

seeing the landscape: a search for hidden narratives

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Seeing the Landscape: A Search for Hidden Narratives

BY

Wendeth Ann Simonson

**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University
of Manitoba in partial fulfillment of the requirements of the degree
of
Master of Landscape Architecture**

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**What our perception
presents us with (at every moment)
is an infinitely complex, dynamic,
whole envelope of the world and
our being in it.**

Robert Irwin in Howett 1997

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In particular my husband,
Norman,
and my children,
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for your patience and
unfailing encouragement,
my love and gratitude forever.

dedication

Finally, I would like to dedicate this work
to my dear parents,

Lawrence and Audrey Simonson

who understood the land, found it beautiful, and
held it in respect.

a b s t r a c t

At the heart of this discussion is the hypothesis that the prairie landscape hides its story from those passing through it, and that by looking at it from the air as well as from the ground, in both a measured way and in a poetic way, we can uncover the hidden and reveal the invisible, and in doing so tell the truer story.

To study the legibility of the story created by and contained within a landscape, this project analyzes a portion of the Manitoba prairie. It uses aerial photographs and ground photographs of the site in a search for its hidden narrative.

The views are considered not only within the established traditions of landscape analysis, but also in a very personal way: through the poetic measures of intuition, memory and sensory experience, the findings of which are expressed in literary form.

Introduction

How do we know a landscape?

Might its views potentially harbour more meaning
than convention allows us to discover?

To study the legibility of a piece of prairie landscape,
this study will consider

TWO VIEW POINTS:

From the air, and

From the ground,

and

TWO WAYS OF SEEING:

The Measuring Eye, and

The Inward Eye.

The medium of analysis in this search for hidden narratives is photography. *Aerial photographs* are used to capture regional and contextual information, surficial patterns and events, and the barely visible underlying structures that hold evidence of the geophysical forces and related natural processes at work in this landscape.

These visible and invisible layers of information are compared and contrasted with the images captured in the *ground views* in a search for story, for a sense of fit between the two view points, i.e. for instances of convergence and divergence between the pieces revealed, of omission or overlap of the natural and cultural landscape characteristics here.

The two approaches to viewing are best described as an objective conventional landscape analysis, and as a subjective poetic analysis. The first approach, *The Measuring Eye*, is a visual assessment, searching for tangible clues about the natural and cultural landscapes.

The latter approach, *The Inward Eye*, explores the idea that a poetic interpretation of the views of a landscape, using all the senses, and drawing on memory and intuition, will more fully realize our understanding of place to better inform and guide our design interventions there.

The Views of Others

This project explores the legibility of a landscape through an analysis of views from the air and views from the ground. It uses these two views, and both conventional and developing theories of landscape assessment to seek ways to uncover the hidden narratives of place for application in landscape intervention and design.

It deals therefore with issues of perception, and of analysis, and considers questions about view and vision, the nature of place, interpretation, and methods of analysis. These are discussed in the context of three approaches in current landscape analysis and interpretation:

Interpretation through Visual Assessment. Those who interpret the landscape through visual assessment focus on the physicality of the landscape itself as a source of visual stimulus and information. This is an analysis of form, structure, spatial quality, and characteristic features in both the natural and cultural landscape.

Vernacular Studies. These studies look at landscape as an expression of culture and the meaning of place as a human environment to understand how we form, and are formed, by the landscape. Human activity creates cultural landscapes in a largely unselfconscious way. How we consider these landscapes is dependent upon our relationship to them; a landscape means something different to the 'outsider' than to the one whose livelihood or patterns of daily living have shaped it.

An Experiential Approach. In this method, our ability as sentient beings to directly experience the landscape acknowledges the full range of the human senses to interpret and understand landscape, including intuition, emotional responses or feelings, memory and the intangible experience of chance occurrence or event. This way of seeing is a highly subjective, poetic response to the landscape being viewed.

The visual assessment of place begins with vision, the act of viewing. A view is an instance of seeing or beholding; it is our range of vision, our prospect. When we view, we see, survey, or inspect, and if we are attentive, we mentally contemplate or consider that which we see.

Daily, our vision captures countless images, processed in our mind to help us interpret our immediate world, its buildings, streets, hills or horizons. As well, vision is most often our first introduction to the world's hidden, invisible meanings.

As to the range of images imprinted on our eye, the external world itself imposes limitations on what we see by virtue of the character of the landscape we are viewing. Higuchi [1983] used the spatial structure of basic landscape features to determine what settings humans find meaningful or pleasing to the ordinary eye.

In order to interpret the spatial qualities of a landscape, Higuchi used eight visual criteria:

- visibility or invisibility
- distance • light
- angle of incidence (the angle at which the line of vision strikes a surface)
- depth of invisibility
- angle of depression (the view from above)
- angle of elevation (nature of the upward view), and
- depth (the degree of 3-dimensionality).

He used these visual criteria to identify tangible features in the natural landscape. This facilitated the exploration of his theory of how we construct landscapes based on focal point, boundary and domain. As a way of assessing human response to the landscape, Higuchi depended exclusively on visual criteria to interpret its spatial forms.

Some of the criteria used by Higuchi are readily applicable to an analysis of the spatial characteristics of a prairie landscape, and in particular the open plain that constitutes the site in this study.

For example, the first criteria is *visibility* or *invisibility*. In a plains landscape, the view appears endless and, to those who view it for the first time, perhaps overwhelming. Any measure of *distance* here appears to stretch to the horizon and so the viewer takes in the vastness of the view, which reinforces the feeling of diminishment in an over-powering landscape: the eye overlooks the colour, texture, or detail which would create a landscape of scale that is more human and touchable. The low *angle of incidence* in this landscape means that its depth cannot be gauged, and the eye drifts ever forward, reinforcing the perception of a place that is seemingly immeasurable.

Although Higuchi's method is a quantifiable approach, a discussion of his criteria in this prairie context is easily associated with the emotional response of the viewer to the landscape. This study will suggest that an analysis that supplements objective criteria such as Higuchi's, with the emotional response they elicit, provides opportunities to gain a fuller, more meaningful understanding of any place.

British landscape designer Simon Bell [1999] wrote of visual landscape analysis based on the idea of the *primal sketch*, a perception model developed by British psychologist David Marr. Bell's approach, like Higuchi's, relied heavily on the concrete physical features of the natural landscape. Seeing, he said,

is not a random sampling of the visual array. We use saccades ['eye jumps'] and fixations to register pattern and we search for our visual objective. . . . Whatever the motive, exploration may be prompted by certain features, perhaps those with highly defined edges or prominent contrasts. Once such a feature is noted, we are likely to explore less easily comprehensible areas with a further series of saccades and fixations, so building up the *primal sketch* . . . [Bell 1999, p. 53]

The application of Marr's perceptual model to this study has particular significance. The *primal sketch* is dependent on the initial identification of features with highly defined edges or contrasts to create the sketch. The viewer then searches the landscape for further patterns to add to the sketch.

In the open, flattened, views of the prairie landscape, the casually observing eye is challenged to find an "apparent structure". When the view offers little or none, the eye "will roam fruitlessly, seeking interest and points of connection, from one fixation to the next, without much success." [Bell 1999, p. 53] One of the goals of this study is to explore ways of seeing that find patterns, or points of connection in the landscape.

A well-known theory of visual perception for interpreting landscape is the figure and ground of gestalt psychology; gestalt means both shape and the character of the shape. German psychologist, Wolfgang Kohler developed ideas about how we determine shape, using spatial cues such as nearness, and similarity in shape, color, texture, direction or position. Although the gestaltists seek more visually elegant or simple solutions, the goal is the same, to enable us to make sense of what we are viewing [Bell 1999].

One of the issues being considered in this study is the notion of 'fit'. The hypothesis is that the view from the ground hides a narrative of history, processes, and pattern that may be visible in the view from above. With regard to this theory, therefore, the question is, to what extent does the footprint of spatial form and pattern in the aerial view find convergence in the view from the ground.

Also within the tradition of visual assessment, is landscape architect Robert R. Riley's [1997] celebration of the sense of vision as source for landscape interpretation. His definition of vision to explain the landscape experience went beyond viewing landscape solely as a source of cognitive information; in response to the question he posed regarding the reliability of the visible aspects of landscape,

he identified another aspect of vision of experience, i.e. its potential as a source of pleasurable experiences for the viewer. Such landscape experiences, because they are evaluative by definition, are, he maintained, more meaningful.

Riley also considered the role of vision in the image viewed as a source of raw material or cueing device to produce an imagined landscape, one of the viewer's own creation. In effect, the view awakens a latent image or experience within the viewer, suggesting that the measure of the landscape experience lies as much within the viewer as within the landscape itself. [Riley 1997]

This adds a significant piece of thinking to the discussion. One of the approaches taken in this study is that the process of visual assessment or analysis of a site invites the viewer to use latent experiences, memory or emotions to see the site in a new way. Where Riley suggested the role of vision as a segue to a new landscape experience for the viewer, this discussion suggests tapping into those same personal resources to unveil more meaning about the site itself.

The discussion to this point has assumed that the vantage point of the viewer is *terra firma*. In the last century however, satellite and communication technology has moved the activity of viewing the landscape from a ground-level position to far above the earth's surface, so far in fact, as to give new significance to Heidegger's term the 'loss of nearness'. [in Corner 1999b] One of the 'two views' discussed in this project is the aerial view.

Waldheim [1999] regarded the modern zenithal view as almost commonplace in our current vision of the landscape. The increase in the incidence of air travel, satellite imagery, and video screens has created a global landscape everywhere for all to see.

Waldheim suggested that the one-time practise of landscape architecture as place-making in the unknown, i.e. the wilderness, is now a matter of "reworking an indexed terrestrial surface about

which all is known and managed through the lenses of remote aerial representation." [Waldheim 1999, p. 122]

That the aerial view has become part of our subconscious way of thinking about the world is clearly expressed in the work of British artist Joseph Lea Gleane. His International Columbus "Lighthouse" in Santo Domingo, a cruciform earthwork with vertical shafts of light, is significant as the first architectural project designed to be viewed from the air. "This conception of architectural subjectivity was unique," Walheim wrote "because it suggested, a priori, that the understanding of the work would derive less through the bodily experiences of its spaces than through a detached and remote viewing position." [Waldheim 1999, p. 124]

Visual assessment of the landscape using vertical aerial photographs is a conventional technique used in conjunction with topographic maps and ground truthing for site analysis. As the camera is removed farther and farther away from the earth's surface, however, the images it returns to earth for our interpretation raise some questions.

The growing familiarity with aerial views of our world has not, it seems for some, translated into comfortable theories of application for landscape analysis and interpretation. Satellite imagery, for example, is regarded by some as exploitive, having a more sinister potential as an instrument of power because of its association with mass surveillance. Michel Foucault decried the practise as a synoptic objectification of our world, as authoritarian and alienating; he regarded even oblique scenographic aerial views as equally estranging. [Foucault in Corner, 1999]

A particularly reductionist way of viewing place is the McHarg method of landscape analysis. [McHarg, 1992] Ian McHarg, acknowledged by many as the founder of ecological design and planning, viewed the landscape in scientific, quantitative terms. The method he developed to inform decision-making for design and planning is

based on the systematic identification of biophysical features in the landscape such as soils, vegetation, topography, hydrology, or wildlife patterns.

This information is put into 'layers' in an additive process that identifies potential sites for the location of constructions such as infrastructure that would least intrude on the ecosystems of the region. McHarg's influence, which dominated the direction of landscape architecture for almost 30 years [Corner 1998], is still seen in the conventional reductionist approach of most landscape assessment.

At their best, as instruments of scientific analysis, aerial views and in particular satellite images are highly composed, abstracted views, most often composites of interpretation and classification. Some would argue that the greater the number of layers of subjective analysis and interpretation that are applied to the images, the more abstract and objective the images become. Their highly constructed nature notwithstanding however, aerial views such as satellite images do also possess intriguing, almost mystical qualities, and therefore perhaps do hold potential for a new kind of analysis.

In this regard, James Corner seemed optimistic: It appears hopeful, he stated, that such schemata lie at the core of "shaping an invisible landscape, one that is more an unfolding spatiality than surface appearance, more poetic property than the delineation of immediate real estate." [Corner 1999, p. 162]

Whereas Corner entertained the idea that there are landscapes hidden in the visible markings of analytical mappings, John Jakle's theory on the distant view of landscape as "a visual world spread spatially before the eyes, and a container of physical structure and functional meaning [Jakle 1987, p. 16] rested solidly on the strength of the external image itself to visually convey its meaning.

