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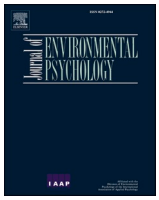

The multidimensionality of place identity: A systematic concept analysis and framework of place-related identity elements

Carola Strandberg *, Maria Ek Styvén

Luleå University of Technology, 971 87 Luleå, Sweden

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ABSTRACT

This article offers a systematic concept analysis of place identity, a concept central to place branding, suffering from conceptual confusion. The study provides an overview of related terminology, theoretical foundations, conceptualizations, and associated operationalizations of place-related identity concepts. Building on identity theory and a thematic analysis of measurement items gathered, a framework conceptualizing place-related identity elements is proposed, distinguishing between different dimensions of identification. Results show a range of cognitive, affective, and conative and evaluative elements of place identity/identification and applicable testable sub-dimensions. Findings show how different labels have been applied to identify what appear to be conceptually equivalent constructs. Potential links between elements, outcomes, and related concepts are discussed and recommendations for measurement approaches, construction of measurement scales, and future research are presented. Results highlight the need for research in the area to exert stringency when applying the terms in their research and to carefully define and delineate concepts when gathering data and reporting results.

1. Introduction

Place identity has become a major research theme in marketing theory (Peng, Strijker, & Wu, 2020), and several articles have been dedicated to the conceptualization of the term place identity as well as its relationship to place brand identity and place image (see for example Boisen, Terlouw, & van Gorp, 2011; Boisen, Terlouw, Groote, & Couwenberg, 2018; Kalandides, 2011; Kavaratzis & Ashworth, 2005; Kavaratzis & Hatch, 2013; Kavaratzis & Kalandides, 2015; Lalli, 1992; Wäckerlin, 2018). While place brand identity is understood as the supply-side stakeholders' deliberate idea or expression of how they want the place to be perceived among target groups (Boisen et al., 2011), place identity is conceptualized as the demand-side perspective, referring to how people understand and recognize places, themselves and/or others (Kavaratzis & Kalandides, 2015).

The term "place identity" is susceptible to dual interpretations as it has been applied to both the identity of a place and to a subset of human identity and identification, which are both socially constructed and develop in relation to one another and to the place. Place is the framework and structure through and within which human subjectivity, experience, and conceptions of self-identity is to be understood (Malpas, 1999). It is constitutive of our character and identity as humans; something that defines us, that we are defined by and through, and that we in turn define both in meaning and by shaping it into a reflection of ourselves (Malpas, 1999). An individual's place identity is seen as an important person-place bond, related to several different affective and behavioral outcomes such as place attachment (Strandberg, Styvén, & Hultman, 2019), place commitment (Tournois & Rollero, 2020), satisfaction (Isa, Hedayati Marzbali, & Saad, 2022), and pro-environmental behavior (Ramkissoon & Mavondo, 2015). To avoid discordance between the audiences' place perceptions and the communicated place brand and to inspire stakeholder engagement, it is vital to achieve congruence between the two and to promote the uniqueness of the place while reinforcing place stakeholders' multiple place perspectives, or place identities (Insch & Walters, 2018).

However, despite – or perhaps due to – several attempts to operationalize the term researchers highlight a lack of specificity when it comes to the scale and delineation of place identity (Lalli, 1992), as well as a clear conceptualization of what identity means in place branding (Wäckerlin, 2018). In fact, place identity has been described as "probably the most elusive and paradoxical of the concepts that make place branding a particularly challenging endeavor" (Kavaratzis & Kalandides, 2015, p. 1372). Peng et al. (2020) conclude that a top research priority should be to distinguish between place identity and other

* Corresponding author. Department of Social Sciences, Technology and Arts, Luleå University of Technology, 971 87, Luleå, Sweden.
E-mail addresses: Carola.Strandberg@ltu.se (C. Strandberg), Maria.Styven@ltu.se (M. Ek Styvén).

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concepts that describe people's emotional connections to places, and "to sort out the basic framework of place identity theory and its relationship with other relevant theories" (p. 16).

Mikulić and Ryan (2018) stress that different measurement operationalizations between cases, revising a measurement from one study to the next, effectively undermine study replication and invalidate any attempt to verify theories reliably and validly. They point out that "Case based construct reliability and validity has no value beyond the case being analyzed, and indeed may not possess even that if the construct operationalization is not replicated in other studies" (Mikulić & Ryan, 2018, p. 468). Place literature exhibits a good deal of inconsistency in concept use regarding for example place attachment, causing obstacles to the comparability of concepts, and their operationalizations across studies. This is not surprising since the multiplicity of research foci and interests requires varying approaches and one common definition of a concept would have to be very broad, generalized and abstract to cover all applications (Trentelman, 2009). Therefore, there is a need to use and make clear the conceptualizations that are applied in each piece of work, explicitly delineating meanings and measures of concepts, as well as the theoretical, methodological, and, where appropriate, disciplinary approach (Trentelman, 2009).

Hence, the *purpose* of the current study is to clarify the measurement dimensionality of place identity based on a systematic concept analysis of operationalizations and existing measures of place identity and overlapping or interrelated concepts. The study seeks to answer the research question: *How can the construct of place identity be measured?* The aim is to clarify the core concept and related concept system of place identity by identifying as wide a range of relevant measurements as possible and classifying these based on established concepts from identity theories. In doing so the study will also expand upon the relationship between the concepts of human place identity and the place's identity and image.

To achieve this, the article draws on a range of identity theory and place-related identity research in related fields such as self-congruity, attachment, and attitude theory, thereby extending research in the field of identity-based place branding. Operationalizations of place identity and related constructs are collected and analyzed against a framework of identity theories, leading to a conceptualization and delimitation of existing measurement dimensions reflected by elements, drivers, and outcomes of place-related identity concepts. The article outlines and exemplifies a wealth of measures within the area of place identity (see Appendix). Measurement issues and potential applications of the proposed elements are discussed and areas for future research are suggested. Finally, concluding remarks are provided.

2. Methodology

To fulfil the purpose of the study, a review and analysis of literature was conducted to identify individual-level construct elements related to place identity. Place identity measures were compiled and analyzed from an identity theory perspective to identify and delineate separate elements or sub-dimensions and present an overview and conceptual framework of the elements connected to existing concepts in identity theory. It is important to note that while the study does encompass a wide variety of measures, the intention was not to conduct an exhaustive review of all items available but to capture as wide a variety of relevant items as possible (Ashmore, Deaux, & McLaughlin-Volpe, 2004). Therefore, the approach taken was a systematic concept analysis, which offers "a panoramic breadth of definitions while highlighting the embedded linguistic complexity of the literature" (Patsiaouras, 2019). The researchers followed the outline suggested by Nuopponen (2010); the different steps are described in more detail below.

2.1. Literature search

Data were collected in a two-step process. In the first phase, the online academic databases EBSCO Business Source Premier and Web of Science were searched to identify relevant literature within place marketing and other related academic disciplines. The search term keywords applied in the first step of the search were generated from a preliminary literature review of identity theory and place branding theory and included, to begin with, the search term "identi*" to capture the different endings of the word identity/ties/fy/fication that are often used interchangeably. This was applied in various combinations with words that are widely used in place branding such as "place," "nation," "country," "region," "city," "town," and "destination" and the word measur* to capture words such as measure/s/ment/ments/ing.

2.2. Inclusion and exclusion criteria

The criterium for inclusion into the dataset was the existence of measurement scale items of self-reported place-related identity concepts, the unit of analysis for the study. While most data compiled stemmed from full-length peer-reviewed academic articles, data from research notes, dissertations, theses, and book chapters were also included in the analysis to achieve as full a picture as possible rather than risk excluding some relevant items. During the search, a preliminary content analysis was conducted, and relevant dimensions and items were recorded into an Excel document containing bibliographical data (author[s], year of publication and journal), theoretical foundation, empirical foundation (object studied and sample units), concept/construct definitions, measurement labels, items, and scales. This facilitated an overview of the data and a foundation for subsequent analysis. Only items, scales and subscales considered relevant in relation to place identity were included in the data set. To limit the number of entries, when several scales have identical or similarly worded items, the references were followed to their source and only the item appearing in the earliest published study was included in the data set, unless the item had been modified in any considerable/significant way justifying the inclusion of both items.

In the second phase, material was gathered through iterative snowball sampling based on references and search terms found in the articles from the first phase. Any significantly new or different items that were missed in the initial step were included in the database, enabling the inclusion of some literature developed in domains outside of the original search scope considered relevant to the study. The search ended when all relevant references had been investigated and no significantly new or different items emerged from the additional searches.

2.3. Data analysis

The researchers followed the process of thematic analysis (Braun & Clarke, 2006) within the confines of systematic concept analysis (Nuopponen, 2010). Hence, the data were re-read several times to become familiarized with the material. Then, similar or related themes were identified and structured into categories, first based on the theoretical concepts identified in theory, and then based on the place-related anchoring and focus of the items. The analysis is based on the idea that semantically closer items measure similar things, and vice versa (Larsen, Nevo, & Rich, 2008). Following Wieland, Durach, Kembro, and Treiblmaier (2017), the judgmental criteria of parsimony between item and construct was used to categorize items based on existing theory. The categorization of items was conducted based on the identity literature and not the original scale or factor labels indicated in the literature of origin. The elements identified related both to identity concepts and processes and to identity-related outcomes. Finally, the list of elements derived from the thematic analysis was organized and presented in a conceptual framework.

The following sections offer a review of the central concepts of place and place identity followed by the results of the thematic analysis together with example items. Due to the extent of the dataset, only a few items were included in the article to represent each element following a

judgment sampling approach. The inclusion was based on the item's representativeness of the respective dimension it falls under. The full list of items from the analysis is appended to the article together with author (s), year and construct measure label presented in tables listed chronologically and alphabetically exhibiting the variety of items representing each dimension.

3. Concept outline and synthesis of place-related identity dimensions/concepts

3.1. Identity theory

Identity refers to the sameness of a person or object to itself and is said to reflect "the human capacity – rooted in language – to know 'who's who' (and hence 'what's what')" based on criteria of sameness or similarity and difference or distinctiveness (Jenkins, 2014, p. 6). To *identify* is to classify or signify something or someone; or to associate oneself with, or attach oneself to, someone or something else depending on the interplay of similarity and difference (Jenkins, 2014). Central theoretical identity frameworks include identity theory (IT), stemming from sociology (Stryker, 1968, 1980; Stryker & Serpe, 1982), and social identity theory (SIT) (Tajfel, 1978, 1981) and its extension self-categorization theory (SCT), founded in psychology (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). While IT focuses on identity related to the roles and relationships people have in society, SIT and SCT deal with identity as the cognitive and motivational mechanisms behind the formation of people's relationships and membership in groups (Hogg, Terry, & White, 1995). IT centers on identity-related behavior and the interactions among concepts such as the individual self, personalized roles, society, social behavior and role performance, and SIT concerns social identity-related behavior and interactions among concepts such as intergroup relations, group relations and the social self (Hogg et al., 1995). SCT posits that humans possess a fundamental and automatic tendency to cognitively sort a range of social stimuli into different social categories based on their similarity with or distinctiveness from other social stimuli (Ashmore et al., 2004).

The self-concept can be divided into a *person identity* (self-, personal, individual, or role identity), distinguished from others through its unique characteristics, abilities, interests and desires, and a *social identity* (group or collective identity), consisting of salient social group classifications enabling people to locate themselves and others within the social environment (Stets & Burke, 2000; Turner, Oakes, Haslam, & McGarty, 1994). Meanings and expectations associated with a role and its performance are internalized into the self through self-categorization, forming the basis for role performance and social behavior (Stryker, 1968). Social identity can be seen as identity-related descriptions of self, based on membership in social categories (Tajfel, 1981), with prescribed social behavior ranging between opposing ends of an interpersonal-intergroup continuum; acting as an individual or as a group member (Tajfel & Turner, 1979). Person identity can thus be described as the individuated self, while social identity depersonalizes the self-concept, changing 'I' into 'we' (Brewer, 1991).

