuals showing higher place attachment are those who express a more positive evaluation of such environment (Rollero, 2013). Moreover, people with high levels of attachment tend to live in the same place for a long time, whereas individuals

not able to develop strong bonds with their place of residence are more prone to leave (Casakin et al., 2015; Hernández et al., 2007).

In reference to the cognitive dimension of the relationship between individuals and places, psychological literature has referred either to the concept of place identity or to the concept of place identification. Place identity has been defined “a sub-structure of the self-identity of the person consisting of, broadly conceived, cognition about the physical world in which the individual lives” (Proshansky et al., 1983). Its construction occurs when the local environment represents uniqueness and individuality and eventually becomes an expression of personal identity (Forrest & Kearns, 2001). Similarly, place identification applies specifically to the aspects of identity based on local dimensions, but it expresses membership to a group of people who are defined by their location (Twigger-Ross & Uzzell, 1996). Although place identity and place identification are often used interchangeably, Uzzell and colleagues (2002) explained that whereas the focus in place identification is on the place, the weight of emphasis in place identity is on the psychological construct of identity. For this reason, in the present study we decided to focus on the construct of place identification.

A wide range of studies has been published on the concept of commitment, spanning from consumer psychology, business-to-business and services marketing, environmental psychology and tourism research domains. There is a consensus to consider that successful long-term oriented relationships culminate in higher commitment (Morgan & Hunt, 1994; Lee, 2011). Drawing on previous literature (e.g. Bodkin et al., 2009; Jaussi, 2007), commitment to a place consists of an individual's positive affect towards it and identification with it, a willingness to share a common development path, and broadly speaking a form of reciprocity.

The application of commitment to nature-based settings has gathered considerable attention in the literature (e.g., Ballantyne et al., 2009; Lee, 2011) and many studies are consistent in showing a relevant link between a positive relationship with the environment and this kind of place commitment (e.g., Cardinale et al., 2016; Kyle et al., 2006). According to Devine-Wright (2009),

both place attachment and place identification are a means of accounting for place-protective actions. In his theoretical discussion about the NIMBY (Not in My Back Yard) phenomenon, local opposition is conceived as a form of place-protective behaviour, which arises when new developments disrupt pre-existing emotional attachments and threaten place-related identity processes. In other words, place attachment and place identification seem to foster place commitment, in either a constructive or critical direction. This assumption is supported by Lee (2011) who found that place attachment and (conservation) commitment are related among tourists.

Nevertheless, how the concept applies to urban settings has received insufficient consideration, as past research has tended to consider commitment only in terms of pro-environmental behaviours (e.g., Carfora et al., 2017; Devine-Wright & Howes, 2010; Song & Soopramanien, 2019; Stedman, 2002) or environmentally responsible behaviours (Vaske & Cobrin, 2001).

2.2. State of the art and hypotheses

Although literature suggests that people with high levels of attachment and identification with place are more prone to cooperate and remain in their environment, the particular influence of place attachment and place identification on place commitment, intended as propensity to remain in a specific place, received insufficient attention. Given this, we therefore aim to extend past research in specifically assessing the influence of place attachment and place identification on place commitment, conceptualized as the intention to remain in the living place.

Based on the above reported literature, we developed the following hypotheses:

Hypothesis 1. Place attachment is positively related to place commitment.

Hypothesis 2. Place identification is positively related to place commitment.

Hypothesis 3. Place attachment and place identification are positively related.

Moreover, prior research, mainly conducted in Western countries, has identified particular socio-demographic characteristics that may predict place attachment and place identification. Age, level of education, and length of residency have been seen to significantly affect residents' attitudes

(Vareiro et al., 2013). Gender, level of education, and length of residence were found to influence residents' behaviours (Besculides et al., 2002; Vareiro et al., 2013).

Specifically, gender, i.e., being a female, was assumed to predict both place attachment (Rollero & De Piccoli, 2010) and place identification (Cuba & Hummon, 1993). Earlier studies generally agreed that level of attachment fluctuates with gender (e.g. Ramkissoon & Mavondo, 2015; Scannell & Gifford, 2017), although Anton and Lawrence (2014) found no evidence of an effect whether on place attachment or place identification. Overall, studies about the effect of gender lead to inconsistent results (Anton & Lawrence, 2014; Rollero & De Piccoli, 2010). In the present study, we hypothesized that being a female is positively related to both place attachment (a) and place identification (b) (Hypothesis 4).