Again, an earthly view: regarding landscapes such as the American Southwest or the desert landscapes of North Africa described

by Norberg-Schulz, Jakle's observations were that they lack visual surprise and mystery, and that they 'form merely a continuous neutral ground'.

Visual assessment such as this, that emphasizes the ocular image and the physical forms the eye sees and measures, leaves room for new ways of viewing and interpretation. How can we view these landscapes to discover whether there is a deeper narrative beneath the "integrated logical system . . . rational and abstract. . .". that is noted here. [Jakle 1987, p. 91-92] Can we take notice of our emotional response to that lack of visual surprise and mystery to seek deeper, fuller meanings in the landscape?

There can be no substitute for visual assessment in any search to discover meaning in place. The nature of that assessment will be governed by many factors that range from the personal perspective of the viewer, and the extent and nature of the landscape being viewed, to factors of time and resources.

Given the breadth and the limitations of seeking information about place, the clarity of the viewer's intent is critical to any outcome. A good place to begin, it would seem, is the visual and spatial structure of the landscape, and an examination of those features that 'catch' the eye as it scans the view. In each instance, the goal is to seek similarity, difference, repetition, configuration, or juxtaposition in colour, texture or shape, all for the purpose of helping us make sense of what we see.

The concept of two views of landscape is necessarily tied to the idea of place and the ways of viewing place.

Viewing a landscape can mean identifying its features, and its spatial and structural qualities. It often includes seeking views that provide pleasurable images or experiences.

Cultural geographers look at the landscape to discern cultural character and the meaning of place as a human environment. They may investigate either the phenomena of the constructed world, the result of interaction between humans and the natural landscape, [Jackson 1984, Cosgrove 1984] or the observer's experience of landscapes and places: "[A]ny landscape is composed of not only what lies before our eyes but also what lies within our heads." [Meinig 1979, p. 34] Both of these approaches illuminate the *genius loci* of place.

The concept of place is a familiar one. It links structure in the landscape to human behaviour and is, therefore, more than location or position. Edward Relph and Christian Norberg-Schulz have both written extensively on this idea, Relph from the perspective of the cultural landscape, Norberg-Schulz with a broader outlook that includes the natural landscape.

For Relph, location was not a pre-condition for place; place was more than a visual landscape, and more than an historical or a cultural landscape. It was bound up with the everyday living of its inhabitants and manifested people's deep involvement with those places: "in other words character and meaning are imputed to landscapes by the intentionality of experience." [Relph 1976, p. 123] It is this meaning of place that is discussed in this study as the theme of event, i.e. the day-to-day activities of living that shape and define place.

To J. B. Jackson, the father of the vernacular landscape, a sense of place was created by the distinctly identifiable landscapes that

its inhabitants build and to which they assign place names. When Jackson surveyed the landscape, he searched for the immediate and tangible, for evidence of social ritual and social change, often observable in a 'view from the road'.

His assessment of the spatial structure of the vernacular landscape was largely in terms of the impact of social influences on the shaping of place, such as the car culture of America. [Jackson 1997] Distances of miles and miles between its major centres and the availability of large tracts of open land in growing post-war America created an unheard of opportunity for a thriving car culture. In turn, the growing affection North Americans came to have for their cars meant the creation of a culture - and a landscape - dedicated to serving the car and its owner.

Jackson's view of landscape as a human creation adds a strong social element to the study of place. As in other approaches discussed to this point, Jackson's assessment relied on ground views, and on objective assessment of the relationship between the landscape and social ritual.

J. B. Jackson is not alone in viewing a landscape as more than form or structure, colour or object, pictorial or scenic. John Stilgoe's view of landscape was the contained environment of a working community that includes dwelling, pastures, fields, perhaps with forest or meadow. In particular, not only did he consider the organization of space itself, but also the inhabitants, and their "obligations to one another and to the land". [Stilgoe in Corner 1999, p. 154] Both Jackson and Stilgoe regarded landscapes as a reflection of human occupation.

The task of interpreting place from views of its landscape must acknowledge that the point of view of the interpreter is inescapably subjective and value-laden. The 'outsider' beholds the manufactured landscape or the distanced scene; for the 'insider', the landscape is simply the everyday structures of place that establish the personal

and collective identity that is linked to habit and use in that landscape. [Relph 1976, Corner, 1999] The outsider viewing the landscape cannot assume to know the social practices, habits, or local myths that accrue with time and give one place its identity over another. The outsider is by definition beyond the everyday.

This is accepted as a limitation. It also contains the possibility, however, that the outsider who is 'beyond the everyday', can bring to the task a new perspective and unbiased perception, and even the predisposition to draw on personal associations, responses, and feelings quite different from those who live there.

Denis Cosgrove [1983] also made a distinction between the 'inside' view and the 'outside' view of a landscape. In this distinction, the qualities of the landscape viewed were given less consideration than the nature of the viewer; this means that from the 'inside', the view of the visible forms of the land were regarded as a constituent part of daily living. In other words, the composition of the landscape is background, "integrated and inclusive with the diurnal course of life's events, birth, festival, tragedy . . . all the occurrences that lock together human time and place." [Cosgrove in Corner 1999, p. 155] In this way, the familiarity with place and the integrated nature of living and surroundings can have the effect of making the landscape invisible.

Although it is necessary for the outsider to be cognizant of the limitations of understanding place, it is perhaps necessary to offset these restrictions with the free expression of unencumbered sensibilities that new perceptions can bring to place. For the outsider, there are no encumbrances from the past.

In contrast to the thinking of J. B. Jackson, Stilgoe, and Cosgrove, the writings of Yi-Fu Tuan and Christian Norberg-Schulz considered the notion of place as set apart from the individual who dwells there, in which place is the "totality made up of concrete things having material substance, shape, texture, and colour". [Norberg-Schulz

in [akle 1987, p. 7] In this paradigm, the outsider is considered to be in the preferred position to interpret and analyze the essence of place. Given the nature of the practise of landscape architecture, in most instances where a visual assessment is undertaken, the architect will be the 'outsider'.

20

The Views
of Others

It is relevant to this study to consider how others arrive at a sense of place. The phenomenological approaches discussed here add another agency to reading a landscape. Whether viewed as a construction that reflects the 'insiders' who created it, or as the creation of the observer's own experience of 'what lies before the eyes and within the head', the idea of landscape as a subjective expression prevails here.

An increasing number of scholars and designers are considering alternatives to the dominant cultural conventions of viewing landscape discussed in the previous two sections. Some of these are highly personal, subjective, and sensory.

Perhaps as a pendulum response to the high-technology and information-intense images generated from satellite imagery, we are now looking more deeply inward to find ways to view and understand place.

Whatever the occasion for this trend, it does appear there is a growing school of thought that urges us to explore landscape based on our capacities as sentient beings, to use every dimension or perception to experience place. This approach trusts initial intuition, and relies on our ability to see, to hear, to smell, to taste, to touch and to feel affectively, with the intent of allowing us to experience place more fully.

Such an approach distinguishes the work of Bernard Lassus, which is based on a "compassionate commitment to the senses as a vital instrument in the organization and understanding of landscape." [Jacobs 1998, p. 3] Lassus read the sensual nature of the landscape through touch and smell as well as sight in an attempt to better understand it, whether it was an exploration of the bark of pine trees, the feel of stones in a stream bed, or the revelation of the intensity of colour in a tulip. [Lassus 1998] Lassus used these understandings in his designs to express through form the meaning of a landscape.

Catherine M. Howett [1997] discussed the argument put forward by Kenneth Frampton for a heightened psychological response of the individual to building or place. Using an approach that parallels that of Lassus, Frampton suggested strategies that "replace the inordinate emphasis on visual perception with an appreciation for 'a whole range of complementary sensory perceptions . . . the intensity of light, darkness, heat and cold; the feeling of humidity; the aroma of materi-

als’ Such realities, Frampton maintained, ‘can only be decoded in terms of experience itself; [they] cannot be reduced to mere information, to representation or to the simple evocation of a simulacrum substituting for absent presences.’ “ [Howett 1997, p. 97]

To this Howett added that it is time we graduate from the western European tradition of aesthetic experience that invests visual perception with such a “privileged function”, and consider “an exploration of alternative values as grounds for judgment. Without such an effort,” she said,

we will continue to live and move blindly within environments that we fail to see or to know intimately or profoundly, simply because we are conditioned to view them with an appraising eye, to see how they measure up against subliminal standards of visual organization and landscape meaning that we have been taught to value exclusively, indifferent to the wealth of knowing, feeling, and caring for places that begins with our earliest childhood experiences of engaging the world. [Howett 1997, pp. 97-98]

Perhaps a first step in escaping this ‘tyranny’ of visual perception is to expand the role of the evaluative process of seeing. This means using the eye to seek the heightened psychological, emotional, or imagined response. In so doing, we ensure that the appraising eye does not stop at visual organization or summative interpretations, but instead takes on a further task, using the views it captures to call forth other, profound responses such as the “wealth of knowing, feeling, and caring for places” [Howett 1997, pp. 97-98]

The philosophy and work of Christophe Girod [1999] exemplified the application of this approach. He asked how, in the face of what he terms our “current environmental and cultural amnesia”, the outsider can understand place well enough to design wisely and knowledgeably. His answer was through a more direct engagement with the unknown landscape, by experiencing it intuitively, and by touching phenomena unique to that place.

Giroi's term *trace concepts* assigned to memory and intuition a dominant role in his method of landscape interpretation. The four concepts, Landing, Grounding, Finding, and Founding, are centered on particular gradients of discovery, inquiry and resolution, and each in turn nurtures a process for design and landscape transformation. For example, the initial act of discovery is Landing, i.e. the sense of entry, and being sensitive to "the recovery of vital forces led astray or left dormant by society". [Béguin in Giroi 1999, p. 67]

Perceptions of place can never really be the same twice. That is the advantage to Giroi's approach: "It escapes clear scientific methodology and is almost always the result of chance . . . open to the elements and to the seasons, to all the customs and risks at large." [Giroi 1999, p.62] Similar emphasis on the reliance of intuitive engagement is found at each level of his exploration and design.

Giroi's philosophy leaves little doubt regarding his position on the value or veracity of information gained by means that are not solely rational, synoptic or abstracted. Instead, in contrast to the theory of understanding place through measured visual analysis or observation of habit and use, his approach celebrates the sensibilities of the 'outsider'.

That Giroi embraced and trusted the instinctual response is not singular. In his discussion of the work of George Hargreaves, Hiroka Hasegawa wrote, "Landscape is gestalt in motion, moving entity, shifting back and forth between the visible and the invisible. Therefore the perceptions of landscape is an intuitive process that is essentially poetic or mystical." [Hasegawa 1996].

When we consider that the time in which we live is characterized as much by the dynamic and mutable as by the constructed and enduring, perhaps the metaphysical quality of nature hinted at here is fitting.

In his discussion of experiencing place as meaningful

It is a space of personality, of encounter and emotional attachment. It is the constructed life-span of the individual involving feelings and memories giving rise to a sense of awe, emotion, wonder or anguish in spatial encounters. Such a space may often as not be felt rather than verbalized. [Tilley, 1994, p. 16]

Benedikt [1987] argued convincingly that it is within the poetic or mystical that the truest form of vision exists. A view, communicated through the spareness of a poem, or the transience of a moment caught and sensed and held for a fleeting interval are, he proposed, the "windows to a reality empty of the intention to 'communicate,' a reality neither potential nor idea, but actual: to a world of things-in-themselves seen clearly." [Benedikt 1987, p.8]

Having faith in the unknown is not a characteristic of our time. We doubt what we cannot see and touch, and have come to rely greatly on the visual image. The rapidity of change in our time underscores a need for the tangible, and foolishly or not, most of us have unquestionable faith and trust in the processes and solutions provided us through technology.

It is no surprise then that it is difficult for us to put trust into theories of interpretation based on things sensed or imagined. We are understandably suspicious when asked to have trust in a theory such as Benedikt's which he refers to as the "*direct esthetic experiences of the real*." [Benedikt 1987, p.4] The discussion in this study does not ask which form of vision is more real or more true, i.e. the physical objects we can see and touch, or Plato's doctrine of Ideas, i.e. being of the mind, the only source of true knowledge. It does, however, explore vision as a source of the aesthetic experience.

Similarly, in his examination of the creative process, architect Tadao Ando called for a reawakening of spiritual sensibilities. He believed these to be latent in contemporary humanity and suggested

that our growing disability to perceive nature needed provoking. Ando contended that rather than diminishing the world's concreteness and reality which we do when engaging in an eliminative reductionist process, we need instead to follow meditative explorations. His belief was that a more contemplative approach will open us to the world's complexity and richness. [Ando 1991]

It would seem that the argument is a convincing one, to restore and nurture trust in the intuition of the individual. Most certainly, it is one that has been practised by sculptors, such as Isamu Noguchi, and installation artists such as Robert Smithson and Robert Irwin to name a few.

