

CAN PROFESSIONAL AESTHETIC LANDSCAPE ASSESSMENTS BECOME MORE TRULY ROBUST? CHALLENGES, OPPORTUNITIES, AND A MODEL OF LANDSCAPE APPRAISAL

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Abstract.—Diverse objections have been raised to the prevailing North American practice of performing aesthetic landscape assessments via expert descriptions of formalist pictorial qualities. This paper explores compelling reasons for this situation such as constraints imposed by legal definitions and due process, as well as pragmatic and political issues. Examples from the United Kingdom, New Zealand, and the European Union show how these constraints and issues need not limit the form and content of assessments. Formalist pictorial aesthetics are noted as a safe and fundamental basis for public perceptions. Hazards with more robust approaches to landscape aesthetics are discussed as potentially usurping political decision authority. A more robust, clear, and distinctive definition of landscape aesthetics is suggested from neuroscience. A model of landscape appraisal is proposed that explains how more diverse but distinctively aesthetic values may be incorporated into assessments. An alternative solution would be an American Landscape Convention.

NATURAL AND INEVITABLE CONTROVERSIES OVER LANDSCAPE AESTHETICS

There is hope and promise in official assessments of the aesthetic merits of landscapes that are worthy of conservation. Visual stewardship has become a significant land planning and management activity, particularly in directing the design of landscape changes to minimize losses in scenic quality. Since this practice became established and took on particular foundational theories, definitions, and methods, its concepts and measures of environmental aesthetics have been contested. Very particular and narrow assessment theories and methods have become established and entrenched in professional practice. These employ expert descriptions of scenery via formalist, pictorial analysis and sometimes content-type-identifications. A variety of objections to these approaches has been voiced, some more fundamental than technical, such as the following:

- Any kind of objective, as opposed to subjective, assessments are inappropriate (Lothian 1999).

- Quantification cannot be validly involved in assessing landscape aesthetics (Carlson 1984).
- Assessments should not be limited to pictorial or formalistic descriptions of scenery (Gobster 1999).
- Assessments should be founded on thick, normative aesthetic epistemology (Carlson 1977).
- Assessments should better include ecological meanings and interpretations (Gobster 1999).
- Assessments should track changing social norms and meanings, not stable criteria (Antrop 2006).
- Assessments should capture “invisible qualities” that contribute to landscape aesthetics (Dakin 2003).
- Assessments should focus on community identity and place attachment (Scannell and Gifford 2010).
- Assessments should focus on exhibited landscape narratives of healthy stewardship (Sheppard 2001).
- Assessments should capture local/visitor social and cultural values/needs (Cats-Baril and Gibson 1986).
- Assessments should employ public participation/surveys not experts (Cats-Baril and Gibson 1986).
- Visual resource management is dishonest in hiding the truths of resource management (Wood 1988).

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UNAVOIDABLE AND IMPORTANT CONSTRAINTS UPON PROFESSIONAL ASSESSMENTS

These objections have in common a desire to make visual landscape stewardship more robust in many potent, inclusive, and complete ways. They all have intrinsic merit in attending to the socio-cultural, ecological, and public participatory dimensions and nuances of landscapes' perceptible aesthetic qualities. But they fail to adequately understand, and fundamentally and technically address, why professional planning practices such as environmental impact analysis and assessment methods produce landscape assessment procedures so narrow in scope. Professional planning practices are constrained by:

- Constitutional limits on planning (police) powers
- Laws, case laws and legislative histories
- Rules of evidence
- The need to weather adversarial contestation
- Financial and time budgets (i.e., a Ph.D. researcher-led team cannot be hired to do a robust, comprehensive, and sophisticated research project every time a particular professional landscape evaluation is needed in its unique political and regional context).

THEORETICAL QUESTION

The central question addressed by the following argument is: *When and how might professional aesthetic landscape assessments overcome these constraints to be more robust in the ways listed above?* Before an answer can be sought, an exploration is needed of the ways that the constraints listed just above effectively narrow the scope of landscape assessments.

LEGAL LANGUAGE THAT AUTHORIZES SCENIC ASSESSMENTS

It is important to note how legal language specifies or limits the scope and nature of aesthetic values that landscape assessments are authorized to consider and evaluate. Much of the narrow scope of professional scenic stewardship derives from laws and the legal

frameworks that make such laws effectively operable. Some examples that favor an emphasis on scenic beauty follow.