Regarding age, numerous studies showed that older people have developed stronger attachment and identification with their place of living than younger ones (e.g. Cardinale et al., 2016; Ng et al., 2005). For this reason, age is supposed to positively relate to both place attachment (a) and place identification (b) (Hypothesis 5).

Several authors found a negative relationship between educational level and place identification (e.g. Anton & Lawrence, 2014; Tartaglia & Rollero, 2010). According to Rollero and De Piccoli (2010), low educated people have fewer chances to belong to different social groups to identify with. On the contrary, high educated individuals are more likely to categorise themselves as members of dominant groups and thus have less motivation to identify with locally-based social groups (which may also explain higher emigration rates among them). Thus, the level of education should negatively relate to both place attachment (a) and place identification (b) (Hypothesis 6).

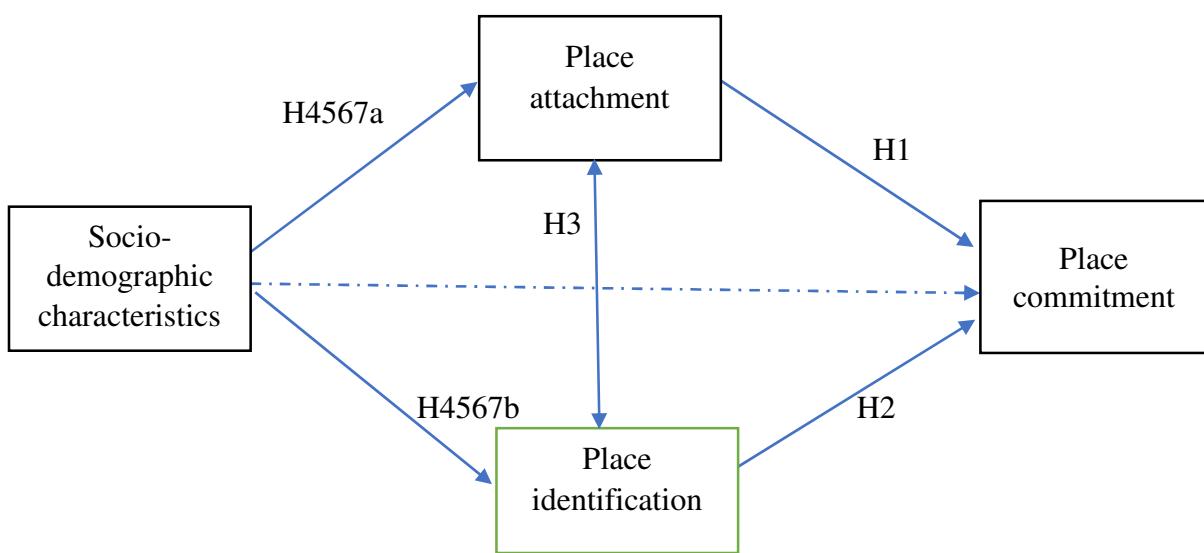
Finally, prior literature has evidenced that attachment to and identification with the place is higher among natives (e.g., Anton & Lawrence, 2014; Hernández et al., 2007). Interestingly, when non-natives spend a long period in the same place, their attachment and identity can become as high as that of natives (Casakin et al., 2015). Garcia et al. (2013) found that birthplace plays a significant role in residents' behaviours (such as water use) as well. We hypothesized that being born in

Belgrade is positively related to both place attachment (a) and place identification (b) (Hypothesis 7).

The following sections describe the materials and methods.

Figure 1.

Theoretical model and hypothesized relationships.



3. Methods

3.1. Study context

Post-socialist countries are far from being a homogeneous group with regards to their history, ethnic and religious compositions, and/or progress towards democratization and a market economy. In this regard, Serbia holds a distinct position as emphasized by Vujosevic et al. (2012). Serbia is a country located in the south-west Balkans which for most of the 20th century was one of the republics of Yugoslavia (meaning “Land of the South Slavs”, Lampe et al., 2018). The country has gone from the 19th century through two divergent spatial and political changes, from continuous territorial enlargement (1833, 1878, 1913, 1918) to breakup and contraction (1974, 1991, 2006,

2008) (Jovanovic, 2014), the latest ones directly resulting from the dismantling of Yugoslavia. Today, Serbian society has been defined as a “society in transition” because it is facing a change of sociopolitical systems, economy and culture (Đukić & Volić, 2017). Obviously, we may expect that these different and somewhat opposite processes have affected citizens’ attitudes and emotional connections with their current place of living and ultimately their mobility decisions.

