Andrew Whitaker

The Landscape Imagination:

Incorporating Amerindian Perspectivism into an Historical Ecology of Knowledge

Introduction to the Landscape Imagination

Historical ecology and Amerindian perspectivism are both regnant theoretical approaches in the contemporary anthropology of Amazonia. These two approaches have developed from very different intellectual origins and constitute both unique and separate orientations to the field. However, they are neither mutually exclusive nor unrelated. The intersection of these theoretical approaches constitutes a relatively open area for future study. Although tentative efforts have been made to bridge the theoretical divide, scholars have primarily remained rooted in one or the other theoretical approach. I propose an intersectional approach that focuses on cultural understandings of the relations between ontological entities; these relations articulate the landscape domain with the domains of cosmology and society. The goal of such research in a given society is to elucidate contemporary structural frameworks of "landscape imagination" in that society. The landscape imagination consists of the categorical relations and ideational content, i,e., the structure[1], that inform a society's intervention into its landscape; both the agency and the intentionality of the society may be expressed, although not determined, in and through the landscape imagination.

Landscape imagination does not determine landscape intervention. Rather it provides a set of relations and attached ideas from which the society takes influence. Furthermore, the structural frameworks that constitute it, i.e. the relations and ideas, change over time in dialectic accord with

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1 This is not "structure" in the sense of Levi-Strauss. The phrase "categorical relations" does not signify abstract relations between terms. Rather, it signifies "social relations" between entities in the domains of landscape, society, and cosmology. I have included a section below that further explains my use of the term "structure".

continuing landscape interventions and the landscape transformations that result from the latter. Although these frameworks are mutable, they may still prove useful at times in interpreting the motivations and cultural intentions underlying anthropogenic landscape transformations in the past. This involves the use of synchronic research to construct interpretive tools for analyzing the data of diachronic research.

Further study is needed to understand how landscape imagination informs the practices that result in landscape transformation; further study is also needed to understand how previous landscape transformations, which involve the replacement of one set of beings (wholly or partially) by another set of beings (Balée 2006: 85-87), influence structural frameworks. Balée (2006: 82) has explained that historical ecology does not synthesize nature and culture; rather, it studies the reiterative dialectic interface between the two sets of domains. Towards this end, theoretical and methodological bridges are needed between historical ecology and Amerindian perspectivism. This paper is an attempt to create such a bridge, to ascertain the contour of an inductive research programme concerned with elucidating the structural frameworks of landscape imagination, and to move towards an "historical ecology of knowledge" (Balée & Erickson 2006: 9).

In this paper, I will begin with a description of the theoretical approaches known as historical ecology and Amerindian perspectivism; this will be followed by an attempt to show how these approaches can be fruitfully combined. The next section consists of an exploration of the concept of "landscape imagination" and how it fits into an intersectional approach that attempts to bridge the theoretical divide. I will then discuss my understanding of the term "structure" and how I am using it in the sense of the landscape imagination being constituted by "structural frameworks". A discussion of possible methodology for undertaking intersectional empirical research is presented. Finally, I will discuss how the landscape imagination can be inductively uncovered and how this kind of research may further our understanding of the intentionality underpinning previous landscape transformations.

Historical Ecology

Historical ecology goes beyond the "standard model" of Amazonian anthropology (Viveiros de Castro 1996: 180-192) by viewing human societies as agents within their ecological milieu, rather than as limited adaptators to a static environment (Balée 1998; Balée 2006; Erickson 2008). The adaptationist view of the "standard model" posited a "...determining action of the environment..." on Amazonian cultures and societies (Viveiros de Castro 1996: 180). Betty Meggers (1954) and Julian Steward (1946-1950) are most associated with the cultural ecological position that Amazonian societies are environmentally limited and characterized by cultural adaptation. Viveiros de Castro refers to this position as the "Steward-Meggers model" (Viveiros de Castro 1996: 186). Meggers describes Steward's analytical division of South American societies (such as Tropical Forest Tribes and Andean Civilizations) as being "one of the most remarkable demonstrations available of the limiting effect of environment on culture" (Meggers 1954: 806; Steward 1946-1950). The emergence of historical ecology as a theoretical approach to Amazonian anthropology is positioned in the history of ideas in the context of the (environmentally) deterministic views of cultural ecology. Historical ecology represents a radical break with this determinism.