United States

In the United States, local ordinances directly or indirectly regulated aesthetic impacts in urban landscapes starting in the 1920s, specifically through nuisance ordinances, zoning, and attendant case law (Duerksen and Goebel 1999). The National Park Service's Organic Act listed scenic resources as its first responsibility but only within its limited domain of management (Nagel 2017). Congress massively extended the reach and intended rigor of aesthetic protection and regulation in 1969 when it passed the National Environmental Policy Act (NEPA) with provisions protecting scenic quality only with administrative procedures. The Act states:

"[I]t is the ... continuing responsibility of the Federal government to use all practicable means to ... assure for all Americans ... aesthetically ... pleasing surroundings (42 USC § 4331(b) Section 101(2))" and "to ... identify and develop methods and procedures ... which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decision making" (42 USC § 4332 Section 102 (2)(b)).

NEPA was a break with the past in explicitly applying national policy requiring aesthetic assessments within planning analyses and subsequent project and management decisions. Congress thus created an evidentiary conundrum in planning procedures as well as in judicial and administrative proceedings that are discussed below.

In compliance with NEPA, similar provisions followed in the National Forest Management Act of 1974, which states that "(timber) cuts ... shall be ... shaped and blended to the extent practicable with the natural terrain" (16 USC § 1604 (f)(iii)). Similarly, the Federal Land Policy and Management Act of 1976 states that "public lands [must] be managed for protection of quality of scientific, scenic, historical, ecological, and archeological values ... to reconcile competing demands; to provide for fish and wildlife; and to provide for outdoor recreation" (USC 43 § 1701(a)(8)).

British Columbia

The British Columbia Ministry of Forests policy authorizing it to require and use scenic assessments in plan and project permitting states: “Scenic quality is a major factor in the public’s enjoyment, for residents and visitors alike. ... [The] objective will be to address the visual impacts of logging activity on the landscape and incorporate measures to harmonize such impacts” (British Columbia Ministry of Forests 1981).

United Kingdom

The United Kingdom’s most relevant law also focuses on scenic beauty but with a bit of broadening in the direction of ecological aesthetic. The preamble of the United Kingdom National Parks and Access to the Countryside Act of 1949 as amended refers to “an extensive area of beautiful and relatively wild country in which, for the Nation’s benefit and by appropriate National decision and action, (i) the characteristic landscape beauty is strictly preserved.” Section 5(1) identifies as a goal “the conservation of the natural beauty of an area,” and Section 114(2) provides a definition: “Conservation of the natural beauty of an area shall be construed as including references to the conservation of the characteristic natural features, flora and fauna and geological and physiological features thereof” (Selman and Swanwick 2010).

New Zealand

New Zealand’s Resource Management Act of 1991 seeks “to promote the sustainable management of natural and physical resources ... [and] shall have particular regard to ... the maintenance and enhancement of amenity values ... The term ‘amenity values’ is defined as ‘those natural or physical qualities and characteristics of an area that contribute to people’s appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes” (Preamble and Sections 7 and 2(1), as cited in Barrett 2012). This rather broad language has led to many complex challenges, innovations and controversies centered on aesthetic landscape assessments (Barrett 2012).

European Union

Aesthetic landscape assessments reach their greatest robust potential in planning that conforms to the European Landscape Convention. It contains extensive

provisions pertaining to the form, content, and use of aesthetic landscape assessments (Déjeant-Pons 2006). Wording from Article 5 (as cited in Déjeant-Pons 2006) illustrates how comprehensive the aesthetic is:

- “‘Landscape protection’ consists of measures to preserve the present character and quality of a landscape which is greatly valued on account of its distinctive natural or cultural configuration. Such protection must be active and involve upkeep measures to preserve significant features of a landscape. ...”
- “To recognize 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. ...”
- “To establish and implement landscape policies aimed at landscape protection, management and planning. ...”
- “To establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of landscape policies. ...”
- “To integrate landscape into its regional and town planning policies and in its cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape. ...”