As a direct consequence and in addition to low fertility, high unemployment, and diminishing perspectives of social ascent, a steady stream of migrants left rural areas of Serbia to settle mainly in Belgrade, thus increasing country’s demographic instability (Protic, 2017). With respect to age and education level, migrants with secondary education dominate internal mobility, while better educated citizens represent the majority of the long-haul migrants (Bobic et al., 2016). Compared to Slovenia which has the lowest (.2 percent) emigration rate (Radeva, 2009), Serbia ranks 137th out of 142 countries in terms of ability to retain talent according to the World Economic Forum data (Howard, 2018). In such context, the capital city Belgrade progressively became the springboard for countries inhabitants in search of higher earnings and better welfare systems abroad.

In 2017, Belgrade achieved a population 1.389.000 which represents 19.53% of the whole population of Serbia (Central Intelligence Agency, 2018). According to mid-2017 estimates, the trend of depopulation continued, and the population growth coefficient, compared to the previous year, is negative and amounts to -5.3 % in the overall Serbia (Statistical Office of the Republic of Serbia [SORS], 2018a). During the same period the Belgrade region has gained 3170 inhabitants mainly resulting from internal migration as the balance between new births and deaths was -2.2% (a loss of 3768 individuals) the lowest in Serbia (SORS, 2018b). Consequently, the diversity of the population of the city of Belgrade, which rises from the interactions among locally born people and internal emigrants, may have substantial psychological consequences. Under such conditions, examining which factors affect an individual’s commitment to its place of living is of particular interest to scholars and policy makers.

3.2. Participants and data collection

The survey instrument was translated (forward and back translation) from English to Serbian using the Brislin reiterative and serial protocol (1970). We pre-tested the questionnaire with 23 Belgrade residents which aimed to verify that its structure and the questions were comprehensible, pertinent, and not hurtful. It is worth noting that, during the pilot study, interviewees explicitly expressed they would be glad to complete the questionnaire provided that their anonymity is guaranteed and that their responses will not be shared with third parties. This attitude named “ontological insecurity” (Svenonius & Bjorklund, 2018, p. 124) is not really surprising as it is deeply embedded in the long history of extensive secret surveillance that characterizes post-socialist societies.

The data collection process was carried on in 2017 through a survey of Belgrade’s residents. A team of seven trained research assistants administered the questionnaires face-to-face to citizens who were at least 18 years old. Systematic random sampling was implemented and, if subjects did not qualify as city’s residents or were not willing to participate in the study, the research assistants intercepted the next accessible person (1 over 5 accepted to complete the questionnaire). In order to control for potential method biases, we followed the procedural remedies of Podsakoff et al. (2003). Firstly, the data were collected in both downtown and suburban areas of Belgrade in order to increase respondents’ diversity. Secondly, interviewee’s complete anonymity and confidentiality of the answers were ensured at the beginning and at the end of the questionnaire. Thirdly, respondents were invited to provide their own opinion in a truthful manner.

From 512 questionnaires distributed to Belgrade inhabitants, 40 were considered not valid (scratches, two answers to the same question). The usable sample comprised 472 questionnaires from which we removed 6 questionnaires because of five or more unanswered items across the measurement instruments (Hair et al., 1995). Finally, 466 responses were retained for subsequent analyses (valid rate of 91%). Considering that we focus on a single city, our sample size is in line

with other scholarly research (e.g. Foroudi et al., 2018 ; Lewicka, 2008; Guimaraes et al., 2016; Ratcliffe & Korpela, 2016; Song & Soopramanien, 2019).

The sample consisted of 48.4% women and 51.6% men which was roughly in line with existing demographic data on the Belgrade area (the share of females equalled 52.8% and of males 47.2% according to the latest estimations (SORS, 2018c). The respondents' average age was 33.72 ($SD = 1.481$) while the average age of the Belgrade population was 42 years according to official statistics (SORS, 2018b). The difference probably lies in the fact that younger people were more accessible and had the highest propensity to be interviewed. Of the participants, 39% had completed secondary studies and 27.7% had a university degree. Our sample participants hold a marginally higher education level compared to the population of the larger Belgrade region according to the latest available statistics (SORS, 2018, p. 10). With respect to job position, 30.7% were working in the private sector while 22.4% were employed in/by the public sector. In terms of place of birth, respondents born and not born in Belgrade were equally distributed. To the best of authors' knowledge, no official data regarding place of birth were publicly available on Belgrade. Table 1 shows the complete demographic characteristics of the final sample of respondents.

Table 1.

Participant characteristics (n = 466).