Historical ecology emphasizes the *relationship* between human societies and the landscapes with which they interact (Balée 1994: 1). This relationship is "manifest" in the anthropogenic landscape (Crumley 1994: 9), which provides historical ecology with a "...holistic unit of study and analysis" (Balée & Erickson 2006: 3). The holism derives from the intersections of nature and culture and from the realization that much of "nature" has been formed and reformed through cultural processes. Clark Erickson writes that "[h]istorical ecology focuses on *landscape* as the medium created by human agents through their interaction with the environment" (Erickson 2008, 158). This concept of landscape can be understood as the register of human effects on the environment or as a cultural representation of the environment. The concept of landscape is polysemous; my understanding of it is derived from both Kant and Hegel. I treat the concept of landscape in Kantian fashion as a

domain of empirical reality that is cognized as a mental synthesis of the sensory awareness of the observer and the categories that structure these empirical sensations (Kant 2003). I treat it in Hegelian fashion as a dialectically changing domain of culture (spirit or *geist*) (Hegel 1977; Hegel 1989).

Rather than relying on cultural ecology's dualistic view of nature/culture, historical ecology views this relationship as being dialectical (Balée 1995: 97; Balée 1998: 4; Balée 1999: 25; Crumley 1994: 9). This implies that, while landscapes affect cultures, landscapes are also affected by cultures. Neither determines the other. Campbell et al. claim that "...human culture and the environment mutually influence each other..." (Campbell et al. 2006: 21). While the primary focus of cultural ecology was the influence of the environment on societies, the primary focus of historical ecology has been the influence of societies on the environment and the production of landscapes.

A fully dialectical approach is needed. Balée and Erickson have written of a "historical ecology of knowledge" that "...reveals the means by which changes in the environment induced by humans actually condition subsequent generations in terms of language, technology, and culture" (Balée & Erickson 2006: 9). In transforming the landscape, societies transform their own cultural frameworks. The influence of human societies on the landscape will dialectically result in the influence of the landscape on these societies. Balée and Erickson claim that societies that have historically transformed their landscapes possess:

> ...a distinctive and historically defined way of knowing the environment that has its origins in the particular relationship it [the society] has had over time to local landscapes and to their metamorphosis at human hands. In other words, environmental knowledge is contingent on interactions people experience over time with their landscape... (Balée and Erickson 2006: 9)

Balée has explored landscape histories and how contemporary cultural knowledge indexes historical transformations and trajectories (Balée 2003; Balée 2009; Balée 2010). He writes that:

> The current state of landscape knowledge possessed by folk (caboclo) and indigenous peoples of Amazonia is, in part, a product of history. As the landscapes have changed through time, and continue to change, that knowledge, too, shows increments in some domains, losses in others. Such losses and increments of landscape knowledge are reflected in vocabulary changes, just as vocabulary can be used as an index, however crude, to knowledge of the past state of Amazonian landscapes. (Balée 2009: 33)

Cultural knowledge of the landscape emerges and reemerges from landscape transformation. Since the vocabulary of landscape knowledge refers to the entities of the landscape, this cultural knowledge is shown to be contingent upon the ontological entities that are presenced within the landscape. Thus, the structural frameworks of landscape-imagination are reiteratively reformulated partially through the successions of organisms that result from landscape transformations.

Although historical ecology provides conceptual tools for the holistic study of the relationships between humans, their landscapes, and their knowledges, the position of this theoretical approach within the history of ideas has resulted in an emphasis on disproving the previous thesis of the "standard model" that culture is environmentally determined or limited. Thus, historical ecologists have been particularly concerned with evidence for anthropogenic transformations, such as Amazonian Dark Earth (ADE), mounds and other earthworks, and forest management (Erickson 2008). These findings signify that Amazonian societies were not limited by environmental conditions; rather, these societies were able to act upon the environment to transform the landscape and its composition – with regard to species, topography, carrying capacity, hydrology, etc. (Erickson 2008). The success of historical-ecological researchers is made evident in Viveiros de Castro's description of the "standard model" as obsolete (Viveiros de Castro 1996: 180). Even Donald Lathrap's more nuanced position on cultural ecology has now been largely superseded (Lathrap 1968; Pärssinen et al. 2009).