REQUIREMENTS OF CONSTITUTIONAL AND DEMOCRATIC GOVERNANCE

In the United States (and other similar democracies), assessing the aesthetic value of landscapes and changes therein presents constitutional challenges related to the U.S. Bill of Rights’ Fifth Amendment requirement of due process as a prohibition against arbitrary governance. Aesthetic evaluations intuitively seem by their very subjective nature to be capricious hearsay but there they are required by law. This creates unusual evidentiary challenges for aesthetic landscape assessments.

The American government’s tradition of accountable regulation and management of the public domain lies principally on four pillars (Schiavo-Campo and

Sundaram 2000, Smith 2007): 1) attendance to and engagement with the popular mandates and discourses that elect and reelect those with legitimate power; 2) the objectivity of science; 3) clear rules and procedures; and 4) reasoned argumentation founded on the first three. The need to make aesthetic landscape assessments legally defensible therefore entails four basic requirements:

- Aesthetics must be defined in accordance with common socio-cultural perceptions;
- Aesthetics must reflect public perceptions and opinions, and probably those of a majority;
- Aesthetics must be validly and reliably assessed in a way that is consistent with its definition and context; and
- Aesthetic definitions and measurements must be reasonable and subject to contested argument.

LEGAL DEFINITION OF AESTHETICS IN U.S. SCENIC ASSESSMENTS

Most U.S. Federal land management agencies, through rule making, adopted or sanctioned procedural manuals, or case law recognized “best professional practices,” have interpreted “aesthetically pleasing surroundings” as referring to “scenic quality.” Courts have interpreted the intent of this language in light of Lady Bird Johnson’s Conference on Natural Beauty in 1966, which is widely regarded as the antecedent “legislative history” of this statutory language (Nagel 2017). The conference’s bipartisan report tended to describe “scenic quality” in landscapes as those that produce first-impression, pictorially formalistic, pleasing public perceptions, consistent with a then just-preceding leading tradition in American environmental aesthetics (Huth 1990).

Such pleasing first scenic impressions are what the aesthetic philosopher Roman Ingarden (1990) relates as “the primary aesthetic” that grabs a particular kind of affective attention and instigates an aesthetic state of mind. More nuanced, interpretive, and cognitively complex aesthetic experience may follow. Simon Bell (2013, p. 8-9) argues that such first blush aesthetic-experience-instigating “universal factors” of beautiful landscapes tend to dominate other personal and cultural factors in explaining scenic quality

perceptions, justifying an emphasis on formalistic descriptions as the method of choice for landscape assessments. Parsons and Daniel (2002) offer a similar, more evidence-based argument. A 1993 public survey by Komar and Melamid found widely shared preferences for certain formalist, pictorial “ideal” landscape elements and combinations, as reported by Wypijewski (1997) and Dutton (2003). Magill (1992) reports findings that support the existence of widely shared scenic preferences for scenes with descriptively natural qualities.

DESCRIPTIVE FORMALISM IN RELATION TO PUBLIC OPINION AND DUE PROCESS

Prevailing professional, as opposed to academic, landscape assessment methods under NEPA typically make little use of public participation other than through *proforma* meetings and hearings. They rarely use research findings pertinent to the relevant landscape’s socio-cultural context or visual impact types that have been investigated in studies of public perceptions of similar landscapes elsewhere.

Professional assessments instead almost always rely on accepted methods limited to evaluative descriptions of landscapes and proposed changes against largely formalist, pictorial standards (Bureau of Land Management 1980, USDA Forest Service 1995). Adoption of these expert-based descriptive methods of scenery assessment in the United States and elsewhere arose for many reasons including the following:

- Formalist, pictorial assessments are intuitively consistent with authorized legal aesthetic definitions.
- Formalist, pictorial assessments are intuitively consistent with broadly shared, basic cultural aesthetics.
- Federal law makes it very difficult for agencies to conduct formal, locally relevant public surveys.
- Writing and adopting assessment manuals using narrowly descriptive methods was acceptably tractable.
- NEPA’s puts prescribed emphasis on the use of objective and expert analysis in assessment of all impacts.