If current directions in landscape architecture follow past precedents that landscape architecture follows art, established when English landscape painters inspired design of the picturesque, then perhaps we will see a movement of analysis in landscape architecture that relies as much on intuition and sensory experiences as it now does on the reductionist, abstracted imagery inherited from the modernists.

Although the design profession applauds creativity and utilization of a full range of senses and emotion in the design phase of its projects, for the most part it has been hesitant to embrace this approach in the analysis of place. Perhaps there is a question about validity, i.e. if the profile of place is not the result of measurement, applied technology, or a system of matrices and interpretation, can it be of value?

If we are indeed seeking a true sense of place, perhaps it is time to ask whether place really is the totality of "concrete things having material substance, shape, texture and colour" [Norberg-Schulz in Jakle 1987, p. 7], irrespective of the individual or society that creates them. If our answer to this question is no, then the next question is whether we can use in a meaningful way the impressions of these 'totalities' to elicit multi-sensory responses to realize an even fuller sense of place.

The act of viewing is the basis of every approach to landscape analysis. The tradition of visual assessment provides information on the structure, form and biophysical characteristics of the landscape. Reductionist processes follow a methodology that arrives at abstracted views based largely on systems of classification of natural or cultural systems. Social geographers view place as an expression of human behaviour, imbued with intention and meaning reflective of cultural beliefs.

These various approaches are treated as separate fields of study in the literature; however, in situations of application, reciprocal connections will appear. For example, it is the structure and morphology of a landscape that inhabitants respond to when they create a community, locating near a river, or at the base of a hill, or at the edge of a wood. This means that when we view the built or cultural landscape, we are also viewing a response to the natural features that influenced the location of that cultural environment.

There are obvious exceptions to this. In North America, the survey system that established the grid as a means of distributing lands for settlement, disregards entirely the landscape and its ecological systems. As a result, there are settlements in this landscape that are situated, not to the physical features of the land or its climate, but to the culturally constructed grid. [Dominion Lands Act, 1872]

The natural characteristics of a landscape, whether mountains, valley, or plain, influence the kind of landscape people build there. In turn, cultural responses to that landscape create unique organizational and structural forms that reflect particular values and beliefs. All of this we inherit in the form of rich and varied landscapes from different regions of the world, and from different periods of our history.

There is recent interest in the theory that design and place-

making should reflect not only historical, cultural, or physical context, but other dimensions of our being as well, such as our capacity to sense, to feel, to imagine. An example of this approach is Girot's response to the new authority of landscape architecture in regional and site work in France where he used his notion of trace concepts to design in a meaningful way. [Girot 1999]

Marc Treib also advocated the recovery of artistry and poetics in landscape architecture which included a consideration of "the cultural, imaginative, mythical, and intuitive", [Treib 1999, p.29] and reminded us of other times and other cultures where the sensory experience caused the viewer to consider meaning. "Significance," he said "is not a designer's construct that benignly accompanies the completion of construction. It is not the product of a maker, but is, instead, created by the receivers." [Treib 1995, p. 60]

Both Girot & Treib advocated restoring the poetic to the design process, restoring faith in intuition and in the awakened experiences of the viewer. If it is the goal of designers to construct places that provide a rich sensory experience for those who use them, the actual experience, Treib suggested, does not rest solely with the designer; the significance and nature of the experience belongs to the viewer.

There is an irony here, considering the importance attached by landscape architects to the kind of experience a project will effect. It is that the analysis of any site intended for design intervention or construction is typically very measured and synoptic, and frequently described solely through a series of reductionist techniques and matrices. A personal response to the site that is sensory, intuitive, or even imaginary is invariably given short shrift at this stage in the design process.

To what degree is this approach taken because of time and convention, or because of the reluctance of designers to trust their personal, emotional response? Can the idea of using the views of the landscape to elicit emotion and stir the imagination, become part of the analysis of that landscape, so that the viewer is responding not only to

the eventual installation or construction intuitively or in a sensory way, but to the landscape that gave rise to it?

This study asks what will be added to our understanding of a landscape by an approach that includes an analysis of intuition, using the poetic measure of the imagination, the intangible and the senses. Will such an approach add new perceptions of the landscape, or open new ways of thinking or looking at place?

Will it influence design interventions that have more meaning, or awaken a larger, wider, deeper connection between someone else and that place, more than what the measuring eye first sees?

Much of the work to date that supports the intuitive approach to analysis is a discussion of the designed landscape, with 'built-in' sensory delights to enrich the experience of the user. [Benedikt 1987, Ando 1991, Treib 1995] This study, however, is of a landscape that has not been intentionally constructed for the viewer; it is a vernacular landscape, created unselfconsciously. The premise is that indeed, beyond the natural beauty that is visible and identifiable by all, such as a prairie sunset, this landscape holds as well, hidden narratives, a richness of story and meaning, that can be made visible by two views and awakened sensibilities.

Riley [1997] points out that the literary image and the graphic image are so different as to be seldom related in thinking about landscape. The literary image, that gained in reading a novel, for example, is multi-sensory, as opposed to the stationary or static quality of two-dimensional imagery. In this study they will be combined to explore new ways of seeing the landscape. The site will be represented in two ways, in the two-dimensional imagery of aerial and ground photographs, and in multi-sensory literary imagery as personal written responses to this landscape as captured in those views.

The Approach

Much has been written about the subjects of viewing and of interpretation of what we see, and so it is curious that with such a broad range of approaches and methods of viewing the landscape, that a truer picture, a more wholly captured sense of place can still be so elusive.

One has only to think of the view of the landscape presented to the traveller crossing the plains of the Manitoba prairies, whether it is J.B. Jackson [1984], John Jakle [1987], Gordon Cullen [1971], or Denis Cosgrove [1984]. Their understanding of that place is guided by their own philosophy and their view from the road.

The hypothesis for this study is that the physical and cultural character of this landscape contains a richness and complexity of form, pattern, and structure, a more complete narrative as it were, than is revealed to those travellers and interpreted by them.

It is important to note that the hypothesis put forward here is a recognition, less of any differences in the perceptual ability or practised eye of the viewer, than it is of the nature of this landscape, i.e. the view from the road in most parts of the prairie is of a largely flat landscape dominated by horizon line and sky. The prairie's low angle of incidence, or depression [Higuchi 1983], limits what the viewer sees, compared, for example, to the view one would have standing on a bluff or overlook.

To study the legibility of the story created by and contained within a landscape, this project analyzes a portion of the Manitoba prairie. It uses aerial photographs and ground photographs of the site in a search for its hidden narrative.

These views will be considered not only within the established traditions of landscape analysis, but also in a very personal way. The poetic measures of intuition, memory and sensory experience as a means of understanding a landscape will add another way of seeing.

The goal is to use this approach to explore ways to find the hidden narratives, while considering how these ways of seeing are a reflection of current landscape architectural theory.

The model developed for this investigation has clearly established parameters of scale, time, and sources of imagery in both the aerial views and the ground views. It is not put forward as a comprehensive way of viewing a landscape. It is one approach to seeing. Other ways of viewing place offer additional or different insights.

One factor, for example, that influences what is viewed, is the scale of the photographs or images used. As one moves closer to or farther from the earth's surface, different pieces of information appear or disappear. The technology of satellite photography offers possibilities for another way of seeing and interpreting a landscape. Its infrared and false colour images contain information about regional patterns, underlying structures and processes, and suggest new insights in a comparison between aerial views and ground views.

Ground and aerial photographs that are taken over a period of time also reveal new categories of information, such as changes in event, process, form and pattern in the landscape. For example, a longitudinal study might consider changes in patterns of human occupation from early settlement patterns to those of present day, related to such events as the consolidation of rural schools, hospitals, or grain collection points, or the current trend of the diminishment of the family farm and the concurrent growth of the corporate farm.

As well, both the physical and cultural points of view affect the way a landscape is seen. In the first instance, consider the difference in the view of a relatively flat landscape as seen from a small car or from a semi-truck, from a bicycle or from a train.

Secondly, our cultural background and the place where we live or grew up affects how we see; it influences what our eye picks out of a landscape and what it overlooks, as well as how we respond

intellectually and emotionally to what we see. The individual who lives in an urban setting in the mountains will see the prairie differently than someone who has always lived in a remote village by the sea.

As well, viewers with the same cultural background but different knowledge or experience, whether social, historical, technical or political, will also see with different eyes.

In this study the visual assessment of the Measuring Eye and the personal responses of the Inward Eye are both drawn from the writer's experience of growing up on a farm in the prairie, and by subsequent living and travel in foreign places. Early images, for example, of event that is determined by the seasons, or event dependent on weather and passable roads will find their way into the analysis.

To test the hypothesis of the study, a model was developed for seeing a landscape in ways that entice us to look beyond the conventional wisdom of established approaches to landscape analysis.

The model uses two ways of seeing, set within a framework of five themes.

Themes	Ways of Seeing	
	THE MEASURING EYE	THE INWARD EYE
Landscape as:		
1 event		
2 process		
3 form		
4 pattern		
5 prospect & refuge		

The landscape is studied from two view points, from the air and from the ground.

1 The aerial views are vertical photographs, taken at an angle of 90 degrees to the earth's surface, and oblique or slant photographs, taken at angles less than 90 degrees. The vertical photographs are at a scale of 1:60 000 (1 mile = approximately 1 1/16 inch or 2.6 cm).

The six photographic tiles that cover the site were photographed one year apart, during the fall of 1994 and the fall of 1995, and have been spliced together to create a map of the area. These photographs were taken for Manitoba Natural Resources.

The oblique views do not have a scale; they date from 1981 to 1997. These are photographs taken for Manitoba Pool Elevators.

2 Ground view photographs were taken for this project by the author in the months of March and April, 2000. They were taken from the main roads that serve as boundaries to the site, and from four secondary roads that cross it. The views are, of course, not bound by these roads, and in most cases run to the horizon unless otherwise interrupted by trees or buildings.

By focusing on images of recurring forms, processes, patterns and materials in the landscape, and including views of what appeared as aberrations in this setting, an attempt was made in taking the ground photographs to capture a representative quality of the spaces and elements characteristic of the area.

1 The aerial and ground views are the basis for an objective analysis of the site. This part of the analysis is termed **The Measuring Eye**; it is an analysis of measure, i.e. the conventional gathering of information by objective observation. This part of the analysis is considered a neutral, synoptic method of record of the information revealed in both aerial and ground views, acknowledging that few measures can be entirely free of the biases of the viewer.

2 This way of seeing is a subjective analysis that relies on the personal, intuitive response of the viewer, and makes full use of the sense of touch, taste, smell, hearing, as well as sight. **The Inward Eye** is a less conventional approach to analysis in that it considers the emotive power of the captured aerial and ground images, and the qualities of place seen in them that are poetic, intangible or imaginary. Its focus is the internally experienced landscape, an experience that is sensory, intuitive, and influenced by memory.

The model uses six themes as a frame of reference for these ways of seeing. The first five themes are:

**Landscape as Event,
Landscape as Process,
Landscape as Form,
Landscape as Pattern, and
Landscape as Prospect and Refuge.**

A sixth theme, **Landscape as Language**, is a meta-theme that runs through all five themes. It is used both in the manner of Anne Whiston Spirn [1998], i.e. that landscape is a language that acts as a connection between the pragmatic and the poetic fusing function, feeling and meaning, and also as a medium of personal expression.

For Spirn, landscape functions as a language in its capacity to carry meaning. In this study, landscape is regarded in that way, and the meaning of place found in the landscape is then expressed through the poetic quality of language.

Landscape analysis relies on the visual assessment of spatial structure, of forms and visible features characteristic to a landscape. From this tradition [Higuchi 1983, Jakle 1987, Riley 1997], the model derives the themes of **Landscape as Process** and **Landscape as Form**.

It is the natural and cultural processes and materials in the landscape that create form, ultimately giving definitive and descriptive character to place. The landscape is subject to the processes of growth and decay, to the forces of sun, wind and water. These processes have variations in their time of occurrence, duration, and even the speed at which they take place. [Spirn 1998]

In the built landscape, process is the story of human commerce and the social, economic, political and technical processes that

sustain it, e.g. establishing settlements, or growing grain. These processes include decay that remain visible as memory traces in the remnants and ruins of our landscapes such as derelict barns or over-grown farmyards.

