Landscape identity, before and after a forest fire

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\textbf{ABSTRACT}

Our identity is tied to where we are and how we engage with the landscapes in which we find ourselves. But what happens if the landscape which we use for our everyday life is drastically altered by a catastrophic upheaval, for example, when forest fires ravage the landscape? In this paper, interviews with individuals affected by the largest forest fire in modern Swedish history are used to exemplify our conceptualisation of how landscape identity is impacted by dramatic change. We address the phases of \textit{stability, change and progression} in relation to the case. Finally, we propose that landscape identity can be utilised as a central concept for engaging with the social aspects of the impact of forest fires.

\textbf{Introduction}

\textbf{Fire in Västmanland}

On 31 July 2014, a small forest fire was inadvertently ignited during forestry work in Västmanland County, Sweden. Due to a variety of management and environmental factors the fire quickly spread, to become the largest forest fire in modern Swedish history. By the 5th of August the fire had covered an area of approximately 14,000 hectares, affecting four municipalities. The fire claimed the life of a forest worker, destroyed over 20 houses and required almost 1,200 people to be evacuated, with a further 4,500 placed on stand-by for emergency evacuation (Länsstyrelsen i Västmanlands län, 2014). On the 11th of August, 12 days after the initial event, the fire was finally considered to be under control (Figure 1).

While the fire was a rapid phenomenon taking a matter of minutes or seconds to sweep through an area it has lasting impact. The fire decimated a vast area of production forest, affected over 200 forest owners; destroyed key biotopes, severely impacted (and revealed many new) archaeological sites and brought about a variety of physiological changes including depletion of topsoil and silting of watercourses. A single dramatic event catastrophically changed the physicality of this area, altering the elements on which processes, experiences, and perceptions have been built.

Driving through this landscape, nine months after the fire (Figure 2), it is hard not to be touched by the charred desolation; forestry machines trundle across the landscape removing the remnants of the destruction; fire damaged timber piled up ready for removal; and heat shattered boulders whitened by the fire, denuded of moss and exposed to the elements. As an outsider with no connection to the
place the scene evoked a strong emotional reaction. How must those who have intimate experiences, memories, and stories connected to this landscape feel; those whose lives are tied to this place; whose identity is inextricably linked to this landscape?

Focus of the paper

It is more than the physicality of the landscape that has changed after the fire, how it is perceived and experienced has also altered. In this paper, we examine the less tangible, existential losses which result from a cataclysmic event such as a forest fire; questioning what happens to landscape identity, a ‘psycho-sociological perception of a place defined in spatial-cultural space (Stobbelaar & Pedrolí, 2011).

The aim of this paper is to develop a theoretical basis for addressing the impact that devastating change has on an individual’s landscape identity in relation to their everyday landscape. We relate to discussions within landscape planning and post disaster recovery studies; exploring the relevance of
landscape identity as a means for addressing the multiplicity of social values affected by extreme events. Ultimately, this paper feeds into the developing discussion of how the concept of landscape and the idea of landscape identity can be utilised as a means for analysing how our surroundings impact on our everyday life.

The article begins by reviewing disaster research relating to this study, exposing gaps in existing literature. Next, we briefly address the complexities of landscape and its relevance when discussing landscape identity, before engaging with the concept of landscape identity itself. We differentiate between identity of landscape and landscape-related identity; with ‘practices’ as a means of negotiating the two. We exemplify this conceptualisation by drawing on interviews from residents affected by the fire. The article then goes on to address landscape identity as process, relating to stability-change-progression.

**Previous research on forest fires**

Over the past three decades, there has been an increase in literature dealing with forest fires. However, literature relating to post fire recovery and impact has mainly focused on economic consequence and
the effect on habitats, with non-economic social impact being perhaps the least researched aspect of disaster studies (Toman, Stidham, McCaffrey, & Shindler, 2013). In forest fire studies, researchers addressing social aspects have tended to focus on the practicalities of dealing with economic and tangible loss (Gill, 2005; Kulig, Townsend, Edge, Reimer, & Lightfoot, 2013). The limited research tackling less tangible aspects of post fire recovery address issues such as evacuation (Paveglio, Carroll, & Jakes, 2008); recovery of community functions (Carroll, Cohn, Seesholtz, & Higgins, 2005), and the effect of media coverage (Paveglio, Norton, & Carroll, 2011).