- Budgetary constraints (mentioned above) prevent public perception research in every assessment.
- Staff and consultant landscape architects with robust assessment capacities are not available.
- Agency cultures emphasize essentially descriptive science-based decision processes.
- Legal and administrative rules of evidence favor the use of experts supported by visual evidence.
- No established alternative methodological models of scenery assessment are available tailored to the key time and place.
- Agencies have adopted or sanctioned established methods and big changes would be a major hassle.
- Judges and hearing examiners have accepted pictorial descriptive methods as the only de facto option.
- No alternatives have been offered that are as inexpensive, intuitively right, and as broadly applicable.
- Researchers have not produced public perception derived findings consistent across many landscapes.

LANDSCAPE ASSESSMENTS AS ADVISORY FACTS TO DECISION MAKERS' CHOICES

In most constitutional democratic governance, a key distinction is made between those who have elected or appointed authority to make policy and permitting decisions versus those who serve them as staff analysts and advisers. Planners and landscape assessors typically fall into the latter category. They are normally limited to finding facts, analyzing them, and offering options to those with decision authority.

A key problem for scenery assessments is that they tend to be unavoidably and explicitly evaluative and therefore easily tend to be burdened with implicit or explicit normative and not analytic “decision content.” The professional landscape assessor must not stray outside of legally authorized “technical” aesthetic analysis and usurp the political authority of the decisionmaker. Some authors who advocate for more robust landscape assessments, at least outside of New

Zealand or the European Union, may be insufficiently aware of this limitation. Proposed methods may require professional staff to cross the line into political ground by in effect “commanding” decisions within the formulation of overly broad and choice-presumptive assessments. Two examples are:

We refer to this integrated set of concerns collectively as issues in landscape ecological integrity. ... An opportunity exists to combine issues of landscape ecological integrity with issues of aesthetic appeal, including appeals to the senses, to our emotions and feelings, and finally to our sense of symbolic meaning invoked by perceptions of caring and stewardship. ... Because the heart of landscape ecology is the evaluation of spatial configuration and temporal sequencing as they affect landscape ecological integrity and aesthetic appeal, we believe it is the logical discipline within which to elaborate the union of these issues. We have called this union the *landscape ecological aesthetic* (Thorne and Huang 1991, p. 61).

In the context of ecosystem services, we suggest a definition of cultural heritage as features within landscapes significant in some way to the present, including not only historical objects or landscape features (cultural and natural) but also intangible aspects such as stories, knowledge systems and traditions; implying that an inclusive approach is crucial for sustainable management of landscapes. Both tangible and intangible heritage within the landscape help to maintain meanings and a sense of collective identity, emphasizing the intimate linkage between cultural heritage and identity (Tengberg et al. 2012, p. 17).

These are both examples of well-conceived proposals for robust landscape assessments. The first would require new law. The second would require a new definition within the law, except in the European Union.

In the case of NEPA impact assessments, an unconventionally robust landscape assessment that considers socio-cultural and ecological aspects risks becoming a political statement rather than an impact assessment. Political decisions belong to the author of an environmental impact assessment's

record of decision, not the landscape architect who must not presuppose or constrain the political biases and choices of that author's authoritative discretion in making key value judgments. A key problem in making NEPA-compliant landscape assessments more robust therefore revolves around how to keep them truly and legally aesthetic, not essentially political.

THE CRITICAL DISTINCTION BETWEEN AESTHETIC VERSUS OTHER PERCEPTIONS

Neuroscience offers an approach to clarifying the distinction between aesthetic judgments and other kinds of choice or decision judgments. If aesthetic landscape assessments are to become more robust in capturing actual public perceptions in many of their socio-cultural, ecological, and aesthetic-theoretical nuances, a key question arises: *When is a perception or assessment genuinely "aesthetic" and when is it political or something else?* Recent neurological research, employing brain scans of people making aesthetic appraisals versus other kinds of judgments, suggests that there is little difference between these (Chatterjee and Vartanian 2016). Both entail activation of the same emotional centers and networks in the brain, albeit differently between perceptions of beauty and ugliness (Kawabata and Zeki 2004). This may explain why researchers, professionals, judges, decisionmakers, and members of the public have a hard time distinguishing aesthetic perceptions from other kinds of judgments, even though NEPA and its derivative laws and assessment methods presume and prescribe such a difference. There is no obvious distinction that allows people to easily "know" or define whether they are making an aesthetic judgment or not. Aesthetic landscape perceptions and appraisals, and broader non-aesthetic normative judgments, bleed into each other. They may fall along a spectrum between obviously pure cases at either end.