Variable	Level	N	%*
Age	18-24	93	20
	25-34	125	26.7
	35-44	87	18.7
	45-54	87	18.7
	55-64	46	9.9
	65+	28	6

Gender	Male	240	51.6
	Female	226	48.4
Level of education	Primary school	7	1.5
	High school	182	39
	Lyceum	95	20.5
	BA	129	27.7
	Master	40	8.5
	PhD	13	2.8
Job position	Private sector	143	30.7
	employee	104	22.4
	Public sector employee	65	13.9
	Self-employed	20	4.3
	Unemployed	11	2.4
	Housewife	44	9.3
	Retired	67	14.3
	Student	12	2.6
	Other		
Place of birth (Belgrade)	Yes	234	50.1
	No	232	49.9

* Rounded to one decimal place.

3.3. Measures

We used multi-item scales validated in previous studies to measure the latent variables. Indicators for *place attachment* were the twelve items developed by Lewicka (2008). Participants were asked to express their positive and negative feelings towards their place of living. Indicators for *commitment* were the four items developed by Félonneau (2004) which aimed at reflecting how

important is the place in a respondent's future. All items measuring the place attachment and commitment constructs were assessed on an agreement scale ranging from 1 (strongly disagree) to 5 (strongly agree). Indicators for *place identification* were derived from the seven "place-related categorization" statements developed by Lewicka (2008), including the city district, the city (Belgrade), the region (Eastern Europe), the country (Serbia), Europe, the world ("citizen of the world"), and finally a "human being". We added the category (Yugoslavia) because of possible nostalgia toward former Yugoslavia. Respondents were asked to mark their level of agreement with each statement on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Socio-demographic questions covered the participants' age, gender (Male=0, Female=1), level of education, job position, and place of birth (Born in Belgrade=1, Not born in Belgrade=0).

4. Data analyses

4.1. Univariate and factor analyses

Prior to conducting SEM analyses, several tests were undergone to verify the adequacy of the data. First, univariate analyses revealed that the number of missing values per observation was below the 5% threshold (see Schafer, 1999) and that the assumption of normality was not reached (as evidenced by the Kolmogorov-Smirnov test). Nevertheless, we did not transform the data as skewness (< 3) and kurtosis (< 10) values were all within the recommended guidelines suggested by scholars and were considered suitable for SEM analysis (Kline, 2005). Second, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (0.85), and Bartlett's test of sphericity ($p < 0.001$) indicated that the data are suitable for factor analysis. Third, an exploratory factor analysis (EFA) was conducted to assess the dimensionality of the measurement instruments (Anderson & Gerbing, 1988). It also aims to expand the measurement properties of current scales (Wieland et al., 2017). Accordingly, the factor structure of each latent variable was simplified using the following criteria: items with low factor loadings (<0.40), or significant cross-factor loadings (>0.40), or low item-to-

total correlation were deleted (Hair et al., 2010; Nunnally, 1978). The remaining indicators for each latent variable as well as related mean and standard deviation values are found in Table 2.

With respect to the place attachment and place identification purified scales, the results indicate that the initial items may stem from different domains and are thus conceptually dissimilar (see Wieland et al., 2017). Potential explanation can be found in the fact that items are not evidently representative of the studied construct (Zaichkowsky, 1994) such as for instance city district and human being regarding place identification. Indeed, the measurement instrument covers individual, local, regional, and supranational levels. In this study, the remaining items (town and district) may thus truly reflect residents' identification with the place. These aspects will be further addressed in the discussion of the results section.

Finally, Harman's one-factor test evidenced the existence of a multifactor structure (the first factor accounted for 21.65% of the variance in the variables) which allowed to conclude that common method variance was not an issue. Such result was confirmed in the confirmatory factor analysis (CFA).

Table 2.

Results of the EFA.

Constructs and items	Mean	S.D.

Place attachment		
Defend it when somebody criticize it	3.46	1.096
Miss it when I am not here	3.55	1.083
Proud of this place	3.74	0.893
Part of myself	3.59	1.063
Place identification		
I am a resident of my city district	4.07	0.886
I am resident of Belgrade	4.28	0.865
Commitment		
I would like to stay in Belgrade indefinitely	3.23	1.144
I would like to witness Belgrade's future development	3.59	1.053
Belgrade plays an important part in my projects for the future	3.38	1.135
My personal future is closely tied up with Belgrade	3.48	1.132