Ultimately, it is these processes which create the dominant natural and built forms of the landscape. The surface shape of the plain and the underlying structure that gives it its form are the resultant geophysical outcomes of the processes of glaciation, weather, and time. Cultural forms that dominate the landscape such as grain elevators, hog barns, or transmission lines all speak of the presence of people and the economy that sustains them. Their shape, material, structure and colour are a reflection of the culture that creates them.

From the approach taken by cultural geographers to determine meaning in landscape [Relph 1976, Norberg-Schulz 1980, Jackson 1984, Cosgrove 1984], is derived the theme of **Landscape as Event**.

The theme of event focuses largely on singular occurrences, such as the cultural event of marking and dividing the land, or a naturally occurring event such as flood or drought. There is a rhythm of repeating events, occurring as either a regular or irregular cadence. Seasonal events fall into the first category, periodic flood or tornado into the latter.

Event, then, can be an occurrence that results from natural processes, such as the event of a flood. Further, singular events can set into motion subsequent events that give form to place, e.g. dikes around farmyards, built following a serious flood as protection against future occurrences. The characteristic form of the grain elevator in the prairie landscape signifies the main event in this landscape, the production of grain.

The theme **Landscape as Pattern** is derived from the striking visual imagery of this landscape from the air. The vibrant quilt

pattern created by the variation in colour and texture of planted or harvested fields and the field shapes themselves are memorable and highly indicative of this kind of landscape.

These visual patterns are attributed to the occurrence of event, process and form in this landscape. It is an ever-changing view, the outcome of grain farming and the rhythm of each of this area's four seasons. The notable absence of corresponding views from the ground is intriguing: the arresting patterns visible from the air are all but invisible from the ground. It is this striking contradiction in visual imagery and the resulting questions it raises about hidden narratives that initiated this study.

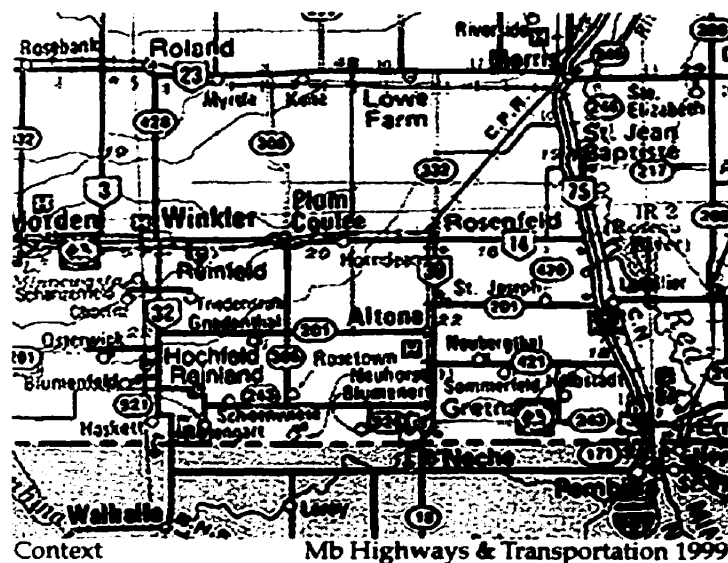
Our emotional response to viewing a landscape creates our experience of that place. Spirn [1998] believes that a landscape is best sensed by our movement through it. The final theme, *Landscape as Prospect and Refuge*, examines this kind of experience. This theme is particularly significant in this site where the characteristic expansive form of plain and isolated instances of settlement clearly recall theories of space as venture, and place as shelter. [Appleton 1975, Tuan 1977]

It should be noted here that because of the inter-connectedness among all of the themes, between process and form, event and form, and event and pattern, similar points of discussion appear in the analysis of more than one theme, e.g. the survey grid, which emerges in each of the five main themes. That there is a repetition of some elements among the themes is regarded as an indication of the significance of a particular feature to this landscape. Such a reoccurrence of features in multiple themes, in images from the air and from the ground, reinforces their importance in shaping the narrative of this place.

The site is located in south eastern Manitoba, an area bound by Hwy. 14 on the north, the Canada/US border on the south, Hwy. 30 (through the Town of Altona) on the west, and Hwy. 75 on the east.

Within the site are three Mennonite street villages, Gnadenfeld, Neubergthal, and Sommerfeld, the Towns of Altona and Gretna, and the Villages of Halbstadt and St. Joseph. Provincial roads Nos. 201, 421, and 243 traverse the site in an east-west direction, and No 420 runs north-south.

As for geographic and natural features, the site is representative of the dominant physical characteristic of the Canadian plains region. It has a largely flat topography with low gradient meandering creeks, and sparse tree cover.



Aerial and ground views of the site are analyzed using the model developed for this study. The analysis that follows is presented by theme. Within each theme is the analysis of the Measuring Eye, an objective study of both the aerial and ground views, followed by the analysis of the Inward Eye, a subjective, poetic measure of place using the same aerial and ground views. A Discussion section completes each theme.



Aerial view of the site

MNR 1994-95

Landscape as event describes human interaction with the landscape. It is human activity made manifest on the land whether through a single particular event such as the North American land survey, or through the activities of everyday living. In this study, landscape as event is agricultural activity, and the built systems that support it.

The conventions of landscape architecture link the idea of place with image, or captured setting. Increasingly, however, since the work of J. B. Jackson [1984], the construct of place has become associated with time and event, with the visual record of present day-to-day living.

In addition to viewing the landscape at large as event, discrete pieces of the landscape can also be regarded in this way, e.g. 'road as event'. In this instance the road is viewed as a significant occurrence in the lives of those who live there and becomes laden with meaning tied closely to the understanding of that place. For each farmstead, the road is the link to the nearest neighbour, community, village or city. It is integral to the weekly routines of going to work in a nearby town, taking the school bus twice a day, or driving to church on Sunday.

theme ONE

landscape as event



Landscape as Event

In the aerial views we see

Geometry of the grid

The dominant image of the North American survey grid [Dominion Lands Act, 1872] overlays the landscape, an image of democratic land disposition, a system that marks and secures settlement and enables event: farming the land.

The grid lines in this system represent square miles, or sections, numbered from 1 to 36 in rows of six sections to make up a Range (east-west) and a Township (north-south). The assigning of numbers to identify land parcels begins at the Principal Meridian and at the Canadian-U.S. border. For example, Section 1, Township 1, Range 1E is the land section located in the lower right hand corner of the Township adjacent to the border, in the first Range east of the Principal Meridian.

Place-making & settlement

Homesteads or farmyards are located adjacent to the grid lines that outline each square mile. The aerial views show a higher density of homesteads in the western half of the site. Townships 1 and 2 in range 1W have a combined total of 169 farmyards or building sites. East of the Principal Meridian in Range 1E, the number of settlements in Townships 1 and 2 is 77 farmsteads or yards.

There is one town which occupies one and one-half sections; two highly distinct street villages consist of farmyards side by side lining both sides of the road, with strip lots running out into the section.

Agricultural activity of farming

The sections are divided into orthogonal fields, rectangles of varied width, the majority being one-half mile in length, laid out in a N-S, E-W direction, parallel to the section lines.



Variants to this strict geometry occur in two instances:

42

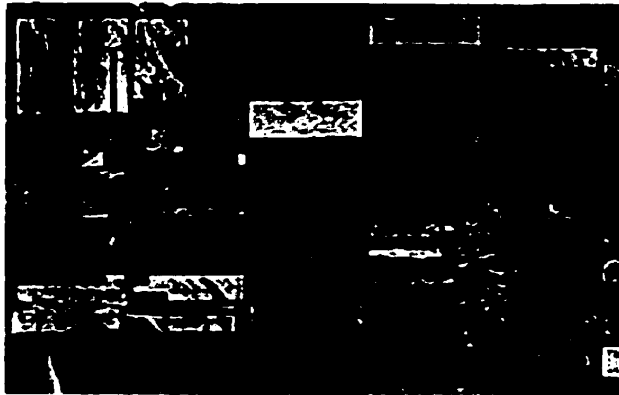
one, where the grid meets a river or stream, and two, where original survey errors took the parallel section lines off course.

Event

A variety of textures visible within these strips indicate differences in type or stage of crop cover. The marks on the land - parallel lines, triangles at either end of a field - are left by the machinery that cultivate, plant, and harvest crops. Other darker linear markings that divide the fields are windbreaks.

Overlay of other geometries

The infrastructure of transportation networks that supports event here form new angles within the grid. These are the highways, railroads, and the faint straight trace lines of pipelines transporting oil or gas.



The Cultural Landscape

MNR

The Measuring Eye: Ground Photographs

43

Event

The ground views reveal event in

Claiming the land

Roads for travel and commerce are a significant image in this landscape; bridges, water channels, and ditches are all visible examples of event.

The distribution of farmsteads across the landscape claims the settlement of the land and creates a structure for farming it. In the view from the ground there is no apparent order or structure to their placement; there is, however, the obvious strategy of locating close to the road.

Farming operations

Event is the everyday activity of farming. Markings on the land are the rows and ridges left by farm machinery. These are either parallel, perpendicular, or in some circumstances, diagonal to the road.

Event is formalized in the construction and management of municipal ditches, culverts, and drains to take water off the land; it is also the informal cutting of shallow trenches in the fields by individual farmers to drain water from low areas into the closest ditch.



Infrastructure

Distinct occurrences

44

The road itself becomes event in this landscape. Most transport is by half-ton truck, car, or van. The main highways and numbered provincial roads also carry large truck transport. On secondary roads, two vehicles that meet will stop on occasion for the drivers to visit across the road.

Event

Cemeteries signify the event of death in the families of the community; they also convey its age. The cemeteries stand alone in the landscape on a piece of ground parceled off in a field, adjacent to the highway or a main road.

Another kind of dying is the agricultural landscape itself, e.g. the traditional working barn part of the original farmyard is no longer used to house livestock. There are, however, new agricultural building forms such as hog barns located either within the farmyard, or built as free-standing operations in a field.



Distinct Occurrences

Nature as event

Reminders of specific events of nature are the dikes that are constructed around farmyards, a response to the possibility of flood in this valley; the most recent major flood occurred in 1997.



The ridges of soil that accumulate into the ditches as drift is a reminder of another significant event in the early days of settlement here, the dust bowl years, when drought and farming practices left exposed topsoil to blow away.



Nature as Event

One of the most striking visual experiences in this landscape is also one of its most ephemeral: the quality of light. Ground views illustrate a variety of light and colour conditions, from overwhelming brightness, dust-filled haziness, and the darkening of an impending storm.

Seeing the landscape with
The Inward Eye:

45

Event

From far above the surface of the earth,
it is clear that sentient beings
have methodically and rigorously imprinted this
landscape
with their square blocks,
insistently over glacial striations,
over wide sweeps of underpinning
rock and soil,
and bluntly up to the wide loops of the
prairie river that snakes and finds its way.
Here Seurat. There Mondrian.

Dozens of tiny farmsteads,
cast adrift across the matrix,
anchor this patchwork to the deeper structure.
Some, already abandoned,
clutch at an earlier dignity.
Soon, frenzy will break beyond their containing windbreaks
as machines spread out into the fields to plant their seeds,
drawing parallel ridges into the earth.

I toe a brown glass bottle shard,
wedged into the grass-pocked gravel on the
shoulder of the highway.

From across the field drifts the scent
of a barn I cannot see.
Carried on the wind, like the hollow whistle of a train
invisible to the eyes.
I watch a lone pickup truck racing against the horizon,
leaving dust clouds in its wake.
And the silence of the wind
picks up once more.

Event in this landscape clearly centres on its roads, the dominant image from the air, and a dominant image on the ground. From the air, the image of roads conveys a system of organization, i.e. a grid used to designate boundary and land distribution, and as squares of containment for the pattern and colour within.

The image of the road on the ground does not carry the same impression of order or containment. On the ground, the road is associated with the daily necessity of travel, and so is regarded as a measure of distance, of places beyond reach such as the immeasurable distance to the horizon, or as counted miles passed on the way from home to town, from neighbour to neighbour.

The roads are a strong image and, regarded in a more poetic and personal way, in both views they appear endless and relentless. They rarely alter their course, and seem to relish the even topography to run unimpeded in their straight course over this valley.

Agriculture as event appears in the aerial photographs as a dynamic mix of colour and pattern, with farmyards as the centre of this activity. Also visible, is an uneven distribution of homesteads across this site, as well as the distinctive morphology of a settlement type known as the street village. Provision for land distribution under the Dominion Lands Act of 1872 required homesteaders to construct a dwelling on their designated quarter-section of land, meaning that each section of land would contain at from one to four farmyards. The eastern townships in this site shows a lower density of homesteads, in spite of the fact that the land is clearly under production.