Other neurological research does suggest that there are important, if subtle, distinctions between aesthetic and non-aesthetic experiences or judgments. These differences appear to reside in the activation of the brain's task networks—not its emotional networks—that are always simultaneously activated

with emotional networks. Aesthetic experience more strongly activates task networks employed to assess one's internal state (i.e., spiritual condition) than other kinds of experience (Ishizu and Zeki 2011, Jacobs et al. 2012). Other studies similarly find that task networks more strongly activated in aesthetic experience focus on meaning-knowledge networks that attend to sensed or contemplated objects, rather than outcomes of expected or contemplated processes or events (Chatterjee and Vartanian 2016).

These neuroscience findings are consistent with Kant's (1780) theory of aesthetics and begin to suggest a basis for distinguishing aesthetic assessments from other types. Some kind of sensed or contemplated "object"—i.e., a landscape, or a representation of a landscape, or a thought or idea or memory of a landscape—must be foremost in mind, and self-awareness in that contemplation must also be equally foremost. The latter must preempt contemplation of value-centric interests (Perry 1914) such as choice tradeoffs, personal or social goals, analytic or conscientious forecasting of the future, or other tasks that focus on other people or social processes and relationships as *problems* of outward-looking concern. These outward-looking phenomena can be disinterestedly and thereby aesthetically contemplated typically apart from landscape assessments.

Such self-aware contemplation of sensed landscapes is a key quality of the kind of aesthetic experiences observed by Gobster and Chenoweth (1990) and Williams and Harvey (2001) and ecological aesthetic experiences described by Gobster (2008). It can also be characteristic of the disinterested, sublime contemplation of properties of landscapes rather than the landscapes themselves (Kierkegaard 1996). A challenge for landscape assessors is to find diverse ways to adhere to this broad definition of aesthetics, which well exceeds pictorial formalism. At the same time, they must produce valid and reliable measurements of their occurrence in landscapes that can stand as legal evidence (Palmer and Hoffman 2001, Ribe 1982) while also assuring that those landscape incidences correspond to majority- or culturally-held public aesthetic perceptions.