Literature relating to impact on individuals and communities in post fire situations tends to be conceptual in nature (Toman et al., 2013). As a consequence, there is limited understanding of the multiplicity of values affected and no established criteria for engaging with social impact of forest fires beyond economic statistics (Paveglio, Brenkert-Smith, Hall, & Smith, 2015).

Whilst landscape is increasingly seen as a concept for addressing multiple values (Sarlöv-Herlin, 2004), it is rarely evident in disaster literature. When the concept is used it tends to be seen as a physical and aesthetic resource (Barbati, Corona, D’amato, & Cartisano, 2013) relating to the economic loss brought about through the altered appearance of the landscape. An exception is the study by Gordon, Gruver, Flint, and Luloff (2013), addressing landscape as a sociocultural, sociodemographic, and biophysical entity, using landscape as a frame to study loss of sense of place amongst locals. Another relevant study from Oliver-Smith (1996) reveals that forest fires have a negative impact on place identity leading to emotions of loss and grief. These two studies highlight the relevance landscape and identity could have within this field.

Unless the multiplicity of community and individual values is made explicit, the true nature of post-fire recovery cannot be fully understood (Gill, 2005). We see that landscape, as an arena in which different values and knowledge can be discussed and legitimised provides an opening for engaging with these multiple values (Butler & Åkerskog, 2014) and landscape identity as a means to convey these values.

### Complexities of landscape

Though landscape is experienced through our senses, it is internalised through values, meanings, and engagement, it becomes a social product, built on processes, practices, and cultural discourses. The landscape provides visible and invisible traces of historic power structures, representing the practices which exist in the landscape and the immaterial laws and customs which lie over the land (Eiter, 2010; Olwig, 2005). These customs are framed by regional, national, and international agendas (Primdahl, 2007); as such the place where a landscape is created is not necessarily the point where it exists. Initiatives such as the sustainability agenda, forest policies, international monetary fund initiative, labour laws (Mitchell, 2007) and the politics behind them all shape the landscape. So whilst relationships to landscape are intimate and individual, the landscape itself represents the most general and publicly accessible source for understanding a culture and the factors which have influenced that culture (Küchler, 1993).

Underlying society’s and individuals’ relations to landscape is the physicality. It is the physicality which provides the framework in which relationships and practices with and within the landscape occur (Stephenson, 2008). The landscapes physicality represents a measurable or at least tangible entity, an understanding of which is reliant on its functionality (Sarlöv Herlin, 2007). However, engaging with only the physical addresses an abstraction of landscape; an object separated from the perceiving subject; a view of landscape at odds with how it is experienced as an everyday environment. These different aspects create an image of landscape as a meta-organisation, making palpable the relationships between different systems and cultures (Brunetta & Voghera, 2008; Stephenson, 2008).

In the case of the forest fire in Västmanland, all aspects of the landscape have been impacted by drastic changes. This extreme example of landscape change allows us to investigate the complexity of landscape. The physicality and aesthetic of this landscape have altered as have the customs and experiences which they supported; the relations and practices which once held sway over this landscape now exist as memories. Subsequently identities linked to the area and identities tied to the activities which the landscape facilitated are impacted by this landscape change.
Landscape identity

People–environment relations are important for the well-being of individuals and society, providing a sense of belonging, meaning, and security (Relph, 1976). Such relationships have gained increased attention both in policy and planning discourse especially through the concept of identity (Hague & Jenkins, 2005). In landscape policy, the significance of landscape identity has been lifted by the European Landscape Convention, where it is recognised at both the European level; ‘…contribution to human well-being and consolidation of the European identity’ (Council of Europe, 2000 preamble) and at a personal level; ‘…recognise landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity’ (Council of Europe, 2000 Chap II, art.5a). This provides the impetus for our focus on landscape identity in this study.