4.2. Measure assessment

CFA was then used to confirm the factor structure that resulted from EFA and to assess the psychometric properties (reliability, convergent and discriminant validity) of the place attachment, place identification, and commitment measures. As advocated by Anderson and Gerbing (1988), SEM analysis with default maximum likelihood estimation in AMOS 20.0 was used to test the measurement model. The results of the estimation of the CFA model indicated no need for respecification: chi-square statistic [χ^2] = 178.41 ($p < 0.001$); degree of freedom [df] = 57; normed chi-square statistic [CMIN/DF] = 3.13 ($p < 0.001$); confirmatory fit index [CFI] = 0.94; Tucker-Lewis index [TLI] = 0.93; root mean square error of approximation [RMSEA] = 0.068. Furthermore, all factor loadings were superior to the 0.5 level, and significant at $p < 0.001$ (Tabachnick & Fidell, 2013): place attachment (0.653 to 0.84; four items), place identification

(0.693, 0.781; two items), and commitment (0.794 to 0.867; four items). As shown in Table 3, the composite reliabilities were above the 0.7 benchmark (Kim & Malhotra, 2005). Moreover, construct reliabilities were satisfactory as all Cronbach's alpha values are above Nunnally's (1978) 0.7 threshold. In addition, the average variance extracted (AVE) for each construct exceeded the recommended level of 0.5 (Bagozzi et al., 1991; Hair et al., 2010). Overall, these results demonstrated convergent validity.

Table 3.

Construct reliability, AVE, and composite reliability.

Constructs and items	Construct reliability (Cronbach's alpha)	AVE	Composite reliability
Place attachment	0.84	57.7%	0.84
Place identification	0.75	54.5%	0.71
Commitment	0.91	70.9%	0.91

Note: * $p < .001$.

Finally, discriminant validity for all measures was deemed established (Table 4), as their respective AVE were larger than the square of the pairwise correlations among the constructs (Fornell & Larcker, 1981). We can conclude that the set indicators that are conceived to evaluate each concept really measure the related concept (Bryman & Bell, 2015).

Table 4.

Correlation matrix and AVE.

Variables	Place	Place	Commitment
	attachment	identification	
Place attachment	0.58		
Place identification	0.14	0.55	
Commitment	0.26	0.14	0.71

4.3. Test of the structural model

To examine the research hypotheses, we used SEM with default maximum likelihood estimation in AMOS 20.0. The estimation of the structural model yielded acceptable fit statistics with $\chi^2(59) = 190.37$ ($p < 0.001$), CMIN/DF = 3.23 ($p < 0.001$), CFI = 0.95, TLI = 0.93, and RMSEA = 0.069.

According to the set of guidelines for evaluating model fit reported in prior studies (e.g. Tabachnick & Fidell, 2007; Wheaton et al., 1977), the normed chi-square statistic (χ^2/df) value was satisfactory (3.23, $p < 0.001$). The value of the RMSEA was 0.069, which was below the suggested benchmark of .08 (Browne & Cudeck, 1993). With respect to the CFI, the value was 0.95, which was above the 0.85 cut-off (Bollen, 1989). Finally, the TLI value (0.93) exceeded the 0.8 lower level and was below the 0.95 threshold recommended in previous studies (e.g., Bentler, 1990).

As portrayed in Table 5, age was positively related to place attachment ($\beta = 0.182$; $p < 0.001$) but not to place identification. Moreover, neither attachment nor identification were related to the respondents' gender. The relation between level of education and the place attachment and place identification constructs was negative and significantly different from 0 only for the latter ($\beta = -0.153$; $p < 0.001$). Contrary to our hypothesis, place of birth was negatively related to both place attachment ($\beta = -0.272$; $p < 0.001$) and place identification ($\beta = -0.119$; $p < 0.001$). With respect to the relation between place attachment and commitment, it was found to be significantly positive ($\beta = 0.418$, $p < 0.001$), as well as the relation between place identification and commitment ($\beta = 0.240$,

$p < 0.001$). Finally, results revealed a positive association between age and commitment ($\beta = 0.168$; $p < 0.001$).

Table 5.

Results of the structural model.