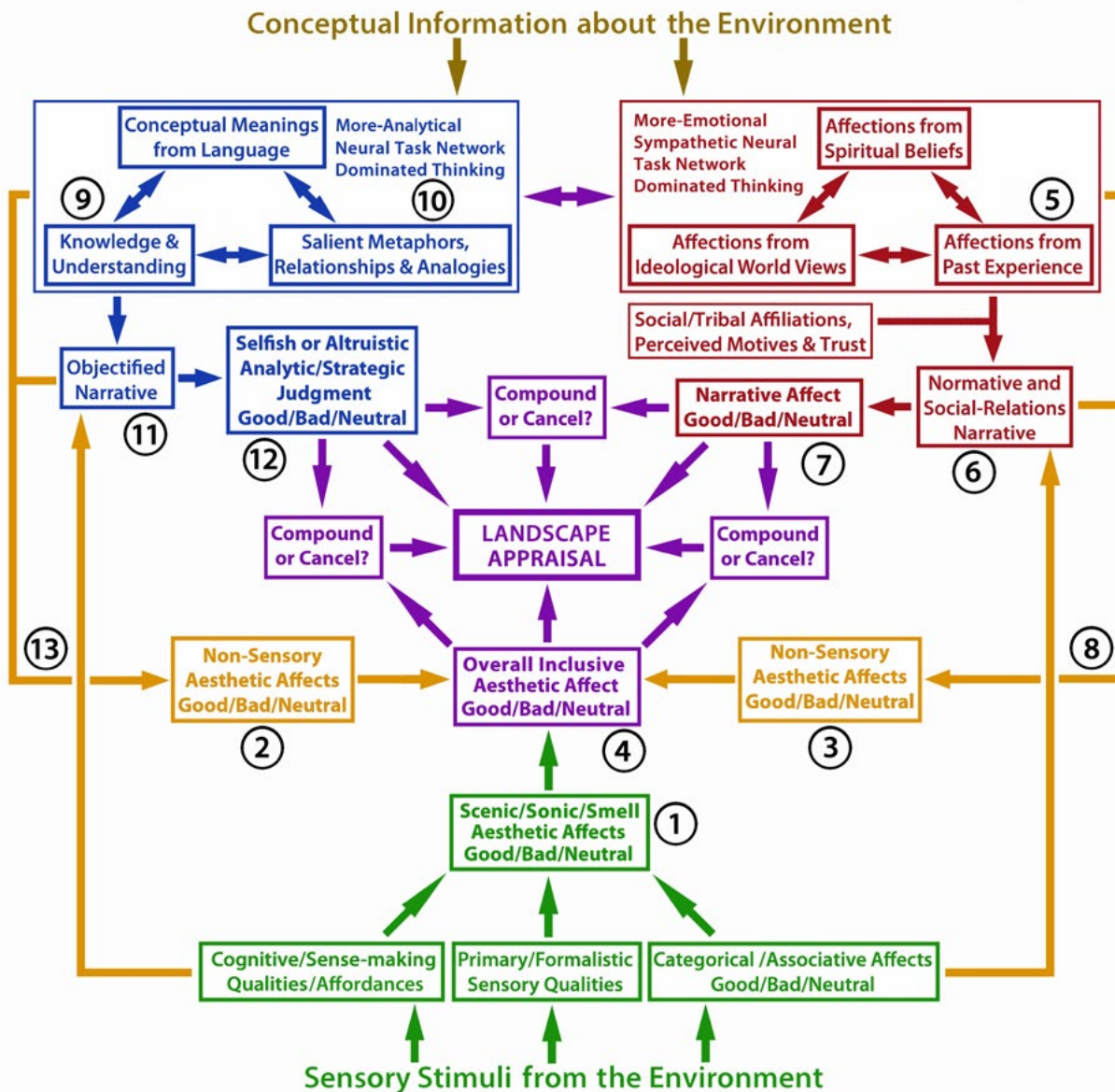


Figure 1.—A conceptual model of the relationship between environmental stimuli and an appraisal of the landscape or environment.

A CONCEPTUAL MODEL OF LANDSCAPE APPRAISAL

The flowchart in Figure 1 is a conceptual model that describes ways by which environmental stimuli and/or information can lead to any appraisal of a landscape or environment. Any individual or set of individuals in any circumstance may make such appraisals, and they might follow any simple or complex path through the flowchart. Most judgments of landscapes involve many or all bits of the flowchart, at least indirectly or subconsciously. But any particular landscape appraisal may mainly follow a dominant path due to people's need to simplify their understanding or articulation

of their perceptions, or for groups to make the process by which they make formal appraisals tractable and transparent. People find their own dominant path to landscape appraisals according to their biases and learned modes of thinking. Groups do so according to their own learned approaches to analysis, cultural traditions, or methods written in official manuals.

The purpose here is to help distinguish between more official, professional, or objectively evidence-based landscape appraisals versus more political, conjectural, anecdotal, or fleeting ones, and to explore the roles that aesthetic perception and experiences play in these. Put another, simpler way: The model in Figure 1

can be thought of as containing either a pathway describing how a formal planning or environmental impact analysis might evaluate an alternative future environment for implementation, or a pathway by which an individual lay person or political process might evaluate the same. The model is complex because individual mental and social processes of judgment are complex. It is not proffered here as a demonstrably valid model of social-psychological or neural processes but as a useful means of distinguishing aesthetic perceptions or assessments from other types and determining when and how they get mixed together. Accordingly, the circled numbers in Figure 1 correspond to where they are parenthetically noted in the explanations of the model below.