Identity is a multidimensional concept, comprising a hierarchy of identities (Ashmore et al., 2004). Person identity is considered the most basic level of identity, permeating internalized social group identities (Stets & Burke, 2000). The social self can be described on three levels: superordinate category self-categorization as a human being, social category in-group-out-group categorizations based on differentiations between groups of people (such as class, race, nationality, occupation), and subordinate level personal self-categorizations differentiating oneself as an individual from relevant in-group members (Turner & Oakes, 1986).

Stets and Burke (2000) posit that although differences exist between the two theories, linking them offers a more fully integrated view of the self. People constantly and simultaneously both occupy a role and belong to a group, and both are simultaneously relevant to perceptions, emotions, and behavior. To fully understand society one must incorporate both the group and the role identity (Stets & Burke, 2000). In the reciprocal relationship between self and society, the self influences society through individuals' actions, and society influences the self through shared language and meanings (Stryker, 1980). Identification is connected through attachment to emotion, thereby influencing behaviors, and vice versa (Jenkins, 2014).

The identification with or activation of a group or role identity may stem from a range of underlying identity motives or principles (Stets & Burke, 2000; Twigger-Ross & Uzzell, 1996). Identity process theory (IPT) outlines several identity motives (also referred to as identity principles or processes) guiding what and how information is evaluated, accommodated and assimilated into the self (Breakwell, 1986, 1993). These identity motives and potential outcomes of these identity processes comprise: (1) self-esteem - personal worth or social value, (2) distinctiveness - uniqueness from others, (3) self-efficacy - the ability to achieve personal goals, and (4) self-consistency - continuity over time (Breakwell, 1986, 1993). Additionally, SIT proposes that people identify with social groups to satisfy motives of both distinctiveness and belonging (Brewer, 1991). With this brief introduction to identity theory, we turn to the methodology of the study.

3.2. Conceptualizing place

Human geography approaches *place* from three perspectives: descriptive – place as unique entities based on their distinctiveness and particularity, social constructionist – place as perpetually producing and produced by underlying social processes, or phenomenological – place as a phenomenon focusing on the human existence in 'Place' as a site of gathering (Cresswell, 2014). A phenomenological approach defines place as centers of meaning and felt value, where we satisfy our biological needs (Tuan, 1977), "an arena of action that is at once physical and historical, social and cultural" (Casey, 2001, p. 683), and "an open yet bounded realm within which the things of the world can appear and within which things can 'take place'" (Malpas, 1999, p. 35). In this view, space, the volumetric void in which humans and things are positioned, can be distinguished from place, as the immediate environment of the lived body - constitutive of one's sense of self (Casey, 2001).

Space becomes place as it gains meaning through human experiences with the environment (Tuan, 1977). *Place meanings* are cognitions or beliefs concerning a setting, reflected by descriptive statements, rooted in symbols about what kind of place it is (Stedman, 2002). People attribute meaning to their environment in a reciprocal relationship where the nature of the physical setting influences community culture, which in turn influences place meanings in ways that reflect people's social and cultural experiences (Stedman, 2003). The environment thus sets bounds and shapes the social constructions of both place meanings (Stedman, 2003) and identity meanings (Malpas, 1999). Place meanings convey and help us make sense of the roles and attributes of the place, while identity meanings convey and help us make sense of our roles and attributes as a person and group member.

Identity, both as self-defined and identified by others, is inextricably bound to the places we are found in and places are intrinsic to the construction, expression, and identification of person, social group, and category identity (Malpas, 1999). Like humans are perceived as having a character and an identity, so are places given character and identity from the various elements both within and outside them, enabling us to identify and distinguish between them (Malpas, 1999). Humans form and shape the world around them, making it a reflection and symbol of themselves - the identity of a place consequently encompassing several factors such as the physical and natural features, the human ordering of spaces and resources, as well as the individual and communal narratives imbued in it (Malpas, 1999).

Places exist across different scalar levels and are associated with different perceptions, strengths of identification, as well as different cognitive and behavioral outcomes (Lewicka, 2008). However, the way

place identity is measured across levels tends to follow similar structures (cf. Lewicka, 2008; Stokburger-Sauer, 2011; Zenker, Braun, & Petersen, 2017), in line with the basis of the concept, i.e., identity theory. In the place branding process, scalar hierarchy, boundaries, and relations (such as national, regional, or local) are important for stakeholder identification since they provide a context in the form of a shared framework within which stakeholders form mutual expectations, practices and inscribe themselves (Giovanardi, 2015). To understand the conceptual implications for place branding a more abstract understanding of place and how places exist through different scalar levels is considered vital (Boisen et al., 2011). In this study, measures relating to any scalar level that appeared in the data were included in the sample.

To conclude, place can be seen as the framework and structure through and within which human subjectivity, experience, and conceptions of self-identity are to be understood (Malpas, 1999). Following previous research (e.g., Malpas, 1999; Stedman, 2003) we adopt a view of the place meaning and place identity constructs as socially constructed within the context of the physical setting/environment. What makes places meaningful can be mapped around and in the relations between the self, others and the environment (Gustafson, 2001), as described in the following section.

3.3. Conceptualizing place identity

As humans we tend to symbolically include personal possessions and surroundings, such as persons, places, and objects into the extended self, allowing us to impose our identities on them and them to impose their identities on us (Belk, 1988). Furthermore, through expansion of the self, the resources, perspectives, and identities (differentiating traits and features) of other people and objects may be experienced as one's own (Reimann & Aron, 2009). Thus, *self-extension* and *self-expansion*, enable places and people to become a part of the self. Hormuth (1990) denotes other people and the environment as things that provide, mediate, and perpetuate social experience, and thus as constituents of the *ecology of the self*, a self which both shapes and reflects the ecological system, using objects and environments as places or tools for actions, experiences and symbols of one's identity. Human experiences take place within this ecology, in an environment that functions both as a framework for behavior and action and as an important symbol of personal and social identity (Lalli, 1992).

Place identity may refer to an aspect or dimension of identity on both a personal and social level (Proshansky, Fabian, & Kaminoff, 1983). It has also been applied to denote both the identity of a place and the brand identity of a place, sometimes interchangeably (Wäckerlin, 2018). As indicated in the previous section, there is a close, reciprocal relationship between the place identity of an individual and the identity of the place (Lalli, 1992). Moreover, there is a dialectical relationship between the place brand identity and the perceived identity of the place (Braun, Kavaratzis, & Zenker, 2013).

A place's identity, conceived as the *feature(s) of a place*, communicates its distinctiveness and continuity in time (Stedman, 2003). The identity of the place itself concerns "the special character of the location, its unmistakable uniqueness" (Lalli, 1992, p. 291). However, as the identity of a place is always based on someone's perceptions, it is an outcome of and susceptible to individual and social constructions or associations (Lalli, 1992). Kalandides (2011) describes place('s) identity as a sense of place in the form of a distinctive personality (human characteristics associated with a place) or character in relation to other places. It is the driver of place perceptions based on "the visual, verbal and behavioral expressions of a place, which are embodied in the aims, communication, values and general culture of the place's stakeholders and the overall place design" (Zenker, 2011, p. 42).

The place's identity thus comprises both the material aspects of the place and the mental aspects of how it is perceived, thereby encompassing the place image (Kavaratzis & Kalandides, 2015). While the place's image can be portrayed as reflecting the external audiences' perspective of the place, the place's identity can be seen as reflecting the internal perspective (Strandberg, 2023). The same characteristics and attributes that differentiate places simultaneously aid in the differentiation of the self-definition of residents, such as buildings and architecture, geographical features, symbols, and specific social, economic, and aesthetic identity (Lalli, 1992).

Hence, based on the discussion hitherto, "place identity" has been used to refer to the identification and identity of person, group, and place, including (see also Kalandides, 2011; Kavaratzis & Kalandides, 2015; Uzzell, Pol, & Badenas, 2002; Zenker & Petersen, 2014):

1) a type of, or aspect/part of, a personal or social group identity;
2) identification (categorization) *as* a (type of) person, member of a group, or a place;
3) identification (feeling similar, belonging to) *with* a group or a place on a personal and social level;
4) the mental perceptions and identification *of* a person, a group or a place itself, based on its distinctive features.

In the current study place identity is seen as an inclusive term describing the various relationships that people have with places. Since its introduction by environmental psychologist Proshansky (1978), the concept of place identity has been studied from various perspectives, reviewed in the following sections.

3.4. Self- and social place identity perspectives

Psychologists consider place identity as a *feature of a person* (Lewicka, 2008). While some conceive of the psychological bonds and relation to place in human experience as a state of being-in-the-world, others focus more on these bonds as a process related to constructing and maintaining identity in the social and physical environment (Lalli, 1992; Proshansky et al., 1983). Proshansky (1978) conceptualized place identity as a *part of self-identity* and as "those dimensions of self that define the individual's personal identity in relation to the physical environment by means of a complex pattern of conscious and unconscious ideas, beliefs, preferences, feelings, values, goals, and behavioral tendencies and skills relevant to this environment" (p. 155). Later, Proshansky et al. (1983) described place identity as *comparable to a social identity*, encompassing different types of place identities (such as urban identity), highlighting place as a dimension of social roles, and a part of both person and social identity formation. "Place identity cognitions express and reflect the physical settings and their properties that support and are directly relevant to the social roles and attributes that define who the person is, how he or she is to behave, and what he or she is worth" and could, on an aggregated level, be understood as a shared mental representation of a place (Proshansky et al., 1983, p. 80). Place identity stems from the socialization of the self and develops through both immersion in and distancing from a place, thereby encompassing strong emotional place attachments (Proshansky et al., 1983).

Place influences the identification process directly through the physical, social, and cultural environments it offers (Cuba & Hummon, 1993). Social aspects of place identity comprise the social construction of the identity of a place as a basis for perceiving, categorizing and experiencing a similarity and identifying with it, and the social process of being identified with it (Lalli, 1992). Thus, place identity has an individualistic aspect, in the development of the *self-in-place identity*, and a communal aspect in the processes of *social (group) identity* (Pretty, Chipuer, & Bramston, 2003). Identification with a place or community can stem from both *physical* (territorial area) and *social/cultural* affiliations (Puddifoot, 1995). This type of place identification has been referred to as *place-related self-categorizations,* defined as self-categorization in terms of place of residence (Lewicka, 2008), and as *place-related social identity* tied to a place-related group, exhibited by referring to a person as a New Yorker/Milanese/Californian/Seattleite (Uzzell et al., 2002). Identification varies across scalar levels, between

more specific (e.g. local identity) and more abstract levels (e.g. national identity), each with the ability to mediate perceptions and judgments (Bonaiuto, Breakwell, & Cano, 1996). Place identity can therefore be considered a complex construct that may refer to different environmental and social levels, including for example national, regional, and urban identity (Graumann, 1983).

From an environmental standpoint, identification may be extended to incorporate the ecological, forming an *ecological self*; an extended identification and expansive sense of self potentially including all life-forms, ecosystems and the entire earth (Bragg, 1996). *Environmental identity* answers the question of who I am (and consequently how I interact) in relation to the natural environment (Weigert, 1997). It differs from group identities, as it has no fixed geographic boundaries and is thus difficult to tie to another group classification, such as national identity (Clayton, 2003). A similar term, capturing identification with nature, is *ecological identity* referring to "the feelings and relationships people develop with landscapes and how they identify with nature in the process" (Thomashow, 1996, p. 62).