Now that the "standard model" has been surpassed, there is great need to direct research to the other side of the dialect – the place where landscape-influenced knowledges are dialectically sublated and become part of the structural frameworks of landscape imagination that inform further landscape transformations. This requires the study of these knowledges in the midst of on-going landscape

transformation. There is also a need to understand how cultural knowledges inform the activities that occur in relation to the environment. There have been steps in this direction. Loretta Cormier writes that, for the Guajá, "...subsistence strategy is intricately integrated with their social and cosmological orders" (Cormier 2006: 356). Laura Rival has noted the influence of culture on societal movements within the landscape; she claims that a society's relationship to the landscape can be a "social relation" through time (Rival 2002: xx). Beyond this, the dialectical relationships between societies and landscapes are embedded within a series of ontological relations between a multitude of entities; these ontological relations articulate diverging domains (cosmological worlds, societies, and landscapes) and the entities which inhabit them (spirits, humans, and plants/animals). Amerindian perspectivism provides the necessary conceptual tools for understanding these ontological relations.

Amerindian Perspectivism

Amerindian perspectivism is centred around the set of cosmological belief systems belonging to indigenous societies in the Amazon. Although there are claims that the perspectivist worldview is shared across the New World societies, as well as parts of Siberia and elsewhere (Fausto 2007: 498, 500; Viveiros de Castro 1998: 471), the main locus of research within this framework has been Amazonia. The central tenet of perspectivism is that one's viewpoint, i.e., one's "perspective", is either affected, conditioned, or determined by the type of body within which one resides[2] (Viveiros de Castro 1998: 470-471, 478). This argument has led to the development of a considerable literature concerned with the nature of the relationship between the body and the soul in Amazonian cosmologies. Much of this literature, which is heavily centred on the body as a frame of reference, is concerned with how ontological entities (spirits, humans, and plants/animals) relate to one another and the ideas that have developed about these interrelations (Fausto 1997; Vilaça 2002; Vilaça 2005).

2 It is important to note that the theory of Amerindian perspectivism is a theoretical model of indigenous belief systems. It is not a philosophy which argues that the world is epistemologically or ontologically one certain way versus another. Rather, it is theory that certain indigenous groups possess belief systems which have philosophical attributes which relate to what Western philosophy has termed a perspectivist framework. It is a theory about indigenous philosophies.

There is considerable debate as to the relationship between the body and the soul in Amazonia; this is reflected in the different (sometimes mutually contradicting) positions which are taken on the issue[3] (Fausto 1997; Lima 1999; Lima 2000; Rival 2005; Riviére 1974; Riviére 1994; Riviére 1997; Taylor 1996; Vilaça 2002; Vilaça 2005; Viveiros de Castro 1998). Unfortunately, space does not permit at present to elaborate on the various differences and nuances in these texts. Elsewhere, I have attempted to analytically divide these positions on the body and soul into the following categorical positions: (1) the duality of body and soul, (2) the soul as a body, (3) the soul as a perspective, and (4) the soul as a bodily capacity (Whitaker 2011b). In addition to these, there seems to be another position present in the literature; this could perhaps be termed "the soul as a social mirror". It is best associated with the work of Anne Christine Taylor (1996) and Laura Rival (2005). Needless to say, the literature on the ontology of the soul in Amazonian cosmologies is quite multifaceted. For the discussion at hand, the significance of the status of the soul in Amazonian cosmologies relates to the need to theoretically comprehend the ontological entities of Amazonian cosmology, their relations with other entities, and the ideational content that attaches to these entities and their relations. Research into Amazonian pneumatologies and ontologies uncovers the relationships that are culturally posited between entities vis-à-vis the soul, which I have noted has several meanings in the Amazonian literature, and the characteristics of such entities. For historical ecology, Amazonian pneumatologies and ontologies help to elucidate the unpredictable cultural connections that are drawn between entities in the landscape and those in the domains of society and cosmology.

Between Historical Ecology and Amerindian Perspectivism

While historical ecology in Amazonia is primarily concerned with how these societies have

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3 Not all of the authors listed in this regard should be assumed to adhere to the perspectivist theoretical framework. Peter Riviére is almost certainly not a perspectivist and Laura Rival's adherence to the framework seems to be less than complete. Riviére and Viveiros de Castro hold opposing views in the literature. Viveiros de Castro openly contradicts Riviére in his major publication on perspectivist theory (Viveiros de Castro 1998: 482). In a later publication, Riviére calls into question Viveiros de Castro's emphasis on predation (Riviére 2000: 264).

transformed their immediate physical worlds in a variety of ways and in response to a variety of stimuli, Amerindian perspectivism is primarily concerned with how these societies understand the spiritual and ontological relationships between entities existing in this physical world. Undoubtedly, these understandings affect their actions in the physical world and their understandings must be influenced by the physical world as it exists and *as they have made it*. Furthermore, there must be links between the domains of landscape and cosmology.