Aesthetic Affects Within Bigger Overall Landscape Appraisals

There are four kinds of specifically aesthetic perceptions or judgments in boxes in Figure 1 where they are called “aesthetic affects.” They are clustered together in the second and third rows up from the bottom. The green one (at 1) represents aesthetic affects derived from landscapes’ describable sensory attributes, including auditory and olfactory ones not required by the U.S. adopted assessment manuals. Visual components of these affects can include conventional formalist descriptions, scenic affordances (Kaplan 1979), or categories of landscape content (Magill 1992). The left-hand orange box (at 2) represents aesthetic experiences and perceptions derived from contemplation of more factual or scientific ideas and stories, as when a scientist finds a theory to be elegant or beautiful (McAllister 1999) or a biologist finds the idea of biodiversity to be sublime (Kiester 1996). The right-hand orange box (at 3) represents aesthetic effects derived from more subjectively value-centric ideas or stories that arise from cultural, social, religious, political, and civic discourse, as when an environmentalist finds a wilderness to be beautiful *sui-generis* or a businessman finds a thriving industrial park to be admirable. The purple box (at 4) represents a synthetic aesthetic affect that may result when one to three of the above types of effects are combined in the contemplation of a single landscape, as when the businessman also smells the sweet smell of bread baking while seeing the admirable

industrial park and recalls the elegance of the theory of economic multiplier effects learned in college.

Each of these types of aesthetic affect could be fair game in more robust NEPA landscape assessments. Both the conceptual and operational measurement definition would need to be arguably aesthetic, as per the discussion above. The measurement in a landscape would need to demonstrate that the aesthetic quality there is not anecdotal or conjectural but perceived or valued by many or most relevant people. Such evidence might be made through public surveys, observations of behaviors, persuasive expert testimony, or pertinent academic research.

Sympathetic Narratives Within Overall Landscape Appraisals

The red part of Figure 1 describes the normal socio-cultural and political activities of people, communities, and nations that influence environmental appraisals (Turner 1991). People have various spiritual, ideological, and way-of-life affections, some derived from past aesthetic experiences (at 5). These are influenced by interactions with the social and cultural reference groups that they most intensively interact with. People also constantly “read” the motives, beliefs, and values of others in relation to their own values and purposes. All these combine to produce social narratives by which people normatively understand the world (at 6). These narratives produce emotional reactions (at 7) that are not specifically aesthetic, although many people will not understand so. This is because such narrative affects are not self-aware and disinterestedly contemplative, but instead are outward-looking, value-interested narratives that deal with forecasting change, making value tradeoffs, and “reading” other people rather than oneself.

The sympathetic mental and social activities in red are not free of aesthetics. Disinterested contemplation of one’s various affections (including of memories involving landscapes), spiritual beliefs, or personally deeply meaningful social narratives can all produce aesthetic affects that can bear upon (at 8) aesthetic landscape assessments as they contribute to combined landscape affects (at 4). They would need to meet the same tests of definition, measurement, and justification—as not conjectural or anecdotal—described above.

Task Analytic Narratives Within Overall Landscape Appraisals

The blue part of Figure 1 describes the kind of scientific or technical analyses that government agencies undertake in conducting landscape planning and assessments. These more objective and evidence-based analyses are necessary to avoid arbitrary and capricious regulation of citizens or management of the public estate. In the particular case of scenic assessments, evidence about the descriptive qualities about the four boxes at the bottom of Figure 1 would be “input” into the “knowledge and understanding” box (at 9). More generally regarding all manner of environmental appraisals, the objective analyses in the upper-left blue box must be normatively meaningful in relation to the legal and social issues and problems that have instigated an environmental appraisal. The resulting policy interpretations of an objective analysis can derive from relationships, metaphors, analogies, etc. (at 10), which produce an “objective” narrative or argument (at 11) to justify a policy judgment or prescription (at 12). These are not aesthetic by virtue of their objectivity and primary attention to socially defined policy goals and objectives. They are framed in regard to collective, measurable goods and not to values centered on self-aware and disinterested contemplation.

The task analytic activities in blue are also not free of aesthetics. The linguistic meanings of concepts, salient metaphors, analogies, and relationships embedded in technical analyses, as well as the narratives they produce, can elicit aesthetic experiences (at 13). These can bear upon (at 8) aesthetic landscape assessments as they contribute to combined landscape affects (at 4). If these are explicitly distilled out of the analytic argument narratives (at 11) and reframed as separate aesthetic phenomena, they might be included in more robust aesthetic landscape assessments. They would need to meet the same tests of definition, measurement, and justification—as not conjectural or anecdotal—described above.