It is through distinguishing one thing from another that identity comes about; that which is excluded, which is not part of the identity, is central for defining identity (Proshansky, Fabian, & Kaminoff, 1983). It is developed through an ongoing process of identification; a continuous process of classification developed through interactions with others and representing an important component of collective action (Hague & Jenkins, 2005; Paasi, 2002). Individuals and groups do not draw on just one identity; a forester may be a mother, an athlete, and a long-term resident of an area. Consequently, both self and group identities entail drawing on a plurality of meanings depending on the issue at hand, as we are continuously confronted with how others see us (Castells, 1997). Through this process, we undergo continuous re-writing of self and the social collective (Paasi, 2002); as with landscape, identity is in constant flux.

But what does it mean when identity is suffixed with landscape. As highlighted above landscape is itself an ambiguous concept built on a plurality of understandings. As with landscape, the conceptualisation of landscape identity is drawn from different disciplinary backgrounds and the epistemologies they recognise. Consequently, the concept of landscape identity is open for multiple interpretations (Stobbelaar & Pedroti, 2011). Within academic landscape literature, landscape identity has tended to be seen as a visual dimension or the character of the landscape (Krause, 2001; Nitavska, 2011). This conceptualisation is exemplified by Landscape Characterisation (Swanwick & Land Use Consultants, 2002). Such a view holds sway within landscape monitoring as a means of expanding the concept of landscape beyond ecological functionality. Several researchers have developed the visual focus of landscape identity to embrace cognitive and historical aspects, yet these still tend to be based on tangible aspects within the landscape (Nitavska, 2011). A further development has been the recognition of landscape identity as being built on all the senses (Kljenak, Kurdiya, Polič, & Golobič, 2013). These conceptualisations draw on the physicality of landscape, recognising landscape identity as identity 'of' landscape, looking at what makes one area similar or dissimilar from another. Such an understanding, which tends to be an outsider perspective, diminishes the significance of experience...
and fails to engage with those who inhabit the landscape, ignoring the complexities of how we relate to our surroundings.

A seminal step in addressing the complexity of landscape identity was undertaken by Stobbelaar and Pedroli, defining landscape identity as ‘...the unique psycho-sociological perception of a place defined in a spatial–cultural space’ (Stobbelaar & Pedroli, 2011). This definition builds on both individual and group understanding of landscape as both a physical and an existential entity. Loupa Ramos, Bernardo, and Van Eetvelde (2016) have expanded on this, arguing that the dual spheres of perception and action increase the dynamism of landscape identity. A body of work has started to develop supporting this conceptualisation. Studies address the relevance of land cover for landscape identity (Carvalho-Ribeiro et al., 2013); landscape as a means for evoking individual and collective memories of place (Wheeler, 2014); the significance of a temporal dimension in landscape identity (Dossche, Rogge, & Van Eetvelde, 2016); and the interrelationship between different aspects of identities (e.g. Wheeler, 2014).

In the following section, based on the developing literature, we outline our theoretical stance for understanding the landscape identity of individuals in relation to loss of landscape. We define and then use the tripart concepts of landscape-related identity, identity of landscape and practicing landscape identity to reveal how the landscape identity of individuals affected by the forest fire has been impacted (Figure 3). Semi-structured interviews with individuals who had the fire-affected area as their everyday landscape have been used. The focus of the interviews was the individual's relationship to the area before the fire and feelings after. Informants were identified through a questionnaire that was sent out to all living around the forest area. A total of 11 individuals were interviewed.

**Landscape-related identity**

*Landscape-related identity* is used in this paper to define the subjective perceptions, feelings and memories which people have in relation to their surroundings (Lewicka, 2008; Stobbelaar & Pedroli, 2011). People develop personal and collective bonds to landscapes that embody not only ecological but also psychological, social, historical, religious, cultural, and well-being dimensions (Knez, 2005; Knez, Thorsson, Eliasson, & Lindberg, 2009; Lachowycz & Jones, 2013). This in turn leads to traditions and practices on how we perceive and comprehend landscapes and ourselves (Canter, 1997).

Consequently, it can be considered that neither the individual nor the collective is placeless, suggesting that one of the functions of a landscape, in a human–landscape relation, is to 'situate' (Casey, 2000) our past, present, and future. In line with this, place-related cognitions have been shown to comprise both personal (Taylor, 2010) and collective information (Lewicka, 2008), functioning as autobiographical memory aids in identity and self-formation (Knez, 2014). Accordingly, landscapes can act as reminders of important personal and collective experiences, events, traditions, and memories, by which we uphold and strengthen different types of identifications (Wang, 2008), as well as influence nature-related well-being (Knez & Eliasson, 2017).