This is due largely to the existence of two Mennonite street villages in this site, Neubergthal and Sommerfeld. These were formed by homesteaders who were allowed by special dispensation to adjoin their farmyards in communal villages, rather than locate on their indi-

vidual quarter-section homesteads. Individually deeded land was then combined and re-allotted to use for the common good. The striking form of the street village in the aerial views consists of a main street edged by long rectangular strip lots. [Warkentin 1959]

From the ground, these street villages stand out like green oases in the landscape because of their concentration of yards along one street, marked by tall cottonwood trees. In the surrounding fields, the business of agriculture is everywhere apparent; the richness and complexity of field patchwork seen from above is replaced with the vanishing points of diminishing furrows and rows, with last year's stubble, and the imagined sounds of the machinery and smells of newly-planted earth or smell of harvest grain dust.

Although the impressions of event change with the vantage point, in this theme there is a high degree of convergence between the views from above, and those seen from the ground, demonstrating that event, as intention and meaning inscribed into the landscape is a sound indicator for understanding place.

theme TWO

landscape as process

Landscape as process is change over time. Landscape as process is a dynamic, played out largely on its surface, of interaction between the cultural activities associated with land use, and the landscape's natural systems of vegetation, soil, water, and climate.

In a construct similar to that of 'event' replacing 'image' to define place, it is 'process' perhaps that displaces the classic 'spatial' vocabulary of place interpretation [Corner 1998]. This suggests that an attempt to explain a landscape might place less emphasis on appearances and their meanings, and more on the prosaic concerns for defining how things work, and effects over time.

There is support for this idea both in the literature and in recent practice. Berrizbeita writes, "Landscape as process is one of the paradigms of postmodern practice in landscape architecture, supported by theories of phenomenology and hermeneutics, among others." [Berrizbeita in Cosgrove 1999c, p. 198]

This sentiment is expressed in the projects of George Hargreaves and Robert Smithson, work which Denis Cosgrove refers to as 'open-ended design', based largely on setting up a biological process which over time constructs its own landscape [Cosgrove 1999c].

Although in this instance the focus of the comments by both Berrizbeita and Cosgrove is the practice of landscape architecture and the implementation of the landscape project, this study will consider the application of this paradigm to the analysis of the landscape itself.



Trees over Time

In the aerial views we see

Formative processes

Land formation is visible in ridges that appear as intermittent brush strokes in a NW-SE direction. The deeper language of place is apparent here in this underlying layer of the physical landscape, as evidence of striations from the glacial processes that created this valley.

A dendritic network of the area's natural drainage, including below surface streams, is also visible from the air. Change in the physical character of the landscape is identifiable in dried stream beds, oxbows, and new stream channels.

Also of interest is the visibility of variance within the hydrological process itself. The vertical images of this site happened to be taken one year apart and, when spliced together show a clear difference in the amount of visible water on or near the land surface in either the natural or constructed drainage systems in the two sections of the image.

Dynamics of occupancy

The processes and cycles of agricultural production here were originally set into place by survey policies for settlement and the production of wheat

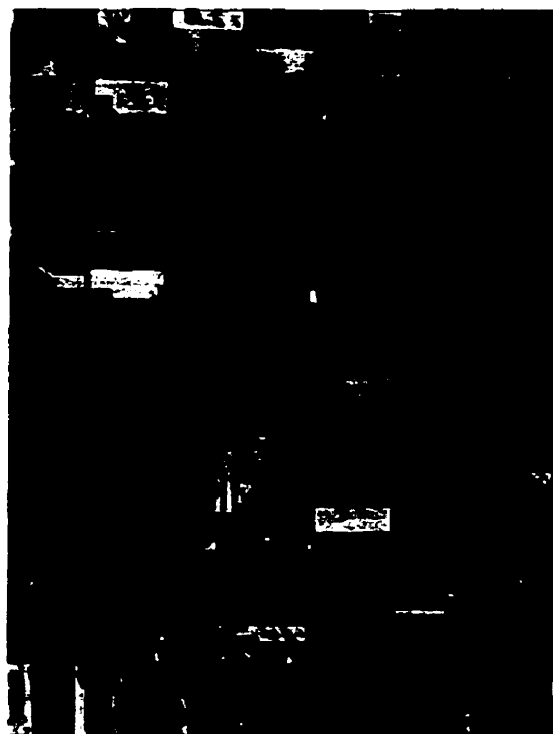
Landscape as process is the change in colour and textures within fields in various stages of agricultural processes, e.g. fields that have been partially swathed or had the soil turned over. Aerial photos also show changes in field boundaries as faint traces and outlines.

The interface of processes

The cultural, economic, political and technical processes that create and sustain place are manifest in visible geometries of the built land-

scape: the field itself, roads, highways, rail lines, towns and farmsteads. Naturally occurring processes of erosion, deposition, and water flow, though visible from the air, are overshadowed by the processes that support today's agriculture. For example, if process can be a measure to define landscape, a significant characteristic of this place is the notable dominance of the processes of the built landscape over the processes of the natural landscape.

The orientation of the grid itself reflects an earlier cosmic order rather than the land's own contours, ridges, soil differences, and water patterns. This dominance is particularly visible at this scale. The creation of drains that channel existing streams and creeks to expedite the flow of water off the land is one of the most notable in this regard.



Interface of Processes

MNR

The ground views show

Natural processes

Snow melt and running water, and the process of draining water from the lands through ditches and channels is a seasonal event linked to the cyclical nature of climate.

Signs of soil erosion such as soil drifts in ditches indicate the land is re-arranging itself in response to the natural forces of wind and water, aided by the 'unnatural' practices of cultivation.

The dynamics of farming

Changes in colour and texture from one field to the next are clues of the dynamics of farming, as practices on the land respond to conditions of climate, soil, and economic forces. The marks left on the land by a previous year's field work are reworked the next crop year in an ongoing cycle of planting and harvesting.

Growth and decay

The cycles of nature's processes are strikingly clear in abandoned farmyards. Dying trees fall and decay, and native forbs and grasses reclaim once cultivated ground. Abandoned buildings also signify changes in the state and direction of agricultural economies in this region, e.g. the ruins of barns and of small-animal buildings are remnants of agricultural production on a smaller scale, traces of a different kind of commerce.

Such remnants of cultural or natural value communicate the story of a place. They speak keenly of earlier layers in the history that characterizes a particular piece of landscape. Formal evaluations are used to determine any historical significance through established systems of identification and classification such as those developed by Parks Canada for cultural resource management. [Douall 1994]



Processes of Wind & Water



The prairie had a hushed look. Rippled dust lay across the fields. The square frame houses squatted exposed, drabber than before, and some of the windows were boarded over like bandaged eyes. Barbed wire fences had tipped flimsily and not been set to rights. The Russian thistle flourished, emblem of want, and farmers cut it and fed it to their lean cattle. The crows still cawed, and overhead the telephone wires still twanged all up and down the washboard roads. Yet nothing was the same at all.

The wind was everywhere, shuffling through the dust, wading and stirring until the air was thickly gray with grit.

Laurence 1964, p. 182

From the view above,
the broad bush strokes of underlying rock and soil assert their strong
and quiet presence
in this Euclidean landscape.

Water reconvenes in inkblots and in the delicate suggestion of
incipient streams,
then finds its moment to break through the geometries of field and
road; at these ruptures we have river.

The greater whole bides its time
as if it knows it will endure.

Already the broken pavement of first-generation highway is consumed by the earth's process of reclamation. Already the lichens etch
tilting headstones in the cemetery,
and wind and weather fell the hollow trees and emptied barns in
farmyards of forgotten promise.
Landscape as process is blurred images, smudged boundaries, the

The flows and processes of agriculture, however,
are easier to capture.

Process

Transitions between seasons are legible in the fields where the
poetics of becoming
are the farmer's watchwords:
next week, next month, next year.

Infrastructure initiates the process.

The survey lines of this prairie landscape serve as the foreign ob-
elisks of early Rome;
set them into place and the rest will follow,
the roads, the settlements, commerce.

Winds now carry the ebbs and flows of process well beyond these
plats and quarter sections;
the unbounded geometries of this post modern world, directed by
economies and technologies far from these fields, will set into play
processes of their own. What their effect will be,
so removed from the landscape itself,
from its deeper structure,
is not yet uncovered.

As cloud's slow shadows melt across the prairie's face, more nights slip darkness over. Light then dark, then light again. Day then night, then day again. A meadow lark sings and it is spring. And summer comes.

A year is done.

Another comes and it is done.

Where spindling poplars lift their dusty leaves and wild sunflowers stare, the gravestones stand among the prairie grasses. Over them a rapt and endless silence lies. This soil is rich.

The wind turns in silent frenzy upon itself, whirling into a smoking funnel, breathing up topsoil and tumbleweed skeletons to carry them on its spinning way over the prairie, out and out to the far line of the sky.

Stegner 1947, p. 300



The processes that occur in this landscape that are visible in the view from above, and visible in the view on the ground, are irretrievably linked.

That all processes operate here according to similar laws of nature but at differing scales is visible in this part of the narrative: the larger regional processes initially set into place by glaciation and amended and altered by time and weather are the underlying geology, soil types, and water flow of this place. Also visible are the constructed processes of marking out fields and roads. Smaller-scale processes are evident at one's feet, i.e. the melting of snow, the drifting of soil, the seasonal marks in the field of last year's farming. All of these processes are related within the larger systems and smaller instances of energy flow. [Smith 1986]

Change is an integral part of this landscape. Agriculture is guided by the cycles of the season, and the change in daily weather, both of which are tied to the larger system of climate. It is also guided by other changes outside this site, such as the market economy of the larger world that blinks into the computer screen on the farmer's desk.

Perhaps, because of this inter-connectedness of processes between the natural and cultural environments, it is not surprising that there is a high degree of fit between the two views. Expectation of change is as real in this landscape as the necessary acceptance of change.

The processes of growth, decay, dying and rebirth, are the cycles of every natural landscape. In this site, however, because they are also bound into the very livelihood that defines this place, one is never far removed from them. In the daily journey through this landscape one passes abandoned farmyards, decaying barns, neglected shelter belts, while at the same time witnessing new forms of building and commerce.

Landscape as form considers the dominant natural and built forms of the landscape.

56

theme THREE

l a n d s c a p e a s f o r m

Geophysical forms are created by glaciation, and altered by the forces of water and weather. So too are the forms of rivers and streams, and the directional bend of trees exposed to prevailing winds.

Though more ephemeral and surficial in nature than the deeper structures of the landscape, forms that are temporal or seasonal also contribute significantly to the image of place. Examples of these are the sand, soil or snow drifts sculpted by the agents of wind or water.

Spatial forms of the constructed world are created by settlement policies, and by the needs and practices of a working landscape. These are the shapes born of boundaries, and the technology of agriculture.

The study of landscape as form also includes built forms that express the human desire to control or capture the natural forces of wind and water, forms such as windbreak, channel or dike, and forms that serve the visible infrastructure of power and communication.

Form also has the capacity to express an inherited way of life, to transmit tradition, or what Rossi [1982] termed the collective memory of a place. This can become embedded within a specific building type, such as the traditional rural grain elevator, whose function has been lost over time and whose value resides solely in its form.



Wind-formed Shelterbelt

The aerial view reveals

Geophysical form

The dominant geophysical form of the larger landscape is the expansive, flattened plain. Its flow is interrupted only when it is carved into organically shaped segments by the meanderings of sinuous rivers characteristic of topography with a low degree of slope.

Built form

The dominant spatial form of the constructed world is the square of the gridlines created by the North American system of land survey [Dominion Lands Act, 1872].

The rectilinear field subdivisions within each section reinforce this basic spatial form. Still smaller divisions of the grid are used to lay out town plats and, at a different scale, to guide the planting of windbreaks to create enclosure for farm buildings and yard.

The exception to the prevalence of the square is a cultural phenomenon characteristic to this area, the linear form of the street villages. Single row of houses line either side of the road, set into yards that extend as strip farms into the surrounding fields.



Prairie Rivers

MNR

The Measuring Eye: Ground Photographs

58

Form

The ground views indicate

Trees as form

Trees appear as a distant linear mass that parallels the ground like extended shallow rectangles against the horizon.

They also appear as intermittent square or rectangular blocks dotting the expanse; in this site these forms are farmsteads, there being no stands or patches of woods here.

Windbreaks create strong sculptural forms. The trees stand out singly yet from the distance read as one unit because of their shared canopy, uniformly bent in one direction by prevailing winds.