3.5. Dimensionality of place identity

Situated in a larger context, place identity has been conceptualized as representing one of three elements of meaning attached to place: sense of place, place attachment, and place dependence. *Sense of place* has been regarded as an overarching concept incorporating constructs that describe relationships between humans and spatial settings (Shamai, 1991) and a multidimensional psychosocial structure organizing self-referent cognitions, emotions, and behavioral commitments (Jorgensen & Stedman, 2001). It has been defined as "the complex bundle of meanings, symbols, and qualities that a person or group associates (consciously and unconsciously) with a particular locality or region" (Datel & Dingemans, 1984, p. 135, cited in Shamai, 1991). In it, place identity represents symbolic and emotional values of the setting in the form of self-referent cognitive associations and beliefs about the relationship between self and place (Jorgensen & Stedman, 2001; Williams & Roggenbuck, 1989). The other two components, *place attachment* and *place dependence*, reflect the affective (emotional) and conative (evaluative of a setting's functional ability to underpin/enable behavior) responses and behavioral commitment to a setting (Jorgensen & Stedman, 2001). Yet another component sometimes included is *sense of community*, reflecting the common meanings (including affective, cognitive, and behavioral components) of the social environment characteristics of a place and feelings of belonging (Pretty et al., 2003). Other studies regard sense of community as the overarching concept, incorporating place identification as a sub-dimension reflecting identification with the geographical community (Obst, Smith, & Zinkiewicz, 2002).

Place attachment can be defined as the experience of a state of psychological well-being resulting from accessibility to a place or a state of distress caused by the separation or absence from a place (Giuliani, 1991). Some researchers treat place attachment (sometimes equated with sense of place and sometimes called sense of place attachment or place affect), as the overarching concept comprising place identity and place dependence (Moore & Graefe, 1994; Prayag & Ryan, 2012; Ramkissoon, Smith, & Weiler, 2013; Williams & Roggenbuck, 1989; Williams & Vaske, 2003; Yuksel, Yuksel, & Bilim, 2010). Place attachment can be seen as an umbrella term, integrating both the dimensions of *community attachment,* which focuses on the socio-cultural dimension of place, and the *natural/nature/biophysical attachment/bonding* to place as a setting (e.g., Trentelman, 2009), while aspects such as *social attachment/bonding* and *physical attachment/rootedness* are commonly considered sub-components of both *place* and *community attachment* (e.g., Riger & Lavrakas, 1981). For example, Low and Altman (1992) discuss that people are attached to the relationships that occur within the context of the place, not just to the place itself. While place attachment and community attachment to some extent overlap and have sometimes been used interchangeably, they stem from different origins and research traditions with community attachment usually referring to the social connections and interactions specifically between residents and their communities (for a review see Trentelman, 2009).

Finally, place identity/identification has also been portrayed as an overarching multidimensional construct driven by subcomponents such as; place attachment, place dependence, in-group identity (centrality, evaluation, and ties) (Marcouyeux & Fleury-Bahi, 2011), at-homeness, affiliations and locus of at-homeness (Cuba & Hummon, 1993), identification with social/cultural groupings and location, distinctiveness, orientation, locus (boundaries, features, and characteristics) of community (Puddifoot, 1995), group identification, cohesion, satisfaction (Guàrdia & Pol, 2002), external evaluation, general attachment, continuity with personal past, perception of familiarity, commitment (Lalli, 1992), place-related distinctiveness, place-referent continuity, place-congruent continuity, place-related self-esteem, and place-related self-efficacy (Knez, 2005), environmental fit, place self-congruity, self-extension and emotional attachment (Droseltis & Vignoles, 2010).

Having been explored from a diverse set of research traditions and disciplines (Patterson & Williams, 2005), place identity, place attachment and sense of community have been used interchangeably and suffered a lack of clear articulation (Lewicka, 2008; Pretty et al., 2003). Furthermore, factors overlap considerably in terms of affiliation, emotional bonds, belonging, behavioral commitment, and satisfaction (Pretty et al., 2003). While many conceptualize place identity and place attachment as sub- or superordinate dimensions in relation to each other, others treat them as separate but related concepts (e.g., Casakin, Hernández, & Ruiz, 2015). Some propose that the terms differ in theoretical positions with place identity involving psychological processes mediating the relationship between person and place, place attachment implying an affective personal perspective, and place dependence implying a social perspective (Bonnes & Secchiaroli, 1995). Droseltis and Vignoles (2010) conclude that while different conceptual dimensions may carry different shades of theoretical meaning, empirically they may prove so similar that they collapse into one another - like self-extension and emotional attachment. The conceptual confusion and conflicting study findings may indeed depend on how well the operationalizations have distinguished between concepts (Droseltis & Vignoles, 2010). Based on the conceptualization of attachment as a reciprocal link between identification and emotion, influencing behavior (Jenkins, 2014), in this article attachment is approached as a component of key place identity processes (such as development and enactment). The focus is to analyze the dimensionality of place identity measures, leaving causality and hierarchical relationships between identified components outside its scope.

4. Elements of place identity/identification

In the following sections, the identified elements and sub-dimensions derived from the systematic concept analysis are defined and described in relation to relevant literature/concepts in identity theory. Some sub-dimensions are further separated based on whether they relate to the physical or social setting. Measurements for each dimension are presented using a select few items presented in a table following each element. The full list of associated items including a more granular dimension structure is available in the Appendix.

Identity serves as a set of meanings attached to the self; a standard guiding attitudes and behavior (Stets & Biga, 2003). The identity process (IT) builds upon a cognitive process of feedback loops comparing self-appraisals by oneself and others, with the identity standard defining the *characteristics and (self-)meanings* of an identity, resulting in a discrepancy *evaluation* and associated positive or negative *emotions*, which in turn influence *behavioral actions* to achieve identity congruence (Stets & Biga, 2003). Identities thus influence attitudes and behavior, towards objects, the self and its identities, serving to maintain and verify identity-related self-meanings, supporting the self-structure in a strong reciprocal relationship (Stets & Biga, 2003). Attitudes are the positive

and negative dispositions stemming from salient beliefs, expressed through verbal and non-verbal cognitive (perception, awareness, belief), affective (emotional), and conative (behavioral) responses toward said phenomenon (Ajzen, 1989).

A similar structure is identified in the thematic analysis of the collected measurement item data. Previous research acknowledges a need for a multidimensional analysis of the concept of identity comprising *cognitive* (beliefs of characteristics, traits, values, and goals), *affective and evaluative* (perceived commitment, closeness, and value), and *conative* (behavioral implications) elements (Ashmore et al., 2004). However, it is important to note that although different constructs may include elements of all three components of attitude, it is not the theoretical attitude classification of each component that is of relevance but rather the practical contribution or consequences related to each construct that matters (Ramkissoon, Weiler, & Smith, 2012). Measurement items analyzed reflect both the content and processes of *identity and identification* based on perceived characteristics and meanings of self, other people, and phenomena, and various related *identificatory outcomes*, in the form of emotions, evaluations, and behaviors reflecting or stemming from internalized identities and identity processes. We turn first to what can be described as the more cognitive elements of identity and identification and the related measurement dimensions identified.

4.1. Cognitive elements of identity and identification

The first dimension identified reflects the *cognitive elements* of place-related identity and identification (see Table 1 and the Appendix). Identification involves internal and external perceptions and definitions of ourselves, others and things in our environment (Jenkins, 2014), and this dimension comprises *the measures or responses reflecting the cognitive identification of self as a member, part or representative of a (type of) place, place-related group or community*. It connects to processes of nominal identification (Jenkins, 2014) and self-categorization to a certain category or group (Tajfel, 1981), corresponding to the cognitive component of collective identity (Ellemers, Kortekaas, & Ouwerkerk, 1999). This dimension includes sub-dimensions of the identity process reflected by *self-categorization,* the relative *importance of identification* and goodness of *self-fit*, internalized *self-meanings*, and perceived *self-congruity* with identity standards.

4.1.1. Self-categorization

Measures of ***self-categorization*** capture *the self-definition, categorization, classification or identification, of self as a member of, or in terms of, a (type of) place, place-related group or community,* connected to either the biophysical or social setting. Place identity has been conceptualized as self-categorization into a *social group or category* related to a (type of) place or settlement, such as; being a *type of person* such as a city, urban, suburbanite, small-town person or country person (Hummon, 1986; Knez, 2005), to being a global, cosmopolitan, world, international *citizen* (Reysen, Pierce, Spencer, & Katzarska-Miller, 2013), a *resident or inhabitant* of a city district, city, region, country, continent/Europe, the world (citizen of the world), as compared to identifying as simply a human being (Lewicka, 2008). Through symbolic extension (Belk, 1988) and expansion of self (Reimann & Aron, 2009) a person may represent and be a part of the place, and a place may symbolically represent and be a part of the person. The internalization of groups and places into the extended self implies a right to membership and identification reflected in reciprocal statements such as "I am a part of the place or group" and "it is a part of me/who I am/my group" (Droseltis & Vignoles, 2010; McMillan & Chavis, 1986).

The self-categorization measures comprise a variety of statements reflecting who or what the person is aware/believes/perceives that it *is*, what it *feels* as/like, or what it would *describe/see itself* as in terms of, a (type of) place, place-related group or community, and inversely, about the (type of) place, place-related group or community being *perceived*, *felt* or *described/seen* as *a part of the self*. The wording of the items is

Table 1
Cognitive elements of identity and identification.

Select sources:	Select measurement items:
Self-categorization	
Williams and Roggenbuck (1989)[a] (Place attachment)	"I identify strongly with this place"
Lalli (1992)[a] (General attachment)	"The town is like a part of myself" "I see myself as a 'Heidelbergian'"
Hernández, Hidalgo, Salazar-Laplace, and Hess (2007)[a] (Place identity)	"This neighborhood is part of my identity"
Zenker et al. (2017)[a] (Commitment)	"I do not feel as a part of 'the family' in [CITY]" (R)
Centrality of identity/identification	
Explicit importance	
Cinnirella (1997)[a] (National and European identities)	"How important to you is being British?"
Stets and Biga (2003)[a] (Qualitative/affective/intensive commitment)	Respondents were asked how important it is to them that their (1) friends and (2) parents view them as an environmentalist.
Implicit importance	
Williams (2000)[a] (Sense of place)	"I do not think of myself as being from this place"
Obst et al. (2002)[a] (Conscious identification)	"I often think about being a resident of my local neighborhood"
Self-fit	
Cinnirella (1997)[a] (National and European identities)	"How similar do you think you are to the average British person?"
Lee et al. (2015)[a] (Attachment)	"I see myself as a typical [community i.e. residential suburb or geographical locality of identity] resident"
Self-meanings	
Keillor and Hult (1999)[a] (Cultural Homogeneity)	"An American possesses certain cultural attributes that other people do not possess"
Stets and Biga (2003)* (Environment identity)	How do you view yourself in relationship to the environment (on a scale from 1 to 5): "In competition with the natural environment - In cooperation with the natural environment"
Self-congruity	
Actual self-image congruence	
Sirgy et al. (1997)[a] (Self-image congruence (also self-image/product-image congruity, or self-congruity))	"The typical visitors (or tourists) to Norfolk reflect the type of person who I am"
Usakli and Baloglu (2011)[a] (Actual congruity/self-congruity)	"Las Vegas is consistent with how I see myself"
Ideal self-image congruence	
Sirgy and Su (2000)[a] (Ideal self-congruity)	"This [destination x] is consistent with how I like to see myself"
Nam et al. (2011)[a] (Ideal self-congruence)	"The typical guest of this brand has an image similar to how I like to see myself"
Social self-image congruence	
Sirgy and Su (2000)[a] (Social self-congruity)	"This [destination x] is consistent with how I believe others see me"
Ideal social self-image congruence	
Sirgy and Su (2000)[a] (Ideal social self-congruity)	"This [destination x] is consistent with how I would like others to see me"

Note: Items indicated by an [a] are measured using Likert-type scales. Other types of scales or cases lacking available scale information are indicated by an asterisk (*). (R) indicates items that are reverse-coded in the source document.

important. There is a difference between I am a resident and I feel like a resident, and thus between assigned and self-selected (or achieved) social identity or group membership (Ellemers et al., 1999). Furthermore, an identity may be ascribed collectively, e.g., all inhabitants in a city may be seen as being city residents and may even be used as self-referent. However, that does not mean that the identity and corresponding self-meanings are claimed subjectively, internalized, and enacted by the individual, nor does it reflect the relative importance of the identification (Jenkins, 2014).