Aparecida Vilaca has expanded analysis of the "production of kinship" to connect the domestic with the cosmological (Vilaca 2002), which implies an extension of social relations to the ontological entities of cosmology. Laura Rival has expanded the analysis of landscape-society interaction to incorporate the concept of "social relations" as a mediation of such interactions (Rival 2002: xx). The expansion of the kinship domain to include the zoological entities of the landscape has previously been achieved by Loretta Cormier (2003; 2006). Theresa Miller has explored perspectival interactions between humans and plants; unlike perspectival interactions between humans and animals, those between humans and plants are generally thought to be non-predatory (Miller 2010: 74). This implies that the structure of ontological relations between different domains of entities may be discontinuous.

Categorical relations exist between societies and the ontological entities of cosmology and the landscape. I hope to expand analysis of landscape transformation to explore how the categorical relations and ideational content of the structural frameworks that constitute the landscape imagination are applied and subsequently reformulated in the contexts of such transformations. This involves a dialectical relationship between the application (thesis) of cultural knowledges to landscapes, the alteration (antithesis or negation) of the categories and schemata of these knowledges by the changes evidenced in the differential presencing of beings – e.g., the succession of organisms (Balée 2006: 83) – in the landscape, and the reformulation (synthesis) of cultural knowledge to account for the changes made by transformation.

William Balée's use of the Greek terms *physis* (φυσις*)* and *nomos* (νομος) is insightful for an

intersectional approach that seeks to bridge historical ecology and Amerindian perspectivism. He

differentiates "...the emic perception of *physis* ("what exists and grows itself")..." from "...the presumed

nomos (what human societies create, infer, and envision to underlie things)" (Balée 2010: 169). He

writes further that "[t]hose spiritual dimensions of traditional Amazonian knowledge systems, however,

limited in number, are always cloaked in the skins, or envelopes, of more or less familiar animals and

plants" (Balée 2010: 169). In addition to souls and spirits, the cosmological systems of Amazonian

societies refer to the entities empirically observed in the physical world – the "bodies" that influence

(to whatever degree theoretically specified) "perspectives" mostly possess referents in the physical

world, such as animals, plants, and humans[4]. An intersectional approach that bridges historical ecology

and Amerindian perspectivism must strive to consider both *physis* and *nomos* in its research

programme. For such an approach, the emics of *physis* are informed by the inferences from *nomos*.

Rival argues that historical ecologists should consider "...religious ideas about life and death.

For it is with such ideas in their minds that they have become ecological and historical agents of

change" (Rival 2002: 180). This claim certainly suggests the possibility of bridging historical ecology

and Amerindian perspectivism in the manner that I have described. However, I would hedge slightly

with regard to Rival's claim. While it is likely that cosmological ideas generally have influenced

landscape-transforming practices, it cannot be taken for granted that they always have done so. Balée

writes that "[i]ndigenous societies of the past had altered *(i.e.*, transformed) environments without

necessarily regarding the spiritual and intellectual contents found in them" (Balée 2010: 168, emphasis

added). Historical ecologists working in historic or pre-historic contexts may not have enough data to

ascertain what influence cosmology had on indigenous actions. Such influence, as Balée notes, cannot

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4 However, the referential character of these systems is not necessarily wholly one of representing physical entities.
Viveiros de Castro has argued that "[a]s bundles of affects and sites of perspective, rather than material organisms, bodies
'are' souls, just, incidentally, as souls and spirits 'are' bodies" (Viveiros de Castro 1998: 481). If Viveiros de Castro's claim is
to be accepted, and it is far from certain that it is agreed upon by other scholars, there are several consequences. First, it
implies that the mechanism of influence between the body and the perspective is not necessarily material or physical.
Second, it implies that the referential character of the cosmological system relates to both one or more sets of physical
categories (such as animals, plants, and humans) and to at least one set of categories present within the cosmological system
– i.e. the domain of the soul. Thus, cosmological categories in Amazonian thought may refer to either or both physical
and/or non-physical cultural phenomena.

be assumed *a priori*. Nevertheless, it may be possible to discern such influence when dealing with more shallow time depths. Ascertaining structural frameworks is necessary in this regard; the extent of subsequent interpretive possibilities remains an open-ended question at present.