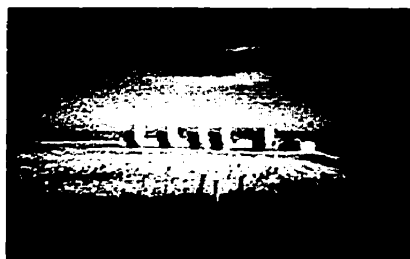
Flowing water

In the lower townships, moving ground water has carved shallow beds and meanders; interestingly, at one junction of road and watercourse, the road accommodates the stream by taking an unexpected curve.

Of the three river crossings encountered, only a portion of one of the streams retained banks of natural vegetation; the other two were farmed or burned so closely to the water it was difficult to identify them as naturally occurring streams.



Natural Form



Built Form

Dominant form

The horizontal plain, the linear ring of the horizon, understood through the curve of the horizon line captured in photographs, and the vast hemisphere of sky overpowers all other forms in this landscape.

Built form

Built artifacts support the business of agriculture: traditional or concrete elevators, wooden barns, steel sheds, or round steel grain bins, are all clearly identifiable reoccurring forms.

Also in this site, a unique form particular to the Mennonite culture of the region is found in the street villages. It is the house barn, a European building type in which house and barn are joined together with a passageway.

Road and highway as form

One of the dominant forms here is the road; all roads of the same type have the same dimensions, surface, and grading, and corresponding depth and width of ditch. Gravel, or secondary provincial roads are wide enough for two vehicles to meet. Main provincial roads are two-way with a clearly marked centre line. Their width and elevation, which makes it possible to see traffic on them from a distance, increase their visibility in the landscape.



Truck & Road & Sky

The Inward Eye:

Form

Organic forms in this landscape are subtle: gentle rises softened by tossing heads of prairie grasses, sloping slowly into mud-filled flats, remnants of a slough or stream. The great dome of sky, so vast its form seems beyond grasp, so wide and immense as to invite a child's spinning dizzily into its great arches. The lazy meander of the river, belying its potential to ravage the land for miles around when flood waters slip easily over its banks.

Here was the least common denominator of nature, the skeleton requirements simply, of land and sky - Saskatchewan prairie. It lay wide around the town, stretching tan to the far line of the sky, shimmering under the June sun and waiting for the unfailing visitation of wind, gentle at first, barely stroking the long grasses and giving them life; later, a long hot gusting that would lift the black topsoil and pile it in barrow pits along the roads, or in deep banks against the fences. Mitchell 1947, p. 3

Built forms announce themselves with greater abruptness in these horizontal spaces: the wooded island that is a farmstead in the prairie sea; the remembered 'houses' of stacked straw bales, or mammoth cylindrical bales set at long intervals, casting dusty shadows on golden short-stubbed fields. The iconic form of a wooden grain elevator, white paint bright in the sun, stands boldly in the flattened landscape. Tall, square-shouldered towers respect no path but their own as they leap across road and field, carrying life-lines into infinity.

On that monotonous surface with its occasional ship-like farm, its atolls of shelter-belt trees, its level ring of horizon, there is little to interrupt the eye. Roads run straight between parallel lines of fence until they intersect the circle of the horizon. It is landscape of circles, radii, perspective exercises - a country of geometry.

The very scale, the hugeness of simple forms, emphasizes stability. It is not hills and mountains which we should call eternal. Nature abhors an elevation as much as it abhors a vacuum; a hill is no sooner elevated than the forces of erosion begin tearing it down. These prairies are quiescent, close to static; looked at for any length of time, they begin to impose their awful perfection on the observer's mind.

Stegner 1977, p.46

The narrative of the landscape from the air boasts the hugeness of the valley plain. Being expansive and relatively flat here, the natural form of the plain receives easily the constructed form of the square grid, a cultural landscape form repeated in the layout of towns and farmsteads.

The vastness of the plain accounts for the strong impression created by this landscape form, the extent of which is clearly evident in the ground views as well. This open expanse of land can be an intimidating or freeing experience, offering little enclosure, and nothing to impede the eye or the mind from seeking the horizon line and whatever lies beyond.

It is the dominance of another form, however, visible only in the ground view, that has the ability to stop the heart with its sense of the eternal; that form is the hemisphere of sky formed by the curvature of the earth. The essence of this piece of prairie landscape is the conjunction of plain and sky at the far-away horizon.

The sky, in its largeness, defines each day in this landscape. It is the source of a light so bright and clear, it sings. Yet, in minutes it can darken and transform the landscape beneath into a flatness that seems brooding and unwelcoming. Those under its influence boast of its clear blue depths and its many days of sunshine, even though the temperature may be below zero.

Also visible only in the ground views are the cloud formations; their presence, or absence, rate of movement across the sky, and height above the ground influence the mood of each day. Photographs catch their impact on the landscape in calendar views of sunsets and as 'backdrop' to fields of blue flax or yellow canola. There are also the clouds that are never captured on film, that lie buried in the memory from one clear day when their hazy softness moved lazily across the cerulean blue, or when their darkening forms tumbled one

over the other in a race against the wind.

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Form

There are other forms in the ground views that signify this place, such as the strings of shelter belts bent in unison away from the prevailing winds, the shallow beds of streams and creeks, and the gentle slopes of meanders that now run dry. These are fluid forms, that have seen once-hard edges softened by time and wind and water.

The forms of sharp edges or abrupt outlines belong to the business of agriculture. These forms are the shiny round steel bins that sit on inverted cones in nearly every farmyard, and the engineered roads and highways whose edges of grassy gravel or winter snow are kept clean and sharp by the grading machines. There is also the prominence of the large-capacity grain elevator of concrete and steel geometry, the new icon of this landscape.

One final incidence of convergence is in the views of certain settlements on the site. In the aerial view, the linear form of the Mennonite street village stands out, in contrast to most settlements here which are based on the square. On the ground, the view of these villages is prominent as well, creating singular forms in a landscape with few adjacent farmyards or stands of trees to detract from their isolation. These oases are also particularly prominent because of the height of its very old, tall cottonwood trees. [Neubergthal Study 1998]



Neubergthal

Mb Pool Elevators

Landscape as pattern is a visual composition of the markings, configurations, geometries and distributive arrangements of natural and constructed elements across the landscape.

In the cultural landscape, pattern-making is a self-conscious or unself-conscious act of design on the land by those who live there. The way a particular landscape looks is considered inseparable from and integral to the day-to-day activities and values of its occupants. [Corner & MacLean 1996]

In less immediate images this theme also seeks the pattern of connection and relationship between small and large systems, of the fit of pieces within a larger whole. Dendritic and fractal patterns of natural systems are types of these. So is the repeated syntax evident in culturally ordered landscapes; in this regard, one thinks of the cardo-decumanus axes that directed the pattern of growth in most Roman settlements.

Landscape as pattern recognizes two other variables in the context of the prairie landscape, complexity and order. As a visual aesthetic, pattern usually exhibits high levels of both of these qualities: the complexity engages our search for variations of stimuli; the order reassures us that these stimuli share some commonality. [Hildebrand 1991]



A. McLean 1996

theme FOUR

landscape as pattern

We can see in the aerial view

Visible cultural patterns

The signature element of this place is the pattern intentionally laid upon the landscape, rooted in the Roman geometrically constructed system, i.e. the grid. The surveyors who consciously measured and marked their way across the land set into motion sequential pattern-making.

Settlement patterns change visibly as one moves across the site; the western townships, Townships 1 & 2, Range 1 West, have an average density of 2.4 farmsteads or groupings of farm buildings per section; in the eastern townships, Townships 1 & 2, range 1 East, the density is 1.06 settlements per section of land. However, the configuration of the pattern regarding farmyard location within each section is the same: homesteads are almost consistently located at the mile lines, half, or quarter mile mark.

Pattern-making in the landscape

The act of farming leaves patterns on the land. These unselfconsciously created geometries are squares, rectangles of varying dimensions, and parallel rows, all of which are drawn in series or repeated syntax on the ground surface. There are also symmetrical rectangular borders created as the fields are worked, and fields that resemble envelopes with triangles at either end, all the result of changes in agricultural activity and circumstance.

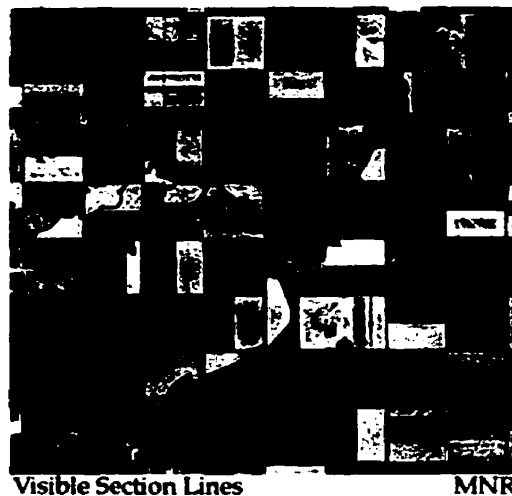
Together it creates a patchwork of colour and texture, stitched together, or separated, by the contrasting whiteness of mile roads, or the black of windbreaks. In the view from above, it registers as both complexity and order.

Natural patterns

Layers of pattern that are natural features here are created by deeper structures of place legible as the geology, topography, and hydrology of this landscape. These form the foundation to less permanent, less enduring constructions. Their shapes and patterns are more subtle and fluid than the highly legible edges of constructed road or field. Changes in rock or soil type appear as watermarks on paper or semi-transparent imprints. The glacial striations read as intermittent streaks that angle beneath the boundaries of the fields. Water pools at varying depths, or leaves wormlike paths of varying depth and opaqueness, and the dendritic forms of deeper running streams cross several scales.

Parts of a whole

The aerial view also reinforces the fractal character of landscape systems, whether constructed or naturally occurring. There is a clarity in the pattern of connection between scales, the fit of pieces within a larger whole. This applies equally to the field, section, township, range geometry of the built environment, and to the hydrological patterns of creeks, streams, and rivers.



Visible Section Lines

MNR

Pattern appears in ground views as

Visible cultural patterns

As part of the activity of farming, unintentionally created patterns in furrows and parallel rows of stubble visible from the road are examples of geometries created in working the land. These patterns are the carefully executed outcome of agricultural practices.

The configuration of these patterns change with changing circumstances - the type of crop that is planted, the size, shape, and orientation of the field to a highway or road, and the manner of planting and harvesting.

These patterns are not always easily seen; however, sometimes the geometry is revealed in moments of surprise when the passing eye, at just the right angle, glimpses for a brief moment the parallel rows that make up what otherwise appears to be a mass of uniform colour or texture.

Sinuous or zigzag patterns cut into the fields to drain water are visible at the time of year these photographs were taken. Causal, more natural dendritic patterns follow as the water inscribes the soil, seeking its way to these trenches.

There is also a visual pattern of progression and sequence observable from moving through the landscape, e.g. from open field as prospect, to homestead as refuge, to open field again as prospect. In this progression, each element in turn becomes both the 'here' and the 'there'.

Other elements that create a strong suggestion of pattern and progression are the steel towers that carry high voltage electric lines. They are arresting by virtue of their height, strong geometric form, and linear

repetition across open spaces. As the eye follows, one is lead visually into the landscape.

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Pattern

Visible natural patterns

Small scale patterns include the rippled surface of the soil that the wind drifts into a ditch, or in the wind - rippled surface of melt water.

Although amorphous and fleeting, cloud patterns captured in photographs of ground views play largely in the imagery of this landscape because of the overwhelming presence of sky.



Presence of Sky

Marks on the Land



There can be no mistaking place
in these images.
Viewed from above,
squares and rectangles of colour and texture
fit seamlessly, and endlessly,
one to the next.

As with a textile or a painting
the eye skips from one colour and geometry to the next.
The instruments of symmetry
inscribe patterns into the land.

They draw across the surface,
creating a rhythm of repetition in the parallel lines,
as if a giant's comb has parted the soil,
each new row parallels the first,
curving where it curves,
straightening and curving again,
gently 'round a slough,
a rocky ridge, an ancient foundation,
or meeting another road or boundary at right angles
and turning sharply then
to stay parallel still with the furrows or swaths from earlier rounds.

The lyrical beauty of this rite, of this repetition and order
vibrates with the energy that went into the making of it.
As the view pulls back, farther and farther
from the unfolding of these earthly rhythms,
the images abstract into the shapes and colour
of a rationalist painting.

In the theme landscape as pattern is revealed one of the greatest discrepancies in the study between the nature of the two views of the site. The views from above reveal the story of a landscape all but invisible in the view from below.

From above, the story is the richness and rhythmic patterns of this landscape. The aerial photographs flood the eye with the shape, colour, and texture of the fields, and of the finer markings within field boundaries. The rhythm of repeated lines and the movement of shape and colour across the land challenges the eye. It is a beautiful and lyrical unfolding of symmetry, repetition, and the variance of geometrical constructions bound by order.