Identity involves two classifications, personal and collective identity. The latter is linked to 'group membership, group processes and intergroup behaviour', and the former is associated with 'close personal relationships and idiosyncratic attributes' (Hogg, 2006; p. 463). Psychologically, both personal and collective identity is grounded in the autobiographical memory resulting in a 'feeling that we are re-living our past' (Klein, 2013; p. 3). This type of mental activity is phenomenologically characterised as a life story (Fivush, 2008), involving several context-specific identities (McConnell, 2011), such as, a landscape-related identity (Stobbelaar & Pedroli, 2011). This construction involves cognitive processes of mental temporality, coherence, correspondence, reflection, and agency, and the emotional process of attachment/closeness.

We can pedagogically exemplify the above and place it in context by drawing on the responses from a resident who lives near the forest fire area.

People from outside don't know about the lake, so there aren't many people there. And that is just perfect. It's a little paradise on earth I have to say (landscape attachment/closeness). …especially when I could swim, it was great to be there… and I knew every stone as I was there so often (reflection). Even as an adult I have been there very
much. And last summer when the fire… it was really warm so I was there almost every day with the dog, so he could bathe, and it was so nice early in the morning or late at night when there were not so many people (coherence in landscape identification). I was there the evening before the fire, with the dog, it was a Wednesday evening (inner temporality). It was, how should I put it? A little gem, really beautiful. This is the first summer after the fire, I haven’t been there to swim, not once, I have been there, but only to see how it looks. Enjoying the nature is out of the question, it is more to see what it looks like, what can I say… (an accurate correspondence with landscape identification)? (Respondent 6)

This suggests that we do not only think, remember and reflect (processes of coherence, correspondence, reflection, inner temporality, and agency) on landscapes in our life but we also feel and emotionally invest (processes of attachment/closeness) in these sites (Marris, 1982). In other words, the ‘legacies we inherit stem both from nature and from culture’, (Lowenthal, 2005, p. 81), meaning that both natural and cultural values are important for our personal and collective understanding.

Identity of landscape

Identity of landscape relates to how we understand our surroundings and negotiate our lives in relation to the landscape. This can be recognised as both collectively understood identity, based on the elements in the landscape which can be perceived by all (Swanwick & Land Use Consultants, 2002) and an individual identification, relating to how we personally engage with our surroundings (Lynch, 1960).

The identity of landscape comes about through identifying what makes an area distinct, what makes this our landscape and thus what differentiates it from another area. This has been the main focus of landscape planners in relation to landscape identity. As a collective phenomenon this relates primarily to the visual and aesthetic qualities of landscape, building on elements which can be commonly recognised as significant to the landscape; topography, spatial composition, land cover, settlement and communication patterns, the colours, texture and forms. (Swanwick & Land Use Consultants, 2002). Such a view recognises the physicality and the processes which define that landscape; the landscape’s character.

We again highlight this by drawing on the response from a local resident:

…it has totally changed. Before it was forest, both mature and young forest and bogs and marshes (land cover) and you couldn’t see very far from the road in most places. Now you can see maybe a couple of kilometres (scale). It has totally changed and there you can even see from the road … how steep it is in many places (perceived landscape). It’s now a rocky desert in many places… there is little soil or surface vegetation left. (Respondent 1)

The identity and character of the landscape is often explained as being dependent on the interplay between the biophysical aspects and people’s preference, relationship and use of the landscape (Gibson, 2014; Lynch, 1960). As an individual relationship the identity of the landscape is tied up in the elements which are significant for individuals in order to recognise and orientate themselves within a landscape. Whilst these features can be recognised by everyone, for individuals they provide significance for negotiating the landscape, both for physical orientation and as anchors for memories. Such a connection to the landscape relates to Lynch’s concepts of boundaries, districts, edges, paths, and landmarks (1989; Lynch, 1960). This is not static but rather changes over time as familiarity alters ones understanding of a place; perceived boundaries shift, whilst landmarks take on new meaning tied to experiences and memories (Lynch, 1960).