Historical Ecology, Amerindian Perspectivism, and the Structure of Landscape Imagination[5]

In the literature on imagination with which I am in dialogue there is a dual treatment of the term as an activity of the analyst's gaze and as a process underpinning societal and individual activity; in both cases, imagination implies a Kantian faculty for "manifesting the inchoate", as I have written elsewhere (Whitaker 2011a). According to Crumley (1994: 9), the dialectical landscape/society relationship, which is inchoate inasmuch as it is continuously being holistically resynthesized, is manifest in the landscape through time. The landscape, as an Hegelian domain of culture (knowledge) (Hegel 1977; Hegel 1989) and a Kantian synthesis of category and sensation (Kant 2003), is both mediated through the structural frameworks of the imagination, i.e., the categorical relations between ontological entities and attached ideational contents, and exists as an empirical reality that constrains the cultural constructions to which it is fit. Sneath et al. provide a Kantian definition of imagination as "...the ability to bring to mind that which is not entirely present to the senses" (Sneath et al. 2009: 11-12). This is the basis of my definition of the concept. I prefer my definition because it provides for a more dialectical (and historical-ecological) application of the concept; in other words, it potentially combines the mental registration of phenomena with the activity of externalizing categorical relations into empirical reality through societal or individual action and intervention. As a faculty for interpolating and re-assorting inchoate things, the concept of imagination is being used in the Kantian sense that Collingwood and Sneath et al. have earlier adopted (Sneath et al. 2009; Collingwood 1946).

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5 The exact extent to which landscape imagination is cultural and the extent to which it is facultive is unclear. I accept the notion that it is not cultural insofar as "culture" is understood as holistic (Sneath et al. 2009) and inasmuch as imagination, as a faculty, precedes the cultural categories that come to shape it; positing a non-holistic imagination as axiomatic facilitates an understanding that it has been reiteratively influenced and partially reshaped through landscape transformation. However, although imagination is not necessary holistic, it is partially submerged in the holism of the relationship between society and landscape. Thus, it is at least partially cultural.

Kant describes imagination as "...a blind but indispensable function of the soul, without which we should have no cognition whatever, but of the working of which we are seldom even conscious" (Kant 2003: 60; Sneath et al. 2009: 12). This cognitive and process-oriented manner of treating imagination (Sneath et al. 2009) contrasts with the usage of several anthropologists, such as Arjun Appadurai and Vincent Crapanzano, who have taken to treating the imagination synonymously with culture (Appadurai 1996; Crapanzano 2004; Sneath et al. 2009: 5-7). My approach somewhat combines the two tendencies mentioned. As noted, it is both Kantian and Hegelian.

I view the imagination as both a faculty of cognition and a dialectic of culture. It is partially structured through culture and partially through cognition. My view of imagination as being constituted (and thus partially structured through culture) diverges somewhat from the Kantian definition. It is constituted by domains of categorical relations and ideational content. Thus, my definition of "landscape imagination" is both Kantian (synthetic) and Hegelian (dialectical) (Kant 2003; Hegel 1977; Hegel 1989). Although its cognitive nature as a faculty transcends culture, its appearance within a context of action is dialectically informed by a given culture in the context with which it exhibits effects. I argue that landscape interventions (and the transformations that emerge from them) are examples of "imaginative effects" (Sneath et al. 2009: 19). They are the visible actions (and effects), i.e. the manifestations that have sensory availability, of a human society's structured play within a world of inchoate things and ontological registries. Through dialectical sublation, the landscape imagination informs the actions that produce these effects and is subsequently reformulated.

The imagination does not determine the effects that are wrought from its application through action, i.e., "imaginative effects". Following Castoriadis, Sneath et al. write that "...the imagination can be defined in terms of its irreducibly indeterminate relationship to the processes that precipitate it..." (Sneath et al. 2009: 6, 24; Castoriadis 1987). In the context of this paper, I understand this quotation to mean that the landscape imagination is not determined, but rather influenced, by the transformed landscapes that it has acted upon. Furthermore, the structural frameworks that constitute

the landscape imagination do not determine, but rather inform, the activities that participate[6] in the

landscape imagination, as a set of relations and ideas. As was noted, it cannot be claimed that all

activities in the landscape necessarily participate in the landscape imagination (Balée 2010: 168). I

argue that my concept of "landscape imagination" provides a means of bridging historical ecology and

Amerindian perspectivism. It provides a way of conceptualizing how cultural knowledge may pattern

landscape transformation by informing the activities that lead to intervention and that are inscribed on

the landscape as "imaginative effects".