Although visible as well in the ground views as furrows or mown swaths, it is the markings of the aerial view that compel the eye. The cumbersome machines that inscribed these marks into the soil seem to have engaged in a choreographed dance with the land, round after round, turning, and turning again, leaving traces in the soil that parallel those that came before. It is a view barely conceivable on the ground, where these same imprints easily become a monotony of row after row, running across the land to invisibility.

The view from above conveys other visual riches. The formative signs of the natural landscape are visible here as glacial striations. A myriad of wispy organic lines indicate a subsurface network of water, totally invisible in the ground views. The rivers that undulate across this topography create puzzle pieces in a landscape, unimaginable from the ground.

The message in this theme is that this landscape has a hidden story, revealed only in the view from above. The lack of convergence in this theme suggests the possibility of a secret narrative in every landscape.



Rosenfeld Mb Pool Elevators

Letellier Mb Pool Elevators



Landscape as prospect and refuge examines qualities of openness and closure in the landscape, instances of interruption or confinement, signs of landmark and sanctuary. As a theme, it is more concrete and immediately engaging than either event or process.

It considers instances of enclave and sanctuary, for wildlife as well as for people, and singular elements such as landmarks that serve as reference and orientation. Anticipated sanctuary and a sense of security is implicit in these focal points; they imply an awaited refuge that stands out clearly in the panoramas here, in the uninterrupted prospects which sweep to far horizons.

This theme is an application of Appleton's [1975] theory of prospect-refuge, and Tuan's [1977] differentiation between place as security and shelter, and space as freedom and venture.

Finally, landscape as prospect and refuge also tests Cullen's [1971] examination of 'hereness' and 'thereness', in the context of a rural landscape.

theme FIVE

landscape as prospect & refuge



More Prospect than Refuge

Seeing the landscape with
**The Measuring Eye:
Aerial Photographs**

72

Prospect & Refuge

In the aerial views we see

Refuge, enclosure & place

From the air, visible points of refuge are the farmsteads that read like "enclosed and humanized space". [Tuan in Jakle 1987] These are set in a landscape that appears open and unbounded.

Straight roads serve as links to the sanctuary of larger centres, towns or villages. The regular and predictable occurrence of mile roads create an observable order from the air.

Enclosure and sheltered habitat for wildlife is fragmented, occurrence in non-continuous corridors along rivers and streams, and in the planted shelter belts and windbreaks of farmyards. There are virtually no isolated patches of parkland forest in this area.

Landmarks or singular elements

Because of their sinuous form in a rectilinear -patterned landscape, the rivers are the clearest landmarks for reference and orientation. In conjunction with the site's major highways, it is by way of these landmarks that one can then locate the named places of the built landscape, i.e. its towns and villages.



River as Landmark MNR

The Measuring Eye: Ground Photographs

73

Prospect & Refuge

The ground views convey

Openness and closure

Views across the landscape in the north portion of the site are sufficiently open to carry to the horizon, interrupted only by fine fringes of distant trees.

The sense of distance and prospect is amplified by the linear repetition of telephone poles, power lines and the distinct edge of ditches, all of which parallel one another and draw the eye to the vanishing point.

There are few instances of confinement in this landscape. A significant exception is the shelter and security created by the mature cottonwood canopies of the street villages. They create a strong image of oasis and announcement, because of their height, 60 - 90 feet, and their density, achieved from close planting along both sides of the road.

Sanctuary and shelter

When the distance between one town and the next is farther than the eye can discern, the proximity of the farmyard becomes a point of enclosure and security here. Not only does it signify people, it projects an image of sanctuary surrounded as it is by rows of trees that act as windbreaks.

For wildlife, the farmyards are also sanctuary, that is, if they are in close enough proximity to another yard, windbreak in an nearby field, or naturally occurring cover to act as a habitat patch for wildlife such as birds or ducks.

Landmarks

The view of traditional wooden grain elevators in the distance signifies a town; newer concrete structures stand isolated in a field, connected only to a highway and rail line. Regardless, because of their



Sanctuary

vertical dimension they have high visibility in these horizontal spaces, and therefore arrest the eye's horizontal outreach, subsequently dividing the vista into more definable spaces, thus orienting the viewer.

Such highly visible landmarks become symbols or icons that convey sense of place. In this landscape, the prairie grain elevator is an integral part of the landscape, of what Morrish & Brown described as infrastructure "that participates deeply in the imaginative life of its community". [Morrish & Brown, 1995, p. 52] By virtue of the fact that these highly identifiable structures signify the main event of this place, they are the icons associated with the identity of this landscape.

As orientation devices, built artifacts that serve as landmarks assume a high degree of importance in this uniformly cultivated and constructed landscape where naturally occurring features such as water, changes in topography or vegetation have a diminished capacity to orient the viewer, in contrast to their function in aerial views.

In fact, systems such as rivers or stream corridors, when they are encountered at discrete points such as a crossing, often remain unnoticed because of the sameness in road feel or bridge design that blends visually into the road. Often the clearest visual signal that we are about to cross a stream, or have indeed just crossed one, is the sign by the edge of the road that flashes by.



High Visibility in a Horizontal Landscape

The Inward Eye:

Prospect & Refuge

The brightness from the distant horizon
pulses across the intervening landscape and
insistently through the windshield of my car.
Sky in abundance.
It wraps the land, infinite, less than gentle.

It illuminates objects scattered across the landscape:
a farmstead, blue in the distance,
a shelter belt of trees,
a single silo or sweep of steel transmission towers
diminishing across the fields until erased by that same light.

The dome, blue and intense, follows;
I am always at its centre.
It holds tight to a horizon line that seems not
to move as I move,
yet never allows me to reach the edge, to drop off.

The highway, unerringly straight here, points to the horizon.
Between me and the horizon, flattened by the light,
is the land. It seems to run forever.
It unfolds and unfolds into such vastness that
the farmyards and aspen bluffs that tick the landscape here and there
seem insignificant interruptions.

Other rhythms seep into my consciousness:
the regular anticipation of the next grain elevator
coming into view,
the clipped image of a road running off at right angles
as the odometer in my mind clicks over another mile,
a record of my own sensibility of passing time and distance.

I turn off the highway,
onto a gravel road, a mile road.
Along the edge of its ditch a line of telephone poles.
Ahead, and in the rear view mirror,
the row of poles stays with me, loyal,
miniaturized by distance in either direction.

Prospect & Refuge

More miles, and the poles that measure them
like the ticks of a clock,
taking me closer and closer to a place I know as home.

The theme of landscape as prospect and refuge is expressed most clearly in the ground views. They capture the sense of panorama and of far-flung dots of settlement contained in views from above, and they underscore the extent of distance and of vista with the its promise of sanctuary. Driving through this landscape establishes a visual pattern of repeated and stretched out expectations, from open space, to town, to open space, to village.

The vanishing point where road meets horizon is visually reinforced by the pavement edge, by the yellow centre line, and by ditches and telephone poles that parallel the road. Together these features dominate the view and pull one forward, first visually, and then physically along a road that leads out into the land. There is no forgetting here that a great expanse lies ahead.

From across the fields, the next town's grain elevator or church steeple gradually comes into view. These serve as landmarks, and over the intervening distance of miles to reach them, their importance becomes magnified. Under the glare of a hot sun, these symbols of sanctuary become the promise of an iced drink; or in a gathering winter storm, they imply safety.

There is also convergence in the views on another aspect of refuge, the lack of naturally-occurring wildlife habitat. Other than protection offered by the river corridor, both views indicate a lack of refuge. In most of the site the distances between significant tree patches, or even farmsteads or shelter belts, lack the necessary connectivity to support healthy populations of larger animals such as deer or fox. Similarly, the lack of edge conditions in the site, where land is frequently cultivated or burned to the water's edge, removes or reduces habitat for small animals and birds. [Smith 1986]

There is only a single instance of divergence in the analysis of this theme. It is, however, very significant in terms of how we

view ecological systems within our built landscape. In the view from above, a natural feature such as the river is landmark and orientation in a landscape otherwise dominated by the sameness of the grid. Its curvilinear form is the first recognizable feature of the site from the air.

By contrast, on the ground there is a noticeable lack of natural features to act as landmarks. Perhaps to those who first lived here, and for those who came to survey this land, the landmarks were small aspen patches, changes in vegetation that exaggerated a slight rise and fall in the topography, or the existence of sloughs and small streams. Any patches or sloughs that were once found here, are now gone, and the uniformity of cultivated crops have replaced natural vegetation. Creeks and streams have been drained, or diverted into channels.

What serves as landmark and a means of orientation now are cultural artifacts such as road signs, water towers, transmission towers, and the most notable of these, a prairie icon, the grain elevator.

theme SIX

landscape as language

Landscape as language is a meta-theme that appears throughout the study; landscape functions as a language in its capacity to carry meaning. These meanings are sought out and expressed in both the Measuring Eye, and in particular the Inward Eye which 'reads' the landscape and 'listens' to it, to uncover its functions and meanings.

More than verbalization to describe form, colour, or spatial relationships, language is also the expression of the culture and history of a landscape. The language of place names provide clues to cultural settlement patterns. Names of towns and villages here such as Rosenfeld, Altona, Neuberghal, and Gretna, indicate settlement in the western part of the site by German immigrants. Names in Range 1 East are French, e.g. Rivière aux Marais and St. Joseph.

The literal language of a landscape are place names that most often appear as visible signage. In a landscape with few geographical points of reference, signs orient the viewer. These include highway and provincial road signs, and the location of north-south roads in relation to the Principal Meridian, e.g. RD 1 EAST

CH EST

Signage also indicates political jurisdiction such as boundary changes between municipalities, town limits, and it relays historical or cultural information such as the route of the North West Mounted Police through this region.

Landscape as language is also memory of place, where windbreaks are links to winter storms or the soil-bearing winds of dry springs, and dikes or remnant farmyards are story tellers of their own. These are the words we listen to when we seek the deeper meanings of place. They come to us on the wind, and in the heat of the sun, or through the coolness of earth on bare feet. These are the words that whisper in the rustle of the aspen trees, and howl through the windbreak of Manitoba maples, willow and white spruce.

Language of place is often revealed over the course of time, in its momentary patterns of shifting colour, settling mists, or elusive light. This

is the language of the aesthetic experience crafted by the sound of water, the weight or weightlessness of snow, the wind rustle of nodding grass or tree branches.

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Language

Finally, the language of the deep structure of place tells yet another story of the landscape, perhaps the least visible yet most stable of all: of seasons we do not see but know will come, of prevailing winds, and deep aquifers. The language of the deep structure of place is the language of the long-lived, a requisite of stability, though the visible 'surface' structure changes, be it gradually, dramatically or abruptly.

Of all the indicators of place, language is perhaps one of the most powerful. It can us know place and the power of a landscape, if we stand still long enough to let it seep into our skin.

The language of this landscape is far greater than its
place names and highway signs.
Its language is in its wind, and in its light,
and in the sharp scent of the air before rain pelts cold and hard,
and in the sweetness of wet earth after the rain has passed.
It is the frantic call of the mother killdeer
who fears you are too close to her roadside nest,
and the hallmark song of the meadowlark on the telephone wire.

The wind may be long-travelled, warm and gentle on the cheek,
or so cold and sharp you can not breathe.
It re-creates the valleys and crests of the ocean
in the grasses and ripening grain that flex their heads as it passes.
It mimics the sandy ridged dunes in the hardened ripples of snow
across the fields
or in the soil banked into the dried-up ditches.
The sun comes up hazy and sets in blazes of orange, or
red or purple.
Lightning can sheet across a darkening sky,
or flash sharp and jagged from the heavens to the horizon.
The air can carry a dust that catches at the back of your throat, and
waits on every grassy blade
for the rain to come.

*It is a long way from characterless; 'overpowering' would be a better word.
For over the segmented circle of earth is domed the biggest sky anywhere,
which on days like this sheds down on range and wheat and summer fallow a
light to set a painter wild, a light pure, glareless, and transparent. The hori-
zon a dozen miles away is as clean a line as the nearest fence. . . . Across the
immense sky move navies of cumuli, fair-weather clouds, their bottoms as
even as if they had scraped themselves flat against the flat earth.*

Stegner 1977, p. 45

Final Views

The narrative of this place is the story of a geometrically constructed landscape. The image of grid, significantly, occurs in each of the six themes. That story begins with the purchase of Rupert's Land by the Government of Canada in 1870 from the Hudson's Bay Company with the intent to open the land for settlement and the construction of a railway. In 1872 The Dominion Lands Act was passed based on American homestead legislation. The Act provided for a system of survey to divide arable land into square townships each containing 36 sections. [Canadian Encyclopedia, 1988]

The resulting grid is the signature image of the aerial views which reveal a landscape constructed by geometry. The basic unit of a section, i.e. one square mile, is the building block of the dominant infrastructure here.