4.1.2. Centrality of identity/identification

Centrality of identity/identification captures *the perceived importance of the categorization, classification or identification of self as a member of, or in terms of, a (type of) place, place-related group or community*. In line with Ashmore et al. (2004), this may be expressed in the form of *explicit importance*, comprising conscious subjective appraisals, and *implicit importance*, entailing potentially nonconscious expressions of the importance of an identity to the sense of self. Explicit importance may be seen as expressions of the hierarchical prominence and psychological centrality of an identity to a person reflected by an awareness of what is important to the self, while salience is a concept that reflects the implicit importance of an identity related to how an individual is likely to behave in a situation, which a person need not be directly aware of (Ashmore et al., 2004; Stets & Biga, 2003; Stryker & Serpe, 1994). Explicit importance has been investigated using rank ordering of place-related identities (Lewicka, 2008), by rating how important a specific identity or aspect of an identity is to the person and by how important it is that others perceive the person as having a specific identity (Stets & Biga, 2003). Implicit importance may reflect the hierarchical position of a place-related identity in the person's self-system captured by how respondents see or would describe themselves (Stets & Biga, 2003).

4.1.3. Self-fit

The sub-dimension of ***self-fit*** captures *the perceived similarity, prototypicality or goodness of fit based on the subjective assessment of the degree to which the person fits or qualifies as a member of a (type of) place, place-related group or community*. Perceived identification stems from positioning the self and others in a wider physical or social context (Puddifoot, 1995). Perceptions of fit from one's own and others' points of view, are relevant to identify (with) something while feeling that you don't fit in, do not represent or are not prototypical of a group may cause hesitation to accept, acknowledge or claim membership to that group (Ashmore et al., 2004; Jenkins, 2014). The embodiment and performance of identity are expressed through the evaluation of self as a typical place user, such as a resident or citizen (Lee, Levy, & Yap, 2015), the degree of similarity between self and the usual place user (Grappi & Montanari, 2011), or degree of fit between (some aspect of) self and the place in question, such as personality (Stokburger-Sauer, 2011; Zenker et al., 2017). Measures reflect both explicit statements such as "I am similar to …." or "I fit (in) …" and more implicit statements such as "I think I agree with people in my neighborhood about what is important in life" reflecting internalized/shared self-meanings and providing justification for why the person fits in (Droseltis & Vignoles, 2010; Obst et al., 2002).

4.1.4. Self-meanings

Place is an efficient symbol or "meaning-making shorthand" ascribing identity associations to people, events, and objects (Andéhn, Hietanen, & Lucarelli, 2020). From being identified with and identifying with a place, a partial equivalence between an individual and a place (or its traits and attributes) may occur, and places may be seen as and become aspects of one's own identity (Lalli, 1992). While the majority of research relies on conscious expressions of identification, a person may not consciously self-categorize or admit to possessing a certain identity, leaving researchers to infer from self-categorization through *implicit measures* of associated cognitive beliefs (Ashmore et al., 2004). Internalized collective identity meanings comprise aspects such as self-defining characteristic traits and dispositions, ideology, beliefs, history, values, norms and behavior associated with categories (Ashmore et al., 2004). Place identity is said to comprise the dimensions of self that define the individual's personal and social identity in relation to the physical environment by means of conscious and unconscious ideas, beliefs, preferences, feelings, values, goals, and behavioral tendencies and skills relevant to this environment (Proshansky, 1978) reflecting purposes, properties, and behavioral expectations of a physical setting integrated into the identity (Proshansky et al., 1983). Similarly, environment(al) identity is depicted as a personal and social identity assessed by the extent to which the natural environment plays an important part in a person's self-definition (Clayton, 2003) and is conceptualized as "a set of meanings attached to the self as the person interacts with the natural environment" measured through eleven bipolar statements of how the person views itself in relationship to the environment (Stets & Biga, 2003, p. 409). The sub-dimension ***self--meanings*** thus captures *the internalized identity meanings* (e.g., *beliefs, values, norms) associated with the identification or categorization of self as a member of, or in terms of, a (type of) place, place-related group or community*.

4.1.5. Self-congruity

Identifying with an identity gives rise to a self-image, or "current working copy" of the identity at hand (Burke, 1980), signaled to others and validated through comparison with the public image (Jenkins, 2014). By associating with things that by psychological comparison fit or match the desired self-concept the identity is reinforced and cognitive dissonance from discrepancy is reduced (Sirgy & Su, 2000). The sub-dimension of ***self-congruity*** (sometimes referred to as self-image/product-image/self-brand congruity or congruence) reflects measures of *the perceived congruence (match, fit) between the self-image (aspects/characteristics) of the individual and the image (aspects/characteristics) of a (type of) place, place-related group or community*. Relevant dimensions of self-images comprise the *actual self* - how a person perceives herself, the *ideal self* - how a person would like to perceive herself, the *social self* - how a person presents herself to others and finally the *ideal social self* - how a person wants to be perceived by others (Sirgy, 1982; Sirgy & Su, 2000) and self-congruity has been studied relating to a range of place-related contexts, such as destinations (Sirgy et al., 1997), destination brand personality (Usakli & Baloglu, 2011), customer image (Nam, Ekinci, & Whyatt, 2011), and to any freely specified self-relevant place, real or imagined (Droseltis & Vignoles, 2010).

4.2. Affective elements of identity/identification

Having an identity comes with an emotional significance attached to that membership (Tajfel, 1978) and self-categorization influences perceptions, and emotional and behavioral outcomes (Stets & Burke, 2000). Emotional attachment is a distinct identity component encompassing a sense of affective commitment, belonging or emotional involvement with the group (Ashmore et al., 2004; Ellemers et al., 1999). Maintaining contexts that enable self-verification and identity-consistent behavior, results in positive self-feelings and the development of cohesiveness in the form of collective orientation, emotional attachment, and commitment (Burke & Stets, 1999). Research shows that identification with a place is linked to a higher emotional attachment and commitment to it (Zenker et al., 2017).

Place attachment has been described as an attitudinal construct comprising a *cognitive* element - by some described as place identity (the association between the self and the setting) - reflected in the construction of and bonding to place meaning (memories, beliefs, and knowledge associated with a place which enable a feeling of closeness to and personal importance of a place); an *affective* component in the form of an individual's emotional attachment or connection to place; and a *conative* component, comprising behavioral intentions and

commitments (Jorgensen & Stedman, 2001; Scannell & Gifford, 2010) or actual behavior (Scannell & Gifford, 2010). Attitudes may become more salient when encountering or thinking of the attitude object and salient attitudes may induce affective states such as loving, hating, or valuing with strong intensity of affect and behavioral response tendencies (Scherer, 2005). Some argue that having achieved place identity is evidenced when residents define themselves in terms of their strong attachment to a neighborhood and community (Lee et al., 2015).

Commitment represents the meaningful relations stemming from behavioral choices, with the implication that one's relationships depend on being or behaving as a certain type of person and that changing this may have costly relational consequences (Stryker, 1968). It acts as a binding tie between an individual and a social entity such as an identity, individual, group, organization, or exchange relationship, thereby preventing the individual from destabilizing current structural connections (Burke & Stets, 1999). Commitment can be divided into an affective and an interactional dimension (Stryker & Serpe, 1994) reflecting the intensity of affect through the strength of the ties to others through an identity, and the number of social relationships associated with an identity (Stets & Burke, 2000; Stryker & Serpe, 1994). Both attachment and commitment involve emotionally based interpersonal connections, but while the first tends to be measured using *affective* aspects, the second may be seen as more *conative* in nature, operationalized as comprising how an individual would act and does act (Burke & Stets, 1999). In this section, the *affective elements* or *outcomes* of identification are considered.

Affective attachment to a place can be divided into a physical and a social dimension (Cuba & Hummon, 1993; Hidalgo & Hernandez, 2001) and can relate to different aspects of a place such as a social group, or its members or the physical setting or place itself. Beyond place attachment, positive and negative feelings about a place (Manzo, 2003) can also be connected to concepts of topophilia (love and affection) and topophobia (aversion) (Relph, 1976). The ***affective elements*** identified in the study, summarized in Table 2 and outlined in full in the Appendix, cover measures reflecting *the emotional bonds, attachments, and attitudes towards a (type of) place, place-related group or community*. The following section presents the dimensions of measures identified that capture the perceived affective elements or outcomes of identification, including sub-dimensions of *affective attachment, centrality of affect, self-merging*, and *motivational drivers*.

4.2.1. Affective attachment

The first dimension identified, ***affective attachment***, comprises measures reflecting *perceptions of the type or strength and locus of attachment, commitment and involvement a person feels towards a (type of) place, place-related group or community – or lack thereof*. Measures cover the existence of some form of affective attachment, tie, bond or relationship of either cognitive or emotional nature (such as at-homeness, rootedness, belonging, fellowship, kinship, togetherness, closeness) and the degree, strength or intensity of said attachment. Shamai (1991) discerns between seven different levels of intensity of feeling and behaving related to place, ranging on a continuum from no sense of place to the sacrifice for a place, but specifies that all levels of the scale need not apply to each type of setting or study.

Place attachment may also develop towards different spatial ranges or types of places/settlement objects and many different measures exist to capture the source, affiliation or locus for place-related attachments and attitudes, such as self, family, friends, community, region, organizations and home/dwelling (Cuba & Hummon, 1993; Hidalgo & Hernandez, 2001), house, neighborhood, or city (Hidalgo & Hernandez, 2001), natural environment (Raymond, Brown, & Weber, 2010) or to any freely specified self-relevant place where the respondent had been, expected to go or could simply imagine (Droseltis & Vignoles, 2010). It can relate to both a more personal-relational context or a more environmental context in the form of nature bonding (Raymond et al., 2010).

In this study, no efforts have been made to try to categorize measures

Table 2
Affective elements.