The Concept of Structure

I have repeatedly used the term "structure" in referring to an organization of the landscape

imagination. I will now try to define this usage. The structural frameworks of the landscape

imagination can only be accessed through language and are posited as discursively asserted relations

between entities in deictic worlds[7]. Thus, as with other writers who have variously used the term

"structure", I am influenced by linguistics; however, my usage of the term gives ample room for

agency, practice, and discourse. My use of the term implies neither cultural nor material determinism.

It also does not imply a static semantic field. The structural frameworks of the landscape imagination

are not static; they are discursively presented in deixis; and they are reiteratively changed through

agentive landscape transformation. They may also somewhat differ between individuals in a society.

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6 My use of the term "participation" here is influenced by Plato's idea that worldly things correspond to transcendental forms; this idea was critiqued by Aristotle because the method and singularity of participation is somewhat unclear in Plato's work (Aristotle 1960; Plato 1888). I am using the concept of "participation" to highlight a dialectical relationship between nature and culture. I am not implying a metaphysical participation in the Platonic sense. Rather, I am simply suggesting that the landscape imagination can be seen in the activities that partially result from its informing. Through partially informing the activities that result in landscape transformation, the landscape imagination is latently retained in the manifestations of the society-landscape relationship, i.e., the sequential historical series of physical landscapes (Crumley 1994: 9). Balée writes that "...landscapes have history, and... natural things in given environments are historiographic indices of those environments" (Balée 2006: 77). Since the landscape imagination is dialectically related to previous transformations, the activities that are informed by it are in a kind of participation both with the imagination and with the previous iterations of the manifested relationship. The method of participation is the encoding of cultural knowledge as the landscape is transformed (Balée 2010: 163); the singularity of participation is stable because the landscape is specified. The exact role of language in the process of participation remains unclear. While it is clear that participations are encoded in language, it is less clear how language may mediate the processes whereby the landscape-imagination informs action.
7 It is no accident that the classic work on perspectivism is entitled "Cosmological Deixis and Amerindian Perspectivism" (Viveiros de Castro 1998).

The extent of the latter is unclear.

Ferdinand de Saussure used the concepts of "structure" and "system" to define and theorize about language (de Saussure 1986: 21). My use of the term landscape imagination, as a categorical and ideational structure, which is both cultural and facultive, is influenced by de Saussure; in particular, it is influenced by his claim that "[t]he structure of a language is a social product of our language faculty" (de Saussure 1986: 9)[8]. The Prague School linguistic theorists, particularly Jakobson and Trubetzkoy, refined the concept of structure and made it applicative to phonological data (D'Andrade 1995: 17). These theorists were influential in the later adoption of the concept by Kenneth Pike and (also later) by the cognitive anthropologists (D'Andrade 1995: 18-19; Pike 1967). Claude Levi-Strauss and E. E. Evans-Pritchard[9] were also apparently influenced by the trajectory of linguistic research (D'Andrade 1995: 19; Evans-Pritchard 1950: 122). Levi-Strauss saw certain aspects of a society's culture as being structural and unconscious; he noted Trubetzkoy's shift, in phonological research, "...from the study of *conscious* linguistic phenomena to study of their *unconscious* infrastructure..." (Levi-Strauss 1963: 33). This emphasis on the unconscious character of structure is resonant with Kant's claim that the imagination's "working" is something "...of which we are seldom even conscious" (Kant 2003: 60). Although Kant's view of the imagination is facultive, it is easy to see how his text is open to a culturalist reading; this is why I have combined his position with that of Hegel. However, my usage of the term "structure" is unlike that of Levi-Strauss. Rather than emphasizing binary oppositions between abstract terms in the culture, I am interested in the structure of relationships that are posited between ontological entities in the domains of landscape, kinship, and cosmology. As such, my use of the term structure pertains more to a social anthropological emphasis on *social relations*, although in this case these are mostly between human and non-human entities, and the ideas that describe them.