The Final “Stew” of Landscape Appraisal

The purple part in the middle of Figure 1 represents how all the normatively meaningful “products” of the green, red, and blue landscape appraisal-related activities come together. There are arrows directly

from the three affects or judgments (at 4, 7, and 12) to the final landscape appraisal. Any one of these might be the singular determinant of the final appraisal without regard to the others, according to the incident institutional, political, or cultural circumstances. If that one determinant happens to be the aesthetic one (at 4) then the final landscape appraisal happens to correspond to its aesthetic assessment, however narrowly or robustly it might have been made. In such a rare case, the landscape architect is as powerful as they might wish to be, or as aggressive advocates for robust and “true” aesthetic assessments wish them to be.

Two or three of the final determinants (at 4, 7, and 12) can instead affect a final appraisal without interacting with each other if they are all in agreement in their normative valence (good/bad/neutral), narrative content, and psychological framing. In such cases, the aesthetic “reasons” for a landscape appraisal would be indistinguishable from the others. People, lawyers, and decision makers might think the whole landscape appraisal is just aesthetic and this is not an unusual kind of confusion.

Perhaps the most common instance is when social affects (at 7), technical judgments (at 12), and overall aesthetic affects (at 4) conflict with each other in normative valence, narrative content, or psychological framing. That is when the other three purple boxes in Figure 1 that say “compound or cancel” come into play.

If any two or three determinants (at 4, 7, and 12) are substantially in accord, they compound each other in producing a strong case for, or perception of, the final landscape appraisal. In these cases, people, lawyers and decisionmakers might think the appraisal is substantially aesthetic because the “flavor” of the aesthetic affects are so well mixed up with the other affects and judgments in the overall appraisal stew; but landscape assessment professionals, their bosses, and relevant policy advocates should take care not to get caught up in this confusion and overreach in understanding the actual standing and power of aesthetics.

If any two or three determinants (at 4, 7, and 12) are substantially in conflict (i.e., if one favors the value of preserving a landscape and the other[s] favors major changes), they likely will cancel each other in affecting the final appraisal. In such cases the third or most powerful determinant will likely hold sway. In such

instances the standing and power of aesthetic affects may often be found wanting, unless there is powerful evidence of their importance to the affected people. In such instances it is usually easy to distinguish the “flavor” of aesthetic affects from the other ingredients in the bigger overall landscape appraisal. Whether that flavor is critical in delivering the final decision is likely a matter for either the red socio-cultural and political narratives to decide, outside of aesthetic assessments, or that depends on the skillfulness and robustness of the aesthetic landscape assessment.

An American Landscape Convention?

The complexity of Figure 1 and its interpretation are only important because of the narrow legal definition and role of landscape aesthetics in NEPA and its derivative laws and sanctioned scenic assessment methods. The result is a set of difficulties that impede and make improbable more robust landscape assessments, which might more fully and truly identify their merit in contributing to people’s happiness and welfare. An improbable alternative would be new law, such as that of the European Landscape Convention.

NEPA is a weak law, primarily procedural, and not prescriptive (Lockhart 1994), and its scenic provisions are arguably the weakest (Brooks and Lavigne 1985). It might be augmented or replaced by more prescriptive national policy directing local jurisdictions to identify the landscape attributes that local people most cherish in affecting the quality of their ways of life, work, recreation, and place attachment for retention or careful management by locally supported and effective measures. Evidence suggests that people deeply care about immediate issues affecting their local landscapes (Cheng et al. 2003, Sheppard 2001), which are now often threatened by larger extra-local forces that NEPA sought to mitigate. Perhaps a National program of attention to contemporary local landscape affections and concerns would gain more support and cooperative engagement toward sustainability than current actual and proposed policies directed to abstract, long-term, large-scale, “elitist” concerns such as climate change, ecosystem services, and biodiversity (Olwig and Mitchell 2007).

A widespread planning focus on contemporary, highly salient landscape services shared by local residents could enable widespread robust and accountable aesthetic landscape assessments of great relevance

and potency to people (Opdam 2013). All the activities in Figure 1 would be centered on a more-than-just-aesthetic shared and enacted concept of landscape as the tangible and perceptible evolving social narrative of people’s collective relations with each other and nature (Olwig 2005).

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