Select sources:	Select measurement items:
Affective attachment	
Explicit attachment	
Buckner (1988)[a] (Neighborhood cohesion)	"I feel like I belong to this neighborhood"
Williams and Roggenbuck (1989)[a] (Place attachment)	"I am very attached to this place"
Cuba and Hummon (1993)* (Existence of place identity)	"Do you feel at home here?"
Cuba and Hummon (1993)* (Locus of place identity)	"Do you associate feeling at home with dwelling, community, and/or Cape [Cod], in general?" Response alternatives/categories: Dwelling-based, Community-based, Region-based
Cinnirella (1997)[a] (National and European identities)	"To what extent do you feel strong ties with other British people?"
Knez (2005)[a] (Place attachment)	"My bonds to this part of town are strong"
Chen, Dwyer, and Firth (2014)[a] (Place identity)	"I feel commitment to …"
Implicit attachment	
Hernández et al. (2007)[a] (Place attachment)	"When I've been away for a while, I really want to come back"
Lewicka (2008)[a] (Place attachment)	"I miss it when I am not here"
Sadeque, Roy, Swapan, Chen, and Ashikuzzaman (2020)[a] (Neighborhood brand love)	"I love my neighborhood"
Centrality of affect	
Explicit importance	
Buckner (1988)[a] (Neighborhood cohesion)	"The friendships and associations I have with other people in my neighborhood mean a lot to me"
Williams (2000)[a] (Sense of place)	"What happens in this place is important to me"
Zenker et al. (2017)[a] (Attachment)	"There are a lot of things that keep me in the place"
Implicit importance	
Williams and Roggenbuck (1989)[a] (Place attachment)	"One of the major reasons I now live where I do is to be near this place"
Raymond et al. (2010)[a] (Family bonding)	"I live in the Northern and Yorke region because my family is here"
Self-merging	
Interconnection	
Buckner (1988)[a] (Neighborhood cohesion)	"If the people in my neighborhood were planning something I'd think of it as something "we" were doing rather than "they" were doing"
Gómez et al. (2011)[a] (Identity fusion)	"I feel immersed in my country"
Interdependence	
Lalli (1992)[a] (Commitment)	"My personal future is closely tied up with Heidelberg"
Obst et al. (2002)[a] (Belonging)	"I don't care if my local neighborhood does well" (R)
Gómez et al. (2011)[a] (Identity fusion)	"I am strong because of my country"
Motivational drivers	
Buckner (1988)[a] (Neighborhood cohesion)	"Living in this neighborhood gives me a sense of community"
Droseltis and Vignoles (2010)[a] (Environmental fit)	"This place allows me to 'connect with myself'"
Droseltis and Vignoles (2010)[a] (Meaning)	"This place gives me a sense of "meaning" in my life"
)Kyle, Jun, and Absher (2014[a] (Social bonding)	"The time spent on the X NF allows me to bond with my family and friends"
Continuity	
Kaltenborn (1997)[a] (Place attachment)	"When I am at the cabin I can really be myself"
Droseltis and Vignoles (2010)[a] (Continuity)	"This place gives me a sense of continuity"

(*continued on next page*)

Table 2 (*continued*)

Select sources:	Select measurement items:
Distinctiveness	
Droseltis and Vignoles (2010)[a] (Distinctiveness)	"Being linked to this place distinguishes me from other people"
Self-efficacy	
Williams (2000)[a] (Identity expression)	"Visiting this place helps me attain the life I strive for"
Droseltis and Vignoles (2010)[a] (Self-efficacy)	"This place makes me feel competent and effective"
Stokburger-Sauer (2011)* (Nation brand embeddedness)	"Ireland helps me satisfy important needs"
Self-esteem	
Bonaiuto et al. (1996)[a] (Local identity)	"Do you feel proud of living in this town?"
Droseltis and Vignoles (2010)[a] (Self-esteem)	"This place makes me feel positively about myself"

Note: Items indicated by an [a] are measured using Likert-type scales. Other types of scales or cases lacking available scale information are indicated by an asterisk (*). (R) indicates items that are reverse-coded in the source document.

based on whether they relate to the *biophysical* or the *social setting*. If doing so, it is important to note that some items lend themselves to ambiguity or may belong to both categories. For example, neighborhood attachment has been classified as biophysical/setting attachment but could also refer to the neighborhood community. This highlights the importance of delineating what is intended when using the term or such an item in a study or survey. Expressions of being from the place are here interpreted as a reflection of having "roots" in the place, therefore reflecting a binding tie or relationship with the place. What type of (if any) feelings are associated with such a statement is however not evident and needs to be clarified when used in a study to ascertain that it represents this dimension.

While statements such as "I am attached" and "I feel attached" may indicate different things and spring from different sources, the affective attachment dimension comprises expressions of both a more cognitive (or rational) and an emotional nature. Whether attachment stems from habit, inertia, constraints (such as lack of options or an inability to move), or some other practical reason, even an imposed bond may cause a felt attachment. Expressions of being attached and feeling attached are thus considered to reflect binding ties that are subjectively experienced or "felt", and hence categorized as affective since affect incorporates both positive and negative emotions. Questions capturing expressions of affective attachment comprise both more *explicit* attachment expressions reflecting the existence and/or locus of attachment such as whether respondents are or feel attached, how they feel attached, what type of or strength of attachment is felt, and towards what or which societal entity they feel attached. *Implicit* attachment statements reflect drivers, implications and consequences of attachment or loss and deprivation thereof, such as feeling love, homesick, missing the place and feeling happy or wanting to go back.

4.2.2. Centrality of affect

The subjective emotional experience (feeling) component of emotion stems from cognitive appraisals and serves the function of monitoring the individual's internal state and organism–environment interactions (Scherer, 2005). The following dimension identified covers the ***centrality of affect,*** that is, measures of *the perceived importance of the affective attachment, commitment, and involvement a person feels towards a (type of) place, place-related group or community,* reflecting the cognitive meanings, affiliations, appraisals and justifications driving affective attachment. This dimension is divided into expressions of *explicit* and *implicit* importance, reflecting whether some aspect of the place *is*, and *what* makes the place more or less important, meaningful, valuable, or special to the person. Questions of explicit nature include whether friendships, the place/dwelling or what happens in the place means a lot or is of importance to the respondent (Buckner, 1988; Williams, 2000), while questions of implicit nature for example enquire whether most of the respondents friends are in some way connected with the use of the place (Williams, 2000), and why the respondent feels at home there (Cuba & Hummon, 1993). The centrality of affect dimension can be linked to the meaning function of place (Proshansky et al., 1983) and the role of places as centers of meaning and felt value (Tuan, 1977) and may help shed light on the reasons, expectations and obstacles associated with place identification and attachment.

4.2.3. Self-merging

Places with a strong identity facilitate social cohesion and homogeneity (Uzzell et al., 2002). Social cohesion in the form of a shared social identity, with prototypical features, values and behavior, is central to self-identity and constitutive of place identity (Guàrdia & Pol, 2002; Uzzell et al., 2002) and members of a cohesive community can be identified by their strong emotional bonds and commitment to place (Cuba & Hummon, 1993; Bonaiuto et al., 1996; Uzzel et al., 2002). Dimensions of collective identity comprise not only attachment but also the feelings of *interconnection* or intrinsic merging of self and other, and more extrinsic aspects in terms of perceived *interdependence* and shared fate resulting from one's self-categorization (Ashmore et al., 2004). Sense of interconnection and interdependence capture emotional responses stemming from a symbolic extension and expansion of the self to include the social group or place, to such an extent that consequences and effects influencing the one also impact the other.

Expressions of this kind of affective outcome/consequence of strong identification and attachment are captured by the sub-dimension ***self-merging***, described as *the feeling of merging or oneness of self with a (type of) place, place-related group or community*. This sub-dimension can be linked to both the related concepts of virtual identification - expressing identity-related consequences in terms of behavior and treatment in interpersonal contexts (Jenkins, 2014) and expressions of group-orientation (Burke & Stets, 1999). It can further be linked to the concept of identity fusion, which is a stronger predictor of extreme pro-group behavior than identification, since it emphasizes a shift from collective orientation to the group, whose members may be seen as replaceable, towards a relational orientation toward the group, where members are irreplaceable (Gómez et al., 2011). Expressions of self-merging stem from the symbolic internalization of the group or place into the extended self and internalization of group norms and identity standards, and are exhibited by feelings of a shared mutual fate (such as success or failure) with a place-related social group or a place (Zenker et al., 2017). They involve taking group or place criticism or praise personally, feeling offended, affronted or ashamed if someone thinks or speaks negatively about the group or place, and thinking and talking about things as something "we" are doing, having, etcetera (Nam et al., 2011). As indicated earlier, self-extension (feeling that the place is a part of the self) and emotional attachment (feeling a strong emotional bond to the place) are theoretically different but prove so similar empirically that they collapse into one (Droseltis & Vignoles, 2010). This could indicate that they are the same in respondents' minds or that there is a reciprocal relationship between the two.

4.2.4. Motivational drivers

The next, related set of measures identified reflects why respondents identify with or become attached to a place based on how the place may help fulfil psychological needs and motives. ***Motivational drivers*** capture *the psychological needs, goals, motives, and outcomes of identification with and/or attachment towards a (type of) place, place-related group or community*. The place identity process is guided by motives of distinctiveness, continuity, self-efficacy, and self-esteem (Twigger-Ross & Uzzell, 1996) and both place identity and place attachment have been linked to various psychological needs and social and symbolic drivers (Droseltis & Vignoles, 2010). Roberts and Robins (2000) posit that goals can be associated with positive and negative affect and consequently with approach or avoidance tendencies, and that life goals and values

act as a link between people's identities and the roles that they enact. Goals differ in the types of behavior they encourage and relate in different ways to outcomes such as personal well-being, social behavior, and attitudes towards environmentalism (Ryan & Deci, 2000). This dimension is classified as affective due to the relationship between motives and goals to positive and negative affect and subsequent approach and avoidance tendencies (Roberts & Robins, 2000) as well as the affective nature of the items. While items in this sub-dimension do not necessarily cover expressions explicitly stating the existence of attachment, they are often seen as measures of *implicit attachment* (or psychological correlates) towards the (type of) place, place-related group or community (see Lewicka, 2013).

Motivational drivers identified comprise expressions of what the place offers, allows, enables, helps, or makes the person be, feel, or become in relation to psychological needs, motives, or benefits. These include reflection/introspection, life meaning, connecting with/enjoying nature, community/affiliation/relationships/belonging, continuity, conformity/fitting in, distinctiveness/self-expression/self-expressiveness, self-efficacy/competence/control/autonomy, and self-esteem/self-acceptance (e.g., Droseltis & Vignoles, 2010; Kyle, Mowen, & Tarrant, 2004; Scannell & Gifford, 2017; Williams, 2000). This is in line with identity process theory IPT (Breakwell, 1993; Brewer, 1991) and due to their prevalence each of the four principles have been highlighted as a separate sub-dimension.

Continuity refers to stability over time and situations between past and present self-concepts, which may accommodate/be associated with growth and change as long as it is congruent with the identity development, to maintain healthy self-esteem (Breakwell, 1986, 1993). Maintaining continuity of self in relation to one's environment can take the forms of *place-referent continuity*, maintaining continuity of self through places of emotional significance acting as references to the past (selves, actions and experiences), and *place-congruent continuity* encompassing compatibility of a place's characteristics with one's present self-concept, beliefs, values and preferences (Twigger-Ross & Uzzell, 1996). Place-referent continuity encompasses a place acting as a reference for one's past, expressed through evaluations, recollections, actions, desires and intentions related to a place serving to maintain continuity of self, such as remaining in or appreciating a place because of its ability to remind oneself of one's past or childhood (Knez, 2005). Place-congruent continuity refers to evaluations, recollections, actions, desires and intentions related to a place serving to maintain the person-environment integration or fit, such as because the environment is the preferred type (Twigger-Ross & Uzzell, 1996) or matches current beliefs; e.g. staying in a place because it is congruent with current self, opinions or preferences of how one wants to live (Knez, 2005).

Distinctiveness reflects the desire to distinguish self from others through optimal personal uniqueness (Knez, 2005; Twigger-Ross & Uzzell, 1996). A place may represent the people residing in or using it, providing distinguishing cognitive features of distinctiveness and similarity which may be incorporated into group and self-definitions (Scannell & Gifford, 2010). Collective identity comprises a distinct evaluative component which reflects the positive or negative value connotation attached to membership, referred to as group self-esteem (Ashmore et al., 2004; Ellemers et al., 1999). While some researchers operationalize *place-related distinctiveness* as distinguishing self from others through expressions of self-referents (or self-categorizations) related to a specific environment or settlement type, such as referring to oneself as a city-, urban- or country-person (Knez, 2005), island-people (Scannell & Gifford, 2010) or related to a specific place, e.g. as a Londoner (Twigger-Ross & Uzzell, 1996), others operationalize optimal distinctiveness in terms of the uniqueness of the place in question, as an implicit distinction of the self from others (Wang & Xu, 2015; Zenker et al., 2017).