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8 However, I am not advocating a strict division of *langue* and *parole*. The landscape imagination is not a static set of abstractions that people draw down in order to act. Rather, it is constituted by relationships and attached ideas that implicate people with other entities and that change over time through people's actions.
9 I am somewhat influenced by Evans-Pritchard's notion of structure as a kind of behavioural pattern (Evans-Pritchard 1950: 121-124). It may be possible to incorporate this notion into a dialectical theory of society-landscape interaction.

However, these ontological relations and ideational contents are mutable and are transformed dialectically in the process of landscape transformation. As the presencing of entities in the forest changes through transformations, the ontological relations change and subsequently the landscape imagination changes, albeit in unpredictable and irreducible ways. Thus, as I noted with de Saussure, landscape imagination is a recurrently changing social product. Structure is not static.

Preliminary Methodological Considerations

The study of landscape imaginative influence on landscape-transforming practices, as well as the study of the emergence of landscape imaginative understandings of contemporary landscapes, must consider both the material (physis / φυσις*)* and the immaterial (nomos / νομος). Balée has written that "[h]uman communities and cultures together with the landscapes and regions with which they interact over time can be understood as total phenomena" (Balée 1998: 14). In the context of this paper, I understand this to mean that the domains of landscape, cosmology, and society can be considered together as mutually related. This mutual relatedness may be seen through the mediations of cosmological frameworks in the processes whereby societies transform landscapes. As noted above, this does *not* imply that transformations are *necessarily and always* related to cosmological frameworks (Balée 2010: 168). The first step in this intersectional approach is to ascertain how Amazonian societies understand their landscape in relation to their society and cosmology. This implies drawing out the relations that may exist between these domains and the ontological entities that inhabit them.

Methodology for an Intersectional Approach

The methodology for an intersectional approach relies heavily on linguistics and can be divided into four parts. The first part uses the method of free-listing to ascertain the salience of ontological entities in each of the three macro-domains noted above: landscape, cosmology, and society. The second part takes the most salient ontological entities, i.e., "highly salient" entities, as a kind of domain

and seeks to uncover relations posited by the society between these entities. The third part uses linguistic methodology derived from discourse analysis to obtain more unrestricted discussion of "highly related" entities and to analyze this discussion with regard to the relations between entities and the ideas that attach to these relations. The fourth part is not necessarily sequential to the second and third parts; it involves observing and recording the interactions between members of the society and the entities on the lists for high-salience and high-relatedness. The goal of this four-part methodology is to provide a means of empirically checking the claims and to possibly discover relations that are not expressed in stated claims. I will discuss each part of the methodology in more detail.

The first part of the methodology involves a standard series of free-listing procedures. Balée has previously used free-listing to determine salience within cognitive domains (Balée 2010; Balée & Badie 2009). I think that free-listing could be used to determine the most salient landscape, cosmological, and societal entities. Because these are broad categories, the exact domains used for free-listing might have to be broken down into more discrete units. For example, "societal entities" could be broken down into the domain of kinship terms; "cosmological entities" could be broken down into the domains of soul terms and spirit terms (which might or might not overlap); "landscape entities" could be broken down into the domains of trees, grerbs, vines, animals, and insects[10]. This initial section of the methodology should produce a restricted domain of ontological entities that are the most salient for the society, i.e., "highly salient" entities.

The second part of the methodology involves a process of drawing out the significant relationships between the "highly salient" ontological entities, as determined in the first part of the methodology. It is unclear how many entities from each domain should be used for this. For each "highly salient" entity, the researcher would ask: "What other entities in the world are related to this entity?" A list would be made of all the entities that are mentioned as being related to the given entity. A network would then be drawn out to depict the full set of relations between high-salience ontological

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10 Referencing Brown and Witkowski (1980: 366), Balée and Badie make the distinction between tree and grerb and use the former as a domain for a free-listing analysis; vine is also a frequently encoded category (Balée & Badie 2009: 3).

entities and between them and other entities. The entities that are most related to other entities should be listed as a set; this list of "highly related" entities might not be identical with the list of "highly salient" entities. This data would then be used in the third part of the methodology.

The third part of the methodology involves a more unrestricted discussion of "highly related" entities. Once again, it is unclear what number of entities should be included for this section. For each entity on the list of "highly related" entities, the researcher would elicit discussion by saying "Tell me everything that you know about this entity (X)." This discussion would be recorded and a transcript of it would later be made for analysis. The methods of discourse analysis would be used to analyse the transcript. The goal of this third part of the methodology is to determine what qualities the "highly related" entities have and how they are related to other entities (ideational content).