Path	Standardized regression coefficient	t-value	Hypothesis
Place attachment => Commitment	0.418	6.884*	H1 (+)
Place identification => Commitment	0.240	3.764*	H2 (+)
Place attachment => Place identification	0.483	7.415*	H3 (+)
Gender => Place attachment	Not significant		H4a (+)
Gender => Place identification	Not significant		H4b (+)
Age => Place attachment	0.182	3.798*	H5a (+)
Age => Place identification	Not significant		H5b (+)
Level of education => Place attachment	Not significant		H6a (-)
Level of education => Place identification	-0.153	-3.021**	H6b (-)
Place of birth => Place attachment	-0.272	-5.573*	H7a (+)
Place of birth => Place identification	-0.119	-2.25***	H7b (+)
Age => Commitment	0.168	4.085*	

Note: * $p < 0.001$, ** $p = 0.01$, *** $p = 0.05$

5. Discussion of the results

Numerous scholars have addressed the issue of people-place bonding across different disciplines. In the field of environmental psychology, one of the most shared perspective has

established that the relationship between individuals and their environment has two dimensions, i.e., place attachment and place identification (Hernández et al., 2007; Rollero & De Piccoli, 2010). Such dimensions, which refer to the affective and the cognitive aspects of people-place bonding, are affected by several variables and may lead to specific outcomes.

The first aim of the present study was investigating the influence of place attachment and place identification on one of these potential outcomes, i.e., place commitment. Previous research had already shown that attachment and identification foster pro-environmental behaviours and place-protective actions (Carfora et al., 2017; Mancha & Yoder, 2015). Moreover, while prior studies conducted in Serbia have considered solely migration intentions (outside-oriented outcome), the choice of place commitment as the dependent variable and inside-oriented outcome appears relevant in order to figure out an individual's propensity to remain in a specific place in the future. Our findings extend such research by revealing that individuals with high levels of attachment and identification with place show also higher levels of place commitment.

The second goal of the current study was to control for the effect of socio-demographic characteristics that may influence place attachment and place identification. As seen, literature has largely addressed this subject (e.g., Cardinale et al., 2016; Nielsen-Pincus et al., 2010). However, most studies have been confined to Western countries and it is important shedding light on other cultural contexts. In this regard, post-socialist and post-communist countries and their capital cities are an under-researched issue.

Results concerning age and educational level are only partially consistent with hypotheses. In line with previous research (e.g. Lewicka, 2005; Rollero & De Piccoli, 2010), older people show higher levels of place attachment and place identification than younger individuals. However, low-educated people expressed higher place identification than those high-educated. We can argue that the former may lack of other potential identifications, due to job retirement, less spatial mobility, dependency issues, and thus may have developed high identification with the local community (Lewicka, 2005) and an enhanced level of adaptation. They may also share common residential

histories with other people living in the same neighborhood, both interpretations providing a substantial argument for the resulting two items categorizing place identification (i.e., the city and the district).

Overall, a possible explanation to these findings may lie in the life course paradigm which considers “the relation between human lives and a changing society, the timing of lives, linked or interdependent lives, and human agency” (Elder Jr, 1994, p. 4). When combined with local historical, political, and economic contingencies, this set of factors provide a more in-depth explanation of mobility decisions and their impact on the level of attachment and/or identification with a place. Indeed, when examined through the lenses of geography and level of education, the Serbian population with incomplete or primary education is out-migrating from the south of the country (mainly rural areas) to the capital city in search of work, to study, or a combination of both (see Bobic et al., 2016; Hatcher & Thieme, 2015). Developing identification toward the city may be a sort of ‘coping strategy’ to better adapt in the new urban context.

Gender does not seem to play a relevant role, in line with the study conducted by Lewicka (2005) with a representative sample of Polish subjects and with the research carried out in Australia by Anton and Lawrence (2014). Literature tends to link gender differences in place attachment and identification with social roles and territorial mobility. Indeed, women may be more likely to socialise within their local area, as it is often women who take their children to school, playgroups or training for local sporting teams (Anton & Lawrence, 2014). Moreover, they have traditionally been restricted in terms of mobility and thus may put a greater emphasis and value on the places that they consider to be theirs (Scannell & Gifford, 2017). According to the 2018 Global Gender Gap Report (World Economic Forum, 2019), which examines gender gap between women and men in four key areas (health, education, economy and politics), Serbia ranks 38th (vs. 40th in 2017) out of 144 countries in terms of gender equality and jumped twelve places in six years, next to Australia, which ranks 39th and not far from Netherlands, which ranks 27th. Thus, this relatively small gender gap may reveal similar roles for men and women, which may in turn have an impact

also on the way of living the city. On the contrary, in other less egalitarian countries, such as Italy, Greece, and Austria (ranking respectively 70th, 78th, and 53rd), gender differences in place attachment and identification seem to remain (Jones et al., 2018; Wanka, 2017). Moreover, our findings may also be a legacy from the socialist period, when the State policy, aiming at redistributive justice, was likely to undermine differentiation between groups (Pratt, 2000). Indeed, gender equality was one of the major ambitions of the regimes of Eastern Europe. Under the communist and socialist systems, Constitutional regulations provided women and men with equal rights in all areas of state, political, economic, social and cultural life (Fortin, 2005).