Self-efficacy is related to the behavioral enactment of an identity (Stets & Burke, 2000) and maintaining an identity structure characterized by competence and control since a lack thereof enables feelings of futility, alienation, and helplessness (Breakwell, 1993). Self-efficacy in relation to place is a measure of personal agency, evaluating a person's ability to effectively manage and meet situational demands and achieve personal goals based on the environment's capability to enable, facilitate or not obstruct such efforts/achievement (Knez, 2005; Twigger-Ross, Bonaiuto, & Breakwell, 2003; Twigger-Ross & Uzzell, 1996).

Desire for *self-esteem* is considered a fundamental tenet of every theory of identity (Breakwell, 1993) with the positive and negative value of an identity an important aspect of it (Breakwell, 1986). Collective identity involves value (Tajfel, 1978), and its evaluative component reflects the evaluations of perceived positive or negative affective value associated with a category or identity by self and others, which impacts self-esteem (Ashmore et al., 2004; Ellemers et al., 1999). Evaluations commonly comprise adjectives such as proud, glad, happy, and satisfied associated with a favorable attitude and, conversely, negations of the former or words such as regret and shame are typically associated with disfavor and a negative attitude (Ashmore et al., 2004). Evaluations may be based on *private regard,* defined as the favorability judgments made by people themselves, and *public regard,* comprising the favorability judgments that one perceives others to hold (see Ashmore et al., 2004).

Self-esteem in relation to place is evidenced by positive feelings and evaluations of self in relation to place or a place-related group. This involves *explicit* statements of feeling proud of the place (Lewicka, 2008), living in it (Knez, 2005; Twigger-Ross & Uzzell, 1996), or feeling good about or regretting being a resident (Obst et al., 2002), as well as external evaluations of the place as possessing prestige and being the object of envy by others (Lalli, 1992). *Implicit* operationalizations, in the form of attractiveness of identification, can be seen in evaluations of the place as being good, positive and favorable (Zenker et al., 2017). However, some argue that the positive evaluation of a place or its qualities (i.e. "I like this place") differs from the impact this has on a person's self-esteem, stemming from a sense of pride by association with the place (i.e., "Living in this place makes me feel good about myself"), meaning that though the two may be related they also may not (Twigger-Ross & Uzzell, 1996).

Attitudes (the disposition to respond favorably or unfavorably to an aspect of the life world) are evidenced not only through affect but also through cognition and conation (Ajzen, 1989). Behavioral involvement can be analyzed as elements or indices of identification (instantiating an identity) and as conceptually independent behaviors in the form of outcomes of identification (consequences of identity) (Ashmore et al., 2004). Attachment to place and community is described as consisting not only of an affective component but also of a *behavioral* or conative component consisting of conative place-person bonds in the form of actions and behavior or behavioral commitment in relation to place (Jorgensen & Stedman, 2001; McMillan & Chavis, 1986; Pretty et al., 2003; Scannell & Gifford, 2010). This brings us to the final dimension of measures identified, the conative and functional dimension, linked to the cognitive and motivational-behavioral aspects of place attachment.

4.3. Conative and functional elements of identification/identity

Identification influences not only affective outcomes but also perceptions and behavioral outcomes (Stets & Burke, 2000). The identity principles guide both what and how information is evaluated by an individual (Breakwell, 1986, 1993) and the place identity process, in which self-identity is developed by accommodation, assimilation, and evaluations of the environment (Twigger-Ross & Uzzell, 1996). The identity process involves a process of comparison, evaluating the degree of correspondence between the identity standard and perceptions and meanings from the environment, resulting in actions and behavior in the environment (Burke, 1991). Place dependence, the conative component of place attachment/attitudes, describes the instrumental or functional bond with a setting formed through the interaction and functionality or ability of a place to help a person meet goals, needs, and aspirations

(Jorgensen & Stedman, 2001; Ramkissoon et al., 2012; Williams & Roggenbuck, 1989). Self-efficacy is linked to place dependence and resource specificity, which in turn relates to satisfaction (Williams, Patterson, Roggenbuck, & Watson, 1992). Place dependence differs from affective attachment in that the strength of the bond is based on preference, judgment, and evaluations of how well a setting serves goal achievement, rather than on general affect, and may be negative if the setting is deemed to impede the achievement of valued behavioral performance goals (Jorgensen & Stedman, 2001).

Another dimension of the conative component of place attachment is social bonding, comprising social ties to places based on their meaning as providing a context for meaningful interpersonal relationships and experiences (Kyle et al., 2004; Ramkissoon et al., 2012). Social embeddedness is considered a separate element of collective identity encompassing how enmeshed or intertwined one's identities are in one's social networks and social relationships, which is more objective and external than that of emotional attachment (Ashmore et al., 2004). This can be linked to the concept of interactional commitment which is measured by the amount of social relationships a person has (Stryker & Serpe, 1994). Assessments of feeling accepted, respected, valued, and supported by the community in turn, are linked to feelings of self-worth and the subsequent formation of an emotional bond and may be seen as indirect or implicit measures of emotional group attachment (Ashmore et al., 2004). Important elements building a sense of community are, besides sense of belonging and identification of community membership (covered in previous dimensions), a common symbol system of social conventions, behaviors and interactions (e.g., traditions, language, landmarks, logos, architecture), recognizable and distinctive community boundaries, feelings of safety and security, personal investment, influence, shared emotional connections (in terms of a shared history, investments and interests, interaction intensity and quality, and community spirit), and ability of the community to meet community member needs (McMillan & Chavis, 1986).

The ***conative and evaluative elements*** identified in this study, summarized in Table 3 and shown in full in the Appendix, capture expressions related to place dependence and social bonding/embeddedness through measures of *the behavioral and functional bonds, attachments, and attitudes towards a (type of) place, place-related group or community*. This dimension matches place identity cognitions when defined as the shared mental representations of a place, its physical settings and their properties that support and are relevant to the social roles and attributes that help define the person, her worth and prescribed behavior (Proshansky et al., 1983). It can be related to evaluations of the quality of community life and functioning (Puddifoot, 1995), place meanings and place satisfaction (Stedman, 2002). Evaluations of how well the place serves to perform, afford, or satisfy specific behavioral needs, functions or opportunities for goal achievement can be made in general or in comparison to other places. These may relate both to the physical functionality ties and interpersonal or group relationship ties to a place (McCool & Martin, 1994). Behavior-related expressions of person-place bonds incorporate proximity-maintaining bonds such as social support and restoration of place, and favoring a certain type of setting upon relocation (Scannell & Gifford, 2010).

4.3.1. Behavioral attachment

The first sub-dimension identified comprises measures of ***behavioral attachment***, reflecting *the behavioral attachment, commitment, and involvement towards a (type of) place, place-related group or community*. Person-place bonds generally have a conative component reflected through present and past behavioral commitment or dedication to the place and its well-being (Lee et al., 2015), intentions to visit (Williams & Roggenbuck, 1989), spend time in (Clayton, 2003), protect (Ramkissoon et al., 2013), and remain close to a place (Hidalgo & Hernandez, 2001; Lalli, 1992; Scannell & Gifford, 2010) or a place-related group (Lee et al., 2015; Pretty et al., 2003). Conative responses to attitude objects comprise behavioral inclinations, intentions, commitments, and actions

Table 3
Conative and functional elements.

Select sources:	Select measurement items:
Behavioral attachment	
Buckner (1988)[a] (Neighborhood cohesion)	"I plan to remain a resident of this neighborhood for a number of years"
Obst et al. (2002)[a] (Ties and Friendship)	"I often visit my neighbors"
Clayton (2003)* (Environmental identity)	"I spend a lot of time in natural settings (woods, mountains, desert, lakes, ocean)"
Lee et al. (2015)[a] (Attachment)	"I would recommend X to others moving to Auckland, if they have a similar family and household situation to mine"
Preferences	
Buckner (1988)[a] (Neighborhood cohesion)	"Given the opportunity, I would like to move out of this neighborhood" (R)
Williams and Roggenbuck (1989)[a] (Place attachment)	"I do not particularly like this place"
Lalli (1992)[a] (External evaluation)	"As compared with other towns, Heidelberg has many advantages"
McCool and Martin (1994)[a] (Community attachment)	"I'd rather live in the town where I live now than anywhere else"
Palmer, Koenig-Lewis, and Jones (2013)[a] (Evaluative/Emotional identity – Group commitment)	"I would rather belong to another nationality" (R)
Functional evaluations	
Familiarity	
Lalli (1992)[a] (Perception of familiarity)	"This town is very familiar to me indeed"
Kaltenborn (1997)[a] (Place attachment)	"I have good childhood memories from this area"
Hammitt, Backlund, and Bixler (2004)[a] (Familiarity)	"I could draw a rough map of the Chattooga"
Droseltis and Vignoles (2010)[a] (Genealogical links)	"My origins are in this place"
Hygiene factors	
Obst et al. (2002)[a] (Belonging)	"My local neighborhood is peaceful and orderly"
Droseltis and Vignoles (2010)[a] (Security)	"This place gives me a sense of security"
Image	
Lalli (1992)[a] (External evaluation)	"In other towns Heidelberg is seen as possessing prestige"
Hosany, Ekinci, and Uysal (2007)[a] (Destination personality)	Respondents were asked to state whether the following personality traits were relevant to their description of the destination: Daring, exciting, spirited, imaginative, up-to-date, independent, reliable, secure, intelligent, successful, confident, secure, upper class, glamorous, good looking, outdoorsy, masculine, western, tough, rugged
Wang and Xu (2015)[a] (Distinctiveness)	"I think Zhuhai is a city with very distinctive features"
Zenker et al. (2017)[a] (Attractiveness of identification)	"The city you live in is good"
Sadeque et al. (2020)[a] (Neighborhood brand love)	"My neighborhood is totally awesome"
Influence	
Obst et al. (2002)[a] (Influence)	"I have almost no influence over what my local neighborhood is like" (R) "The council does very little for my local neighborhood" (R)
Instrumentality	
Goudy (1982)[a] (Community satisfaction)	"Please indicate how satisfied you are with: your residence (house, apartment, room) as a place to live, your particular neighborhood as a place to live, and your community as a place to live"

(*continued on next page*)

Table 3 (*continued*)

Select sources:	Select measurement items:
Williams and Roggenbuck (1989)[a] (Place attachment)	"I find that a lot of my life is organized around this place"
Williams (2000)[a] (Centrality)	"This place plays a central role in my lifestyle"
Jorgensen and Stedman (2001)[a] (Place attachment)	"I feel relaxed when I'm at my lake property"
Félonneau (2004)[a] (External evaluation)	"Bordeaux is mainly a city for tourists"
Knez (2005)[a] (Place-related self-efficacy)	"Everything I need in my everyday life is here"
Droseltis and Vignoles (2010)[a] (Economic links)	"This place has financial importance for me"
Droseltis and Vignoles (2010)[a] (Spiritual significance)	"This place has spiritual significance to me"
Casakin, Ruiz, and Hernández (2021)[a] (Place attachment – Cognitive)	"My neighborhood allows me to have excellent living conditions"
Place potential and future	
Pretty et al. (2003)[a] (Place dependence)	"All in all, life in this community will continue to improve more rapidly than in other communities in this country"
Chen et al. (2014)[a] (Place expectation)	"In the future … is better than now"
Social embeddedness	
Kasarda and Janowitz (1974)* (Local social bonds – Networks)	"How many people would you say you know who live in … (Home Area)?" Respondents were also asked about participation in several different types of organizations.
Buckner (1988)[a] (Neighborhood cohesion)	"I believe my neighbors would help me in an emergency"
Obst et al. (2002)[a] (Support)	"I have no friends in my local neighborhood on whom I can depend" (R)

Note: Items indicated by an [a] are measured using Likert-type scales. Other types of scales or cases lacking available scale information are indicated by an asterisk (*). (R) indicates items that are reverse-coded in the source document.

of what people say they do, plan to do, or would do under certain circumstances (Ajzen, 1989). Statements about behavior and behavioral intentions would typically include expressions using action verbs such as, do, act, think, say, stay, spend time, visit, plan, expect, will, defend, and recommend as exhibited by example items presented in Table 3 and the Appendix.