The fourth part of the methodology involves making and recording observations of the interactions that occur between members of the society and the entities listed as "highly salient" and "highly related". In the case of spirits and souls, since direct observation is unlikely, the researcher would probably have to rely on the accounts and recordings of the third part of the methodology. Through observing the interactions between entities, the researcher may hope to uncover further understanding of how the entities are caught up in social relations with other entities and with members of the society. This part of the methodology may also provide a means by which to observe contradictions between verbal claims and observed behaviour. It is less rigorously structured than the first three parts; furthermore, it can overlap in duration with the second and third parts. There are many things that may be included in this part of the methodology. Societal members may treat certain entities with respect; they may treat certain entities in a ritual manner; some entities may be shown dislike or disrespect (for example, invasive weeds). Some entities may be shown affection. There are many possibilities. The key to this part of the methodology is to partially restrict observation to the entities on the designated lists. This will direct observations in the most promising directions and channel research efforts.

Uncovering the Structure of Landscape Imagination: Interpreting Intentionality

    As stated in the last section, the ultimate goal of this interactional approach, which incorporates both historical ecology and Amerindian perspectivism, is to discover the social relations and ideational contents that connect the three domains (landscape, society, and cosmology) and that constitute the structural frameworks of landscape imagination. The incorporation of non-human entities into human worlds (and vice-versa) is ubiquitous to the texts of Amerindian perspectivism (Fausto 2007; Vilaça 2002; Vilaça 2005; Viveiros de Castro 1998). Both historical ecology and Amerindian perspectivism reformulate the earlier division of nature and culture, albeit in different ways. The intersectional approach understands the dialectical relationship between society and landscape as embedded within the relations that are culturally posited between ontological entities. These relations, along with the ideas that accompany them, constitute the structural frameworks of the landscape imagination. Levi-Strauss once claimed that anthropology's purpose was "...to bear testimony to future generations of the ingeniousness, diversity, and imagination of our species" (Lee 1992: 32; Levi-Strauss 1968: 349). The intersectional approach accomplishes this by highlighting the structure of the landscape imagination and how it informs and is influenced by landscape interventions.

    According to Ian Hodder, there has been a division between those who view culture normatively, as something that patterns and perhaps constrains observed behaviour, and those who view culture processually, as something that emerges from material processes (Hodder 1982: 7). Hodder argues that "...symbols do not 'reflect' but... [rather] they play an active part in forming and giving meaning to social behaviour" (Hodder 1982: 12). The intersectional approach that I have put forward is less concerned with "symbols", *per se,* and more concerned with social relations between ontological entities. However, I share with Hodder the view that social behaviour is informed by cultural understandings. In the intersectional approach, this implies that the interaction between societies and landscapes in Amazonia is mediated through the kinds of ontological relations that

Amerindian perspectivism posits. The reference to Hodder relates to my claim that the intersectional approach has a latent interpretive goal.

It is central to ethnoarchaeology that the study of contemporary ideas and behaviours may inform the interpretation of the past. I think that the intersectional approach, through the elucidation of structural frameworks, may come to facilitate interpretations of the intentionality and agency that underpinned (pre)historic landscape transformations. Carlos Fausto has used research on ontological beliefs among the Parakanã to interpret their earlier history of contact with Europeans (Fausto 2002). Much earlier, Claude Levi-Strauss wrote that:

> [W]hilst the Spanish were dispatching inquisitional commissions to investigate whether the natives had a soul or not, these very natives were busy drowning the white people they had captured in order to find out, after lengthy observation, whether or not the corpses were subject to putrefaction. (Levi-Strauss 1973: 384; Viveiros de Castro 1998: 475)

Understanding the cultural knowledges that informed such actions requires comprehension of indigenous pneumatologies and ontologies. Although it must be remembered that structure is not static, an intersectional approach that combines historical ecology and Amerindian perspectivism may facilitate a greater comprehension of the cultural knowledges that informed actions in the past. As such, synchronic research may provide the structural frameworks for interpreting diachronic data, whether ethnohistorical or archaeological[11].

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11 Balée has pioneered historical linguistic work in this general direction; he writes that "...one can utilize methods from historical linguistics in order to begin to build a model of landscape knowledge and the changes it underwent during thousands of years before the European conquest" (Balée 2009: 34).

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