In some places you cannot recognise, not at once, you have to think and look… It is completely different, but you know roughly where you are. There are no landmarks, maybe a bog a small bog or something… a water course, some dip in the ground a bit of water or a rocky edge. But it is very, very different. (Respondent 1)

For these individuals their means for navigating and engaging with this landscape have been drastically altered. The coherence and legibility, which developed through familiarity and appreciation of the landscape has been severely impacted; boundaries and paths have disappeared and landmarks have been destroyed or are now unrecognisable in their new context. At the same time, the complexity and mystery has also altered, the landscape must be discovered anew, its mysteries revealed and complexities re-understood.
Practicing landscape identity

Both landscape-related identity and identity of landscape are interconnected through practices; the behavioural routines of interconnection between bodily and mental activities and ‘things’ (Nicolini, 2012; Reckwitz, 2002). What the landscape means for us and how we view ourselves depends on the practice we are engaged in. For an individual, the landscape can be the focus for recreation, an asset for production or an entity for observation, depending on the practices they are engaged with. Consequently, objects need to be considered in relation to the practice in which they are connected (Nicolini, 2012). The landscape of the fire area is such an entity connecting people’s practices and lives.

The residents of the fire area have engaged in many practices connected to the landscape. Prior to the fire, this area was a part of identity formation for a multitude of individuals identities, based on their practices; as bird-watchers, skiers, summer house owners. The practices undertaken in the landscape related to past personal engagements, for example, as a child, but were also interconnected with the practices of generations of others. This is exemplified by the following response:

When I was a child they [my parents] owned the forest, so we were there a lot. I was small so I wasn’t really involved in the work. But we often took coffee and a picnic with us and sat by the lake there, on their land. So it was those moments too, not just swimming… and even in winter we were there and took our Christmas tree and even had coffee with us. (Respondent 4)

The experiences of this respondent are tied up with practices from their childhood, the activities their parents undertook in managing this landscape and the continuation of these practices.

Through the responses from residents it is evident that various aspects of landscape identity are interlinked and directly influence each other, as such any division is arbitrary and purely for means of analysis. A collectively understood identity of landscape acts as a prompt for which practices can be undertaken in that landscape, which in turn affects how the individual identity of landscape is created, how routes and landmarks gain significance; influencing the landscape-related identity, which likewise affects the collective and individual identity of landscape.

Loss of landscape identity

What kind of feelings and thoughts do those with connections to this landscape have after the fire? Has landscape identity really been lost? If so, how do they cope with that, and can a new landscape identity be created?

After a forest fire a new geography is created. The landscape drastically changes and many elements and aesthetic qualities around which the collective identity of the landscape was formed disappear. Prior to the fire the land cover of production spruce forest and wetland vegetation were seen as the dominant characteristic (Ek, 2012), informing the collective identity of this landscape. Now the collective understanding relates to the impact of the fire and the aesthetics this produces, with little attention...
paid to a history before the fire. This is formalised in the development of a nature reserve across much of the area:

...to preserve and study the natural values that occur in fire-ravaged areas of forest. The highly distinctive area is also considered to be an attractive destination for visitors and local residents as well as visitors from afar. (Regeringskansliets, 2016)

The new geography is brought about through the creation of a new boundary (the extent of the fire) and at the same time the destruction of elements. It has altered perceived distances and spatiality. For individuals the routes, perceived boundaries and landmarks used for understanding this landscape have changed, altering the way individuals negotiate and engage with the area. The individual practices and customs which once defined the use of the landscape no longer fit, as social constraints have altered. Many of the identity formation and meaning making activities which were previously a part of this landscape can no longer take place. New practices develop in the area, producing new identities, are connected with dealing with the fire and managing its consequences. People who previously had little in common now have shared practices with the burned landscape as a material focus.

According to Brown and Perkins (1992) the processes of evolving a landscape identification, losing it, and later coping with that by creating a new one, may be understood in relation to three chronological components of a stability-change-progression of the personal and collective landscape identification, namely, (1) pre-disruption of landscape identity; (2) disruption of landscape identity; and (3) post-disruption of landscape identity. More precisely (Figure 4):

(1) This period involves evolvement, sustainment, and potency of the landscape-related identity. Accordingly, it comprises mental and materialised aides-mémoires of important personal and collective experiences, events, and traditions. This is exemplified by the quotes from the respondents above.