4.3.2. Preferences

Another sub-dimension of measures, closely related to behavioral attachment is ***preferences*** which captures *the evaluative dispositions towards a (type of) place, place-related group or community*, in general, or in comparison to others. Preferences are stable evaluative judgments about stimulus phenomena, in the sense of liking, disliking, preference, or non-preference over other phenomena that result in positive or negative feelings and behavioral approach and avoidance tendencies (Scherer, 2005). This sub-dimension can be linked to cognitive attitude responses and salient beliefs in attitude theory (and could be seen as reflecting a form of implicit centrality or relative importance of the place to the person). Attitudes may influence perception and thus an individual's cognitive beliefs, meanwhile salient beliefs in turn are assumed to influence overall evaluations and attitudes, thereby influencing intentions and subsequent behavior (Ajzen, 1989). This kind of measure captures expressions of comparison, conditionality, or modality; in other words, what the respondent would, want, like, desire, wish, imagine, prefer or negations of the former in relation to a (type of) place, place-related group or community. Measures cover dispositions such as enjoying, liking or disliking a place (Williams & Roggenbuck, 1989) preferring for example to live, stay, visit, or move to or from a place (e.g., Lalli, 1992; Lewicka, 2008), wanting to be involved in the place and what goes on there (Kasarda & Janowitz, 1974).

4.3.3. Functional evaluations

The final sub-dimension identified, ***functional evaluations***, captures *the functional evaluations of a (type of) place, place-related group or community* in terms of properties relevant to the behavioral needs, functions, or opportunities of a person, place-related group or community. This includes also what in attitudinal theory is referred to as place dependence. Places serve as arenas for action (Casey, 2001, p. 683) and play different roles in peoples' lives (Merrilees, Miller, & Herington, 2012; Strandberg & Styvén, 2021). Quality of community life and functioning covers numerous aspects and is considered an important feature of community identity (Puddifoot, 1995). The positive and negative valence of place cognitions depend on the quality of the physical setting, objects, and facilities for human activity and social interaction, such as the quality of social context, how well individuals may play their roles, get along with and feel towards each other, how well it serves their biological, psychological, social, and cultural needs (Proshansky et al., 1983). Functional evaluations include perceptions of how conducive the physical and social setting is or what it has to offer in terms of satisfying personal and/or group goals and needs. Measures typically comprise statements of what the physical or social setting (it) is, has, could be (come), and offers in terms of what the person can do, feel, and experience in the place. Inversely they tend to reflect the person's knowledge, experiences, memories, and relationship with the physical or social setting. The physical and social setting functionality comprises the multitude of functions that a place serves related to a person's goals. Evaluations may thus be related to the psychological goals and needs described under motivational drivers (see also Droseltis & Vignoles, 2010).

Functional evaluations have been divided into several sub-dimensions or themes, both symbolic and utilitarian based on themes identified during analysis. These themes do not stem from identity theory and are presented in alphabetical order without any analysis relating to the hierarchical relationships between them. The first theme identified concerns aspects of *familiarity* reflecting statements of knowledge, history, memories, ancestry, familiarity, orientation, nostalgia, stability/consistency/continuity relating to goals such as self-efficacy and continuity. Evaluations comprising aspects such as safety/security, law and order/criminality, peacefulness, diversity, pollution, and healthcare relating to goals of for example safety and physical health were captured by a theme labeled *hygiene factors.* The theme called *image* reflects evaluations on aspects of representation, display, expressiveness, and public regard which connect to personal needs of for example image, conformity, uniqueness, and distinctiveness. *Influence* captures evaluations of agency and ability by the self and others to influence the reference object, which could be tied back to goals of community and political influence.

Instrumentality reflects evaluations related to the ease of performing daily life/lifestyle activities and achieving financial success/career/status, social, leisure/pleasure/entertainment, spiritual/religious, relationship, and environmental mastery goals. These can be general or related to self-verification of certain role performances or expectations (such as visitor, resident, parent, etcetera). *Place potential and future* reflect evaluations of the prospects of the place and its development which may be of relevance to self-efficacy goals for example. Finally, *social embeddedness* comprises evaluations of the social arena/ties/cohesion which may be connected to affiliation/relationship/social/community-type goals. This is by no means an exhaustive list of all potentially relevant functional components, other aspects not captured by the scales or reference literature included in the study may also be of relevance (see also Puddifoot, 1995).

There is a significant overlap between the aspects identified in the functional evaluation dimension and attributes commonly used to measure the concept of perceived place image and identity of a place (cf. Jenkins, 1999; Peng et al., 2020) and depending on the context they could be argued to be the same. Furthermore, this dimension of measures can be linked to concepts such as functional congruity (Sirgy & Su, 2000), place utility (Wolpert, 1965), resource evaluation (Lai, Gudergan, Young, & Lee, 2021), consumption emotions, and subsequently

various types of satisfaction (e.g., Trentelman, 2009). It also relates to concepts such as the place brand and the place identity elements of materiality (aesthetical and physical features), institutions (organizations), practices (culture), and representations (image) of a place (Kalandides, 2011), as well as the dimensions of representationality and functionality of place brand identities, referring to the 'value-expressive' aspects of a place in its ability to display a person's self-concept, and the functional performance of the place in fulfilling users' needs (Caldwell &

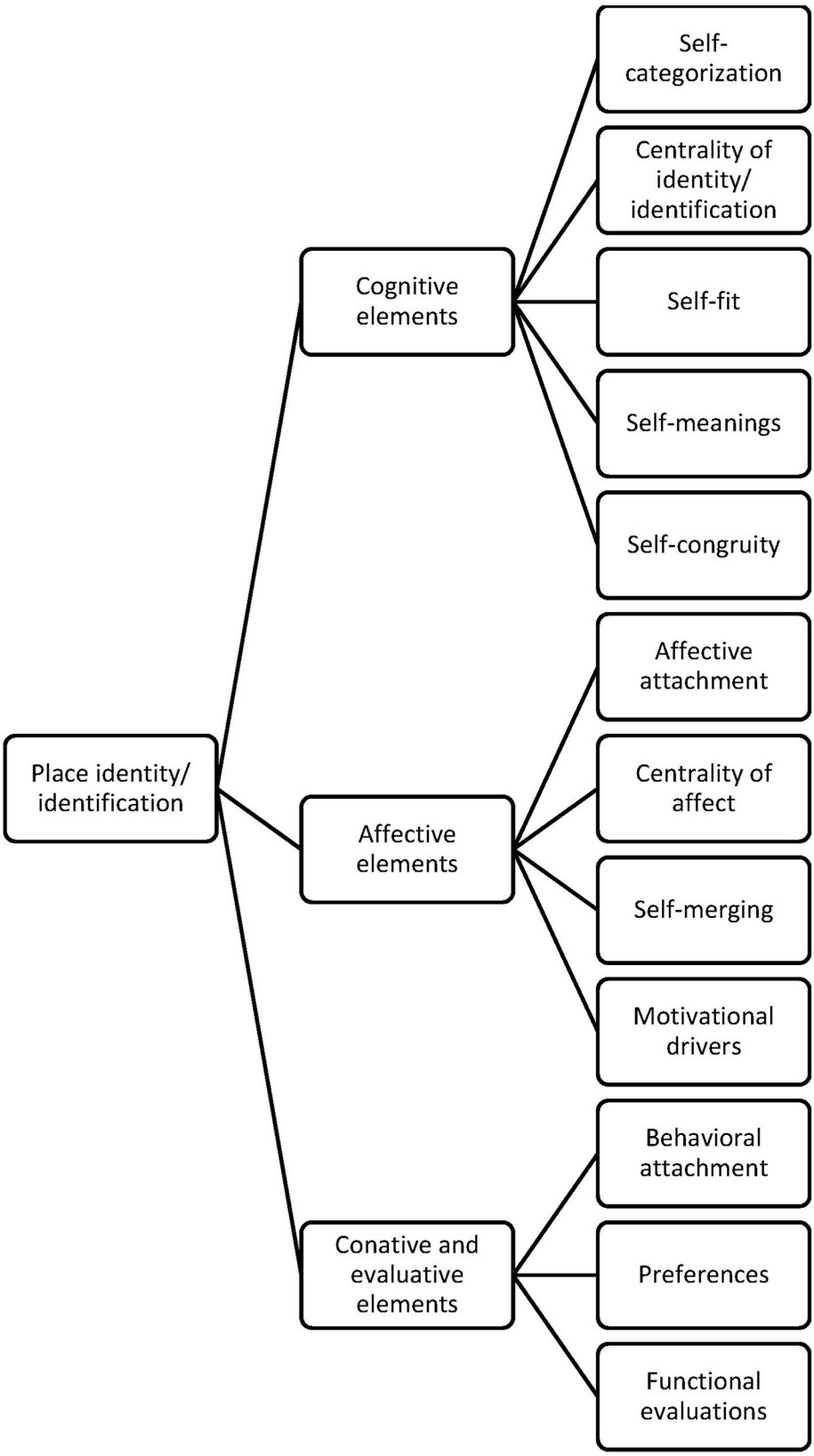

Fig. 1. Elements and dimensions of place identity.

Freire, 2004).

5. Discussion

This study divides measurement items into various sub-dimensions based on a thematic analysis. Identity theory was applied as a framework while assessing the semantic meaning of items to identify the underlying identity elements reflected. These are presented in Fig. 1.

5.1. Application of items and scales

In comparison to affective attachment, measures of self-categorization tend to come in scales with only one or a few items. While identification is generally seen as multidimensional in nature (Ashmore et al., 2004), research shows that a single-item measure is considered a valid and reliable assessment of psychological in-group identification (Reysen, Katzarska-Miller, et al., 2013). However, in general, while single-item measures can be used for easily understandable attributes, multi-item scales are considered more reliable and capture more of the construct's subjective properties (e.g., Shiu, Joseph, Robert, & David, 2009). Hence, in most cases, multi-item scales would be advisable.

As reflected by the measures, identity can be analyzed from a macro-perspective as a position or category in the social structure and a micro-perspective as a set of associated self-meanings, however, one may label oneself as belonging to a certain identity but not fit the mold with regards to identity content (Stets & Biga, 2003). This highlights that scales using first-order factors (e.g., self-meanings) to capture latent second-order factors (e.g., place identity) are merely indicators, not determinants, of identity and that capturing all facets of meanings related to a place identity in a scale is difficult if not impossible or even futile (Keillor & Hult, 1999). Evidence shows that measures that are self-referent in content (containing the pronouns "I" or "me") are better at predicting behavior than measures without self-referent items (see Tittle & Hill, 1967, pp. 199–213). Self-perceptions may be captured using measures of indirect or implicit meaning, however, while such measures may be desirable to capture attitudes eluding conscious awareness, they remain subject to interpretation and/or inference and may not tap the intended self-construct (Ashmore et al., 2004). It would thus seem advisable to attempt to include at least one direct self-categorization item when aiming to capture identification as a construct in a study. While semantically strong scales need to include items that are closely related (reliability), they also need to be sufficiently different (construct validity). To this end, a semantic analysis (manifest validity) as well as a review of inter-item correlations tables may be of assistance (Larsen et al., 2008). A potential approach to achieve such goals when composing a scale for a specific dimensional construct could be to include items of different attitudinal domains, such as capturing self-categorization by including items such as "I am a …" (cognitive), "I feel like/I am a …" (affective), "I would describe myself as a …" (conative), and "I am proud to be a …" (evaluative).