Finally, the findings about the place of birth are completely different from those expected. Surprisingly, people who were not born in Belgrade are those who experience higher place attachment and stronger identification. This may be due to the peculiar situation of the context, a post-socialist country which had to face very significant changes in the last thirty years. We can suppose that individuals from Belgrade can hardly identify with and be attached to the capital of a nation which has evolved from Yugoslavia to Serbia and Montenegro, to Serbia with Kosovo, and ultimately to Serbia without Kosovo. On the contrary, people who were not born in Belgrade may have actively decided to relocate there, looking for a job and better economic opportunities, and thus may easily develop feelings of attachment and identification because of the lack of other possible identifications and newly developed residential histories and shared spatial experiences. These results emphasize the need to consider households' socio-economic situation, life course and lifestyle aspects which have been found to explain residential mobility (Kahrik et al., 2015). Moreover, they are in line with the study of Lewicka (2008) carried out in Poland and in Ukraine, which demonstrated that it is the newcomers to the cities or towns and not those who were born there (representatives of older generations), who are the most interested in the place and in its roots, memory, and identity.

With regards to the measurement instrument we used to assess how place identification is perceived by Belgrade residents, the results (of the exploratory and confirmatory factor analyses)

provide interesting insights. While the other self-categorizations may fluctuate due to political, historical, and/or economic influences, inhabitants expressed a strong identification toward the local dimension (i.e., city and district) that finally stands away from any ideological consideration. This result is also supported by the continuous decline of the ethnic category “Yugoslavs” as evidenced in the latest Census results: in 2011, 23303 Serbian citizens self-declared themselves as Yugoslavs, which represents 0.32% (23303) of the total population (7186862) declared themselves as Yugoslavs compared to 1.08%; (80721/7498001) in 2002 and 4.09% (320168/7822795) in 1991 (SORS, 2012). As such, respondents showed very little engagement with a nostalgic emotional attachment to both subjective and objective desirable aspects of the former Socialist Federal State of Yugoslavia almost fifteen years after Lindstrom (2005) coined the concept of *Yugonostalgia*. Thus, residents seem to give their preference for reality, i.e. their immediate environment that is the city/district in which they live, rather than for an ideal that passed away. When put in perspective with linguistic aspects, this result is not counter-intuitive : the district (which is an administrative division) relates to “komsiluk”, a Serbian word meaning “neighborhood” which is derived from the Turkish word “komsuluk” which refers to good neighboring. This finding is consistent with that of Lewicka (2008) regarding the city of Wroclaw for which she found some evidence about the degree to which place attachment is associated with a lower-order – local - identity. It is also in line with that of Backovic and Spasic (2014) who found that individuals they interviewed, have developed a higher attachment to the place they live in than to other spatial identities such as the region, the country/Serbia or geographic area/Europe.

6. Conclusions and implications

6.1. Limitations and further research directions

While the findings of this study advance existing literature, future research is needed to examine their stability, with a special focus on post-socialist and post-communist countries and contexts that have undergone similar remarkable changes. Like prior research in this field (see Lewicka, 2011), a

limitation of our study pertains to the cross-sectional correlational design. This approach prevented us from drawing conclusions about the causal direction of the relations that we observed. In particular, the causal relation between attachment/identification and place commitment needs further exploration. Future research should consider longitudinal research designs in order to provide clearer arguments on these potential causal pathways. In line with the work of Zenker and Petersen (2014) and with respect to the results of our study regarding place identity items, the rapid transformation of neighbourhoods and that of the overall living environment of post-socialist cities, residents' psychological as well as social well-being (e.g. Rollero & De Piccoli, 2010) and their residential satisfaction would worth to be investigated (e.g. Temelova & Dvorakova, 2012).

Another limitation of the present study is related to the assessment of socio-demographic characteristics referring to the relationship with the city and the house. For instance, we did not measure length of residence, which may play a specific role, even different from the place of birth that we considered in the research. Similarly, home-ownership may influence place attachment, identification, and commitment. It represents an important aspect to assess in future studies on this topic.

Furthermore, our sample is biased towards the younger population. Future studies should involve a greater number of residents over 65 years old to obtain a higher age representativeness.