(2) This period involves collections of different types of disruptions related to landscape identity and human-landscape relations, with accompanying personal and collective emotional expressions; behavioural and cognitive responses. The relation to the landscape loses it familiarity affecting all three aspects of landscape identity as outlined by the respondents above. The result of this loss is exhibited by respondents when they spoke directly of their experience of the landscape after the fire:

Yes, it is so sad that the landscape has gone… you cannot get out into nature. You can be in nature… but you know what I mean, to go in a green forest and hear the birds and the peace. It is a huge sadness. It’s something you can carry with you all the time and you just try to accept and live on. I don’t know… it will grow again eventually, but still... It’s gone. (Respondent 8).

...the nature is so completely different now… and… I stood and cried when I saw it. It was terrible… and like I said our son hasn’t been there because he can’t bear to see it. (Respondent 3).

(3) This period involves the processes of coping with the loss and re-establishing personal and collective landscape identifications, by addressing issues such as magnitude of the loss, ability of the lost landscape to provide new positive identification, and evolving a community consensus.

This later period of coping with loss and how one handles it is a constantly ongoing process needing longitudinal studies to address these changes. Which aspects of the pre-disruption are drawn on to re-establish connections and which new factors come into play?

At present if landscape identity is considered at all in post-disaster situations it tends to be seen as an aesthetic loss, relating to a collective identity of landscape at the expense of more individual landscape-related identities and practices (e.g. Barbati et al., 2013). In order to address the future of landscapes and landscape-related identities afflicted by drastic change, the complexities of the pre-disruption identities period needs to be understood. Only then can we question how the different aspects of landscape identity are impacted by events such as forest fire during the phase of disruption of landscape identity.

If we can comprehend the loss then we can have an inkling of how the future can be shaped to reflect the needs of those who have relationships with the landscape allowing them space to shape their own
future; helping to foster a *post-disruption* identity. Such an approach requires the engagement of those affected by disaster, enabling them to inform and be part of future development of the landscape and their future landscape identity. Involvement of the public in decision-making and place-making are widely recognised, both in landscape issues (Buchecker, Hunziker, & Kienast, 2003) and in forest fire studies (Gill, 2005), yet practice appears to lack the tools to engage with complex values attached to landscape (Butler, 2016).

Engaging with landscape identity allows a clearer appraisal of whose losses are legitimised in planning and policy decisions. The loss of familiar landscape is much harder to quantify than more tangible aspects such as economic loss and thus its acceptance as legitimate loss is harder to discuss. In order to handle landscape identity as a complex, pluralistic and holistic concept, interdisciplinary approaches are required, built around research groups and practitioners with broad competence of the diverse aspects of landscape identity (Loupa Ramos et al., 2016). Such approaches provide a broad theoretical understanding as well as a diversity of methodological approaches. Mixing quantitative and qualitative methods (questionnaires, interviews, focus group, and observations) have better chance of capturing this complexity and the diversity of... the unique psycho-sociological perception of a place defined in a spatial–cultural space’ (Stobbelaar & Pedroli, 2011).

**Conclusion**

Dramatic landscape change and the resulting *disruption to landscape identity* creates the space for new identities, albeit identities where conflicts need to be renegotiated and losses reconciled, old identities are transformed and new identities develop. These new identities are bound up in both the catastrophic event itself, the new geography which the event created, as well as the memories of the lost landscape. The relevance of the pre-disruption, disruption, and post-disruption aspects of landscape identity (*stability-change-progression*) recognised in this article goes beyond the case of the fire or even dramatic landscape change. All landscape change impacts on landscape identity to varying degrees (Dossche et al., 2016). Understanding how the various aspects of landscape identity are altered when the physicality changes is essential to ensure that future landscapes cater for individual and community well-being.

The concept of landscape identity provides a frame for addressing what is lost and a basis for addressing the complexity of this loss. This in turn can inform future landscape change, recognising the legitimacy of the drivers for change in this landscape. Expanding landscape identity beyond landscape character, to encompass the personal and existential, helps to understand and legitimise loss after traumatic landscape change. At the same time highlighting the complexity of landscape identity exposes the dominance of specific forms of knowledge and providing a space for questioning the ethics which promotes certain knowledge whilst subordinating others.

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