Questions of self may elicit responses and statements comprising both *consensual* references, referring to groups and categories whose conditions of membership are common knowledge, and *sub-consensual* references, such as groups, classifications, attributes, and traits that require interpretation to be precise (Kuhn & McPartland, 1954). Direct questions in relation to self tend to favor answers of consensual references and to primarily be statements specific to the role situation, perceived or asked for, meaning that more general self-attitudes must be inferred (Kuhn & McPartland, 1954). Consequently, qualitative approaches are deemed to be better suited than scales when it comes to recording the meaning contents of place-related identities (Lalli, 1992). However, if there is reason to believe an identity to be perceived as negative, it may require the inclusion of implicit identity measurements (Ashmore et al., 2004). To achieve more direct measures of general self-statements, and avoid dubious chains of inference, the use of prompts may be helpful, such as instructing respondents to answer questions about who they are ("Who am I?") by answering as if to oneself rather than to somebody else (Kuhn & McPartland, 1954). Since self-statements may vary from consensual to sub-consensual, a combination of both open- and close-ended questions with pre-specified options (e.g., Lewicka, 2008) is recommended to avoid overlooking any relevant category of labels and to enable confirmation that the respondent is answering any additional questions in reference to the phenomenologically "correct" social category (Ashmore et al., 2004). As people may vary in their perceived fit with the prototype and/or in the certainty of identification, it may be advisable to complement self-categorization measurements with items assessing the perceived goodness of fit and certainty of self-categorization (Ashmore et al., 2004).

Some dimensions identified in the study, such as behavioral involvement, may be approached both as indices of identification or as conceptually independent outcomes of identification (e.g., intention to stay may be measured both as a consequence of identification and as an expression of identity). Hence, it is vital for researchers to theoretically frame and make explicit the underlying logic of the theoretical question of interest and operationalization (Ashmore et al., 2004). Furthermore, links or relationships between different components can be hypothesized. For example, the instinct to defend a place when somebody criticizes it (conative dimension) may stem from a strong interconnection with the place which is reflected by feeling criticized when someone criticizes the place (affective dimension), which in turn is less likely to happen unless the person identifies strongly with the place to begin with (identity dimension). Nonattachment, as another example may be expressed differently across dimensions; by strongly disagreeing with the cognitive level statement "Belonging to my neighborhood is a part of who I am", answering that "I feel no commitment to this place" on the affective level, and finally reflected in the statement that "This city has many advantages but if I find a better place, I will move out" on a behavioral level. Although a theoretical link can be discerned the items cannot substitute each other.

In general, the most common measurement method in the sample is Likert-type response scales, with a few exceptions. The wording varies not only of the scale anchors such as from Strongly/Fully/Completely disagree - Strongly/Fully/Completely agree, to Not at all - Extremely well/Very much, and Not "me" - "Me" but also with regards to the item statements. It is worth noting that what may appear to be minor changes in wording may have consequences for the implication and understanding of an item (Larsen et al., 2008). There is a different meaning between the items "I am very attached" and "I feel very attached", the latter being more focused on the perceived emotional aspect while the former may reflect anything from a lack of options, habit/inertia/necessity, or an emotional connection. Similarly, "The place is a part of who I am" is more neutral or factual, while "The place is an important part of who I am" is more value-laden, reflecting centrality and explicit importance.

Several items are used both in their original form and reversed (negatively worded) in other scales, a technique typically used to filter out presumably invalid response items. This practice is supported by some researchers but not by others. Reversed (negatively worded) items are quite frequent, and technically most of the items could be converted into negatively worded statements. Some items are modified by adding adverbs of degree (e.g., strongly) which also changes the meaning of the item. While tests exist to establish that measurement scales are reliable and possess construct, content, and face validity, no objective test exists that takes into account the semantic differences or similarities between items and scales, or whether the measurements rely on deep or shallow processing (Larsen et al., 2008).

Regarding comprehensibility, some items evidence ambiguity in phrasing or wording making them difficult to understand. Some items use potentially ambiguous wording with unclear valence (e.g., "The idea that I will always live in my neighborhood overwhelms me"). Others are

complex or overly abstract, making them cognitively challenging to process (e.g., "I cannot imagine living somewhere else because I would give up too much of myself"). Yet others include multiple meanings of either conflicting or complementary nature, making them more difficult to understand or answer (e.g., "Living near wildlife is important to me; I would not want to live in a city all the time", "This town is a nice place to live but not a great place to visit"). A semantic evaluation of potential items to include in a scale is recommended to increase comprehensibility, response rates and response quality while reducing respondent fatigue (Larsen et al., 2008). The Appendix shows an overview of all items included in the study and the wealth of tested items available to researchers.

Other measures applied were open-ended questions, rank ordering, categorical, and semantic differential scales, VENN diagrams, and absolute metric distance and discrepancy measures. Fit or congruence can be measured using discrepancy measures and calculating ratio scores of scale-by-scale comparisons. However, a direct holistic method evaluating the global perception of the degree of match or mismatch between perceptions of the self and perceptions of the reference object is considered more robust, predictable, and straightforward as well as less cognitively taxing, as it captures aspects considered relevant by subjects (Sirgy et al., 1997).

5.2. Type of identification and object of reference

Places serve as arenas for action – where there are people there is a place (Casey, 2001). What makes places meaningful to people can be mapped around, and in the relations between, the *self*, *others* and the *environment*, an interconnection that resounds in place identity measures covering all three bases (Gustafson, 2001). Scalar hierarchies or boundaries (e.g., national, regional, local) provide a context within which place stakeholders inscribe themselves and form mutual expectations, routines, and practices (Giovanardi, 2015). While the majority of measures in this study capture meanings and relations on only one scalar level, some encompass different types of scalar levels or loci (Cuba & Hummon, 1993; Lewicka, 2011), different types of bonds (Shamai, 1991), or different types of underlying meanings, affiliations or motives for these relationships (Cuba & Hummon, 1993). The type of place could involve any specified self-relevant place where the respondent had been, expected to go or could simply imagine (Droseltis & Vignoles, 2010).

Differentiation of spatial scales can be made based on a partitioning of a continuous size scale (from micro to macro units). However, for scales or categories to be psychologically relevant, they must be meaningful for the individuals interacting with them (Lalli, 1992). Lalli depicts *place identity* as a label for the research area and a superordinate term encompassing *subordinate forms of space-related identity* in medium theoretical range terms (such as urban-related identity) referring to places that are directly experienced and subjectively meaningful in the formation of identities and bonds (Lalli, 1992). The reference object in question varies between items in our study. Depending on the circumstances, researchers apply different denominations in reference to a (type or aspect of) place, place-related group, or community. Identity-related items and dimensions cover specific place units or types of places, as well as aspects or attributes of or in a place, such as the people or groups in a place, the brand of a place, or the personality of a place. Items cover a vast range of physical/geographical and social level denominations. Some use the place or social group name or label, while others are more generic comprising the/this/my/your place, area, region, city, community, neighborhood, neighbors, etcetera, or simply refer to the place as a "here". Others focus on aspects or attributes *of* place as objects of reference, such as the place or group image, brand, personality, values, settings and facilities, geography and natural history of the area, nature, and wilderness, backcountry, roadless or natural area, to name a few. As stated above, the denomination of the object of reference influences the meaning and interpretation of the item. In terms of conceptualization and operationalization, it is especially important to delineate and clarify the intended meaning of concepts such as neighborhood and community which may refer both to the biophysical and the social setting, both when conducting a study and reporting it.

5.3. Future research

Meanings ascribed to a place by individuals and collectives are reflections of cultural and individual identity (Kyle & Chick, 2007). Places are not a collection of universally defined physical attributes but rather symbolic contexts imbued with meaning, making definitions of place and their attributes a reflection of self-definitions conditioned by cultural affiliation and evolving through ongoing interaction with others and the environment (Kyle & Chick, 2007). Knowledge may be captured differently in languages across different cultures and variance in results may stem from both differences in language itself and from varying attitudes or beliefs (Larsen et al., 2008). Extant research posits that place meanings reflect cultural differences that accompany socioeconomic differences between groups (e.g., Kyle & Johnson, 2008), that the bonds people hold for places have distinct origins and meaning (Williams & Vaske, 2003) and that self-expressions have been found to differ between cultures (Inglehart & Baker, 2000). Consequently, there is a need to assess the psychometric properties of a place identity scale and the viability of the conceptual model across different contexts (e.g., different populations, cultures, and settings). Adapting the measurement of place identity to a local context may improve the construct measurement and provide a deeper understanding of its relationship to other constructs (Clayton et al., 2016; Wynveen et al., 2017).

This study has divided items into different categories based on, and limited to, identity theory. There are of course other theoretical foundations that could be used for categorization. Future research could apply personality/trait theory to further previous work (e.g., Gustafson, 2009; Lewicka, 2011; Lewicka, 2013; Stets & Biga, 2003) investigating the connection between different forms or types of attachment (or sense of community) to different personality profiles, thereby providing an even more holistic understanding of the linkages.

Finally, while sub-dimensions were identified under several of the dimensions, this is primarily a reflection of the prevalence of certain types of expressions, rather than an emphasis on a feature specifically inherent to that dimension. Technically, each dimension could be further analyzed, and items classified into different categories, based on characteristics such as object of reference (biophysical or social setting), attitudinal disposition/domain (cognitive, affective, conative, evaluative), and their semantic formulation (explicit or implicit phrasing, conscious or nonconscious evaluations).

6. Conclusion

Existing research has indicated that the current application of certain items of place attachment and place identification may not always be representative of the studied construct, potentially because they are conceptually dissimilar and reflect different domains (Tournois & Rollero, 2020). This study has attempted to further clarify the measurement dimensionality of place identity based on a systematic concept analysis of operationalizations and measures of place identity and overlapping or interrelated concepts. Identity theory was used as a framework to improve clarity on the core place identity concept and its related concept system.

The study contributes to situating place identity in relation to other closely related concepts in literature, thereby visualizing similarities and differences. As such, it offers a taxonomy of sorts, which researchers can both draw from and further refine.

In line with previous studies on organizational identity (Bergami & Bagozzi, 2000), few measures turn out to be pure measures of one specific sub-dimension such as self-categorization. More commonly, measures also include potential causes, effects, and correlates with identity. This study shows that measures of affective attachment evidence an

overlap with other factors, which may reflect the belief that affective attachment is not separable from other notions, such as emotional bonds, cognitive affiliation, behavioral commitment, belonging and satisfaction (Pretty et al., 2003).

While place identity and place attachment can form independently, a dissonance between the two may lead to a negative place relationship and a resonance may influence an individual's place cognitions and perceptions to become stronger. In turn, other mechanisms of affect and dependence are prompted, which highlights the need to achieve a realistic and true identity from the get-go (Davis, 2016). The items and dimensions identified in this study may prove helpful in this regard.

Furthermore, there is a significant overlap between the aspects identified in the functional evaluation dimension and the attributes used to measure perceived place image (Jenkins, 1999). Using measures of place attributes to capture a person's attitude towards a place includes two important aspects, namely the evaluative perception of the construct (e.g., perceived degree of beauty) and the preference reflecting the salience (perceived importance) of that construct (Jenkins, 1999). Combining the two allows for a better understanding of the image held of a place and allows researchers and practitioners to assign weights to the image aspects that are considered important by an individual or a group. Such understanding enables the identification of market segments and a comparison of the aggregate or "stereotype" of the place image with the image of other places or among market segments over time (Jenkins, 1999). These are objectives relevant to practitioners and researchers alike and help achieve the essence of place branding; that is, the purposeful symbolic embodiment of information about a place.

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CRediT authorship contribution statement

Carola Strandberg: Conceptualization, Data curation, Formal analysis, Methodology, Visualization, Writing – original draft, Writing – review & editing. **Maria Ek Styvén:** Formal analysis, Funding acquisition, Supervision, Writing – original draft, Writing – review & editing.

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