Finally, a longitudinal approach could contribute to extend our knowledge on how place attachment, identification, and commitment may develop in a context which has gone under so relevant changes. Indeed, in Serbia the transitional period of the Nineties caused turmoil, war and refugee waives, economic downfall and political dictatorship. All of these, among other consequences, have certainly changed the perspective on attachment, identification and commitment to the capital Belgrade. This trend may still be a reality, but its consequences may be decreasing in the next years.

6.2. Conclusions

Despite these limitations, the current research extends our knowledge on people-place relation, as it demonstrates the link between such relation and place commitment and constitutes one of the very few studies focused on a post-socialist context in the post-Iron Curtain. As recent literature has shown (Stefaniak et al., 2017), a strong bond to the place of residence increases the willingness to become socially engaged in the community, which in turns has great benefits on both individuals and local contexts. These processes may be particularly relevant in countries whose identity has undergone dramatic and disruptive changes. As Lewicka argues (2008), cities or towns that changed their national composition and state belonging or that were destroyed by war are important research targets, and more studies should be developed. Nevertheless, despite the prevalent role that social, historical and contextual factors play, there are some variables that may contribute to individual differences in how much people develop affective bond toward their city and identify with it (Lewicka, 2008).

6.3. Public policy implications

Besides its theoretical and empirical contributions with respect to studies in a post-socialist context, our results have important implications for policy-makers. People who feel bonded with their living place seem to be more likely to become civically engaged and to adopt civic behaviours. The multiplication of community initiatives such as “Do not stifle Belgrade” or that of the “Guardians of the Old Town” which aim to deal exclusively with local problems (Aleksic, 2017), illustrates that residents do not perceive themselves as passive spectators of the way their city is changing. In this regard, the recent controversy surrounding the urban renewal project “Belgrade Waterfront” supported by the Government of the Republic of Serbia (with a projected investment superior to 3 billion Euros in the next twenty years, it aims to enhance the image of the city in order to attract investors and tourists) sheds light on short-term (top-down) profit objectives rather than a mere hand-in-hand (bottom-up) collaboration. While this strategy may fit to an external audience, it neglects its actual residents, potentially leading to a distrust between local authorities and a wide

part of its population (Zenker & Beckmann, 2013). As a result, the European project “SHARED CITIES: Creative Momentum” which brings together seven major Central and Eastern European cities (it is a “Central European consortium of cultural actors whose interest intersects in sharing, circulating, and exchanging the best practices in self-initiated, participatory and transdisciplinary architecture and urbanism collaborations” (European Union, 2016) has advised Belgrade's local authorities to act in accordance with the guidelines of the United Nation's New Urban Agenda and to accept that the city belongs to its inhabitants and not to commercial interests (Ciric, 2017).

On a broader scale, the current work may advise governments in the wider Balkan region (including Serbia's neighbouring countries, such as Bosnia-Herzegovina and Croatia) to improve the living and working conditions in order to strengthen the level of attachment of their inhabitants and thus to reduce their intentions to leave. However, future research should assess whether the intentions to leave has different motivations according to the country. Indeed, although we expect similar processes across the Balkan region, specific studies should consider the role of the characteristics of each country (e.g., religion, economic growth, recent history).

In any case, public policy efforts could be directed, for instance, towards improving country's business climate. According to the 2018 Legatum Prosperity Index, while Serbia's overall ranking is 56th, the country seats at 95th position in terms of quality of the economic environment and continuously loses ground (88th in 2017, 79th in 2017) (Legatum Institute, 2019).

Moreover, in a recent survey, young people expressed a prominent distrust in institutions and political parties, while at the same time three-quarters of Serbian youth voiced an intention to emigrate because of the negative situation and pessimism regarding improvement of social conditions (Popadic et al., 2019). Local authorities should therefore maintain priority on improving public trust in institutions as it undermines democracy in the Balkans, a crucial issue already stressed by Transparency International few years ago (see Transparency International, 2013).

From a psychological perspective, as Lewicka (2008) has shown, the message of this kind of studies is that, instead of forcing people to confront the rapid changes of place and state histories, it

would be more efficient ‘to step down to the level of individual *place*’ (Lewicka, 2008, p. 229), and encourage inhabitants to discover for themselves the place’s unique and distinctive dimensions and identity. Certainly, the history of places is not independent of the history of higher-order entities, e.g., nations, states, or the world, but places have their own unique identity. Different people who live or lived in one place contribute to the place’s distinctiveness and perception, which in turn has an impact on individuals’ well-being and quality of life. In a world which is rapidly mutable, even in consequence of political and territorial changes, research and policies should address together these phenomena.

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