On the ground, agricultural operations, the most prevalent land use here, adhere to this geometry, and through its own processes refine and reinforce the grid imagery with visual order, repetition of line, symmetry, form, and pattern. These images are created by the disposition of fields and settlements, and in closer views, by the parallel markings on the fields left by the machinery used in cultivating, planting, and harvesting.

Farmyards consisting of residential and agricultural buildings, one or more ponds, vegetable and flower gardens, and fruit trees, are dispersed widely across the sections, locating for the most part at points determined by the subdivision of the grid. These serve as the centres for the agricultural operations. Hamlets, villages, and small towns appear in the aerial views as the natural gathering point or nucleus for the scattered farmsteads.

The conventions of dividing and occupying the land reveal the influence of governance at the turn of the twentieth century, a political imperative of land settlement, and social policies of demo-

cratic land distribution and individual ownership. The culture of settlement that required homesteaders to live on the land they cultivated is vividly written into this landscape. Also visible here, is an exception to this policy, the occurrence of the Mennonite street village.

This piece of the narrative, as read in the view from above, is very clear. Because of the dispensation granted the Mennonite settlers, the density of farmyards established in sections surrounding the street villages is lower than in the rest of the site. As well, also seen from above are the rectangular strip lots that surround the villages, each lot connected to a farmyard that lines the street. These are the only strip lots to be found in this region, a morphology usually associated with a river.

Although the story of this landscape is largely one of occupation for grain production across an extensive open plain, other narratives become particularly evident in views farther removed from the earth's surface. These are the natural characteristics of the landscape, visible in particular from the air where the patterns they create reveal the processes of the underlying structure, and the forms of natural features read clearly.

Rivers are a visible reminder of the processes of glaciation that formed this valley. The Laurentide Ice Sheet scraped across the land 10,000 years ago and created the plain in which this site is situated. [The Canadian Encyclopedia, 1988] From the air, rivers and streams still tell the story of the view below by acting as points of orientation and serving as natural boundaries that segment the land.

Underlying hydrological patterns visible from above also contribute to our understanding of the deeper landscape beneath the surficial grid. An entire system of ancient geology and of water movement and containment is at work here. There are underground streams, aquifers, and former stream beds - many of which are visible in the aerial photographs. The resultant patterns are the 'invisible' part of a larger hydrological system which surfaces at ground level as sloughs,

small creeks and rivers. At the surface, the movement of water through these systems is altered , redirected, or contained in a built system of ditches, drains and channels.

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Final Views

Other processes borne of seasonal change, weather and time are the subtexts in the reading of this landscape. The genius loci of this place is linked to these cycles; they govern how people here live, their patterns of operation and event, the forms they build. All are inseparably interchangeable.

DIVERGENCE & CONVERGENCE IN THE VIEWS

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Final Views

The view from the air and the view from the ground each reveals and conceals clues to the sense of place here. The views are set in the context of six themes to effect an exploration of the landscape from a fresh perspective. To the conventional, objective, and often reductionist form of analysis is added the subjective analysis of personal experience, using all of the senses, intuition, and memory.

One of the first questions emerging from the analysis is the issue of fit: what indicators are there of convergence between the aerial and the ground views within the six themes?

The images of agriculture best illustrate the interconnectedness of all six themes. It is the main event in this landscape, with strong images of activity in both views, such as the configuration of fields. Agriculture takes advantage of the dominant land form here, i.e. the plain, to use as its table of operation; its built farmyards, grain bins, elevators and roads are visible in most of the ground views. Agriculture as event and process is also highly visible in the patterns it creates on the earth's surface, apparent in all views.

Both aerial and ground views capture the spatial quality of this place. The prospect of distance, openness, and unboundedness is visible in the aerial view, and reinforced in the ground views by the presence of the mile roads which appear to run forever. The theme of prospect and refuge, more applicable to the ground views where its immediacy is experienced, confirms a lack of enclosure or containment in this landscape, and identifies landmarks such as elevators that imply sanctuary.

Infrastructure, an integral part of the event of agriculture, is a highly visible part of both the aerial and ground narrative. Its distinctive forms of grid, highway, and railway in the aerial views, and the elevated roads, power and communication towers, grain elevators

One of the most notable areas of divergence between the two views is the poor 'fit' between the very strong impression of the grid and its ensuing patterns of shape and colour as viewed from above, and their virtual disappearance in the view from the ground. It is a significant contradiction, that an aerial image which so unforgettably identifies this landscape through pattern, has no counterpart in the ground view. The lyrical and compelling patterns, created by the configurations of fields within squares, are impossible to see from the ground given the limitations of the human eye, and the relative flatness of the topography. What this means is that a major piece of the narrative of this landscape is invisible from the road.

Another instance of divergence is made apparent by changes in scale. The subtlety of natural processes such as water flow in the spring, or colour and pattern in the fields and ditches, can only be captured and appreciated with close-up ground views. However, the connection between these processes and the larger processes of a regional ecosystem, visible from above, are significant to gaining a fuller understanding of place: what is the source of the water that irrigates the fields? what are the foundations of its productive soils?

Also interesting in this narrative is the interface between the two major large-scale systems, the natural system and the built landscape. The interaction of the processes of one system - the flow of water, for example, with event of the other, such as immigration and settlement, causes some small shifts in otherwise established patterns.

For example, throughout the site most farmyards are located at a crossroads, or at the half or quarter mile points. In the south part of the site, the Rivière aux Marais passes through seven square-mile sections of land that each contain farmyards. In these sections, twelve homesteads have located near the river, whereas only four homesteads are situated at the anticipated and regular measure of the half-mile or quarter-mile.

As well, at a point where the river nears the intersection of two mile roads, settlers located their village. The Village of Halbstadt is the only settlement in this site that is located near a river. Both examples of settlement are expressions of the theory of prospect and refuge: settlers chose to build in the sanctuary of a river corridor, yet maintain a panoramic view of the landscape.

The fit or lack of fit between the two views of this landscape draws our attention to pieces of its story. Our awareness is thereby heightened to its configurations of farm and field, the alteration of or response to natural processes, or the inspiration of its forms, all of which contribute to our understanding of its particular sense of place.

The Inward Eye analysis of the landscape adds intangible qualities not conveyed in the measured analysis, qualities such as the tranquility or fear of the emptiness, ephemeral qualities of sun, cloud, wind, and rain, the struggle between people and nature for dominance and control of the processes of landscape, or the longing for refuge and sanctuary.

As well as relying on visual perception, this approach uses all the senses, and the creative forces of imagination and memory. Just as the aerial views reveal a narrative hidden in the ground views, the narrative of the Inward Eye seeks other invisible dimensions of this landscape. It uses views to awaken memory, and the senses to expand the meaning of what is seen here.

Part of the hidden narrative explored in the Inward Eye is the power of this landscape, the source of which is the inevitability of its cyclical processes, the sense of endlessness created by a vast sky and vanishing points that measure more than distance.

There is an assertive power in this landscape created by the vastness of the panorama, the far-off horizons, and the largeness of sky, reminiscent of the potency that lies beneath the endless waves of the ocean. It is a landscape that evades human attempt to measure it, subdue it, or control it. It is ever-changing from hour to hour, day to day and season to season, uncontainable or tameable. Inner sensibilities try to touch these ephemeral qualities, the scent of the air or the touch of wind, morning soft and gentle, or harsh and dry, waiting for rain.

It is not a matter of this environment aggressively and boldly asserting itself or making itself known, although this it does too in the violence of high winds and deadly temperatures in a snow storm or in the wind, lightning and sheets of hail when summer heat builds, knowing no boundary of section line or field. Its strength is there, felt

in the margins, like that empty space you feel when you catch your breath and pause between one breath and the beginning of the next. Before the next breath comes, there is the pulse of this landscape. It waits there, as unpredictable eruptions in its cyclical predictability.

Its ability to endure is almost palpable. Human occupancy and organization of the land in this place is a blip in the larger continuum of its history. Yet the struggle continues, to control natural forces and alter natural systems, to irrigate where there is no water, to drain where there is too much, to empty the sloughs and then plant shelter belts to hold on to blowing soil. Humans persevere, nature follows its own order.

These perceptions are one way of looking at this landscape. They are part of an exploration of place so that others can consider them, can respond to them, or call up their own experiences to look at this landscape in a new way.

What is the importance of this approach and what can it contribute to current theory and to the practise of landscape architecture?

It offers the methodological value of combining conventional approaches with the experiential and intuitive in the analysis of a landscape. The importance of the internal experience, the sensory response, and the images of memory have been undervalued and underutilized in landscape analysis. It reminds us that as we become more and more dependent on improved technologies and digital ways of measuring and seeing, we lose some of the human imprint, the measure that can be made only with the human eye or ear or sense of touch.

In this way, it adds another dimension to the approach of assessing a landscape, a balance to the use of matrices, codes, classification systems, digital summaries, and similar reductionist methods. New terms of reference can not only influence how we see the landscape, but that we in fact see beyond it to possible hidden meanings.

It also upholds the importance of the human experience of delight in one's surroundings; although this has always been one of the tenets of good design to be tested alongside 'firmness' and 'commodity' in assessing the outcome of any design project, it is a quality often overlooked at the initial stages of assessing or analyzing a site or a landscape. Spatial and behavioural and ecological measures have long been deemed sufficient to understand place. If we value the sensual human experience at all, then it seems appropriate to use it at the onset of a project as well as applying it as an evaluative tool at the project's conclusion.

This approach brings values and beliefs into the study - social, cultural, intrinsic, or monetary - to develop a meaningful narrative. It uses the Inward Eye to ask what is valued here? What beliefs are visible in the forms of a place, and hidden in its patterns? What do

the daily experiences of living feel like? What is in the scent in the wind, or in the sound of a meadowlark, and what can this tell us about event here and process. It asks how we can remember things sensed when we return to our computer screen to design.

The vertical and oblique images, and the images of the Inward Eye look at relationships between natural and built processes so that those who live in that place can consider the revealed narratives, the sets of relationships between the deep structure of place, its manifestations on the surface, and the state of current events, and respond knowledgeably to external forces that dictate change, such as changes in industry, or in the control or management of resources.

It brings an importance to the processes of growth and change that are mindful of the invisible structures that influence the landscape, its climate, and its water. Building dikes and dams, removing sloughs and river bottom trees, removing contours or installing additional drains alter these patterns and we do not always look carefully enough to find the deeper narratives that allow us to proceed with considered change.

This study is not without its limitations. Additional resources for custom aerial photographs and satellite images would allow for further explorations such as site specific field compositions, or the water quality of rivers and streams indicated through the false colour imagery. The patterns of a different scale, and the broader interface of natural and cultural processes captured in satellite imagery would capture broader rhythms and regional influences that place a site in a larger context thus adding a new perspective.

This model is a snapshot in time. It could also be applied to a longitudinal study to examine short or long term changes within the themes of event, process, form, and pattern on the landscape. As economies and technologies change, so do related events, processes and resultant forms that serve as indicators of place. What effect, for example, on the dominant quilt patterns of grain-based agriculture will

be had by current trends in agribusiness, the loss of the smaller individual farm, and the growth of a different kind of agriculture such as the hog industry. History already tells us of the loss of one-room rural schools, rail and telegraph stations, and wooden grain elevators all of which affect road and land use patterns, and social behaviours. Further changes are inevitable; what will their effect be on the character of this place, the quality of life here, and on our ability as landscape architects to enhance it ?

Finally, the perceptions and observations in this study are based on one person. They bring therefore one set of experiences and memories and the personal intuition of one individual, the writer. These are the parameters established for this study; the sensory response of another, or several others, would arguably change the outcome of the findings of the Inward Eye. They would not be more or less valid; rather they would add another perspective to the findings.

At the heart of this discussion is the hypothesis that the prairie landscape hides its story from those passing through it, and that by looking at it from the air as well as from the ground, in both a measured way and in a poetic way, we can uncover the hidden and reveal the invisible, and in doing so tell the truer story.

The site for this project has been looked at in this way. The measured analysis includes a detailed consideration of the aerial views equal to that given the ground views. The value of this approach is apparent in the findings: a landscape that is a challenge to read from the ground because of its relatively flat topography appears wonderfully coloured and patterned from above. The patterns speak of the dynamic nature of the kind of agriculture practised in this landscape, growing grain.

To see the aerial view as well in terms of event, process and form reveals its deep structure and hidden forces, and offers additional meaning and understanding for events that take place at its surface, on the landscape itself. These might be the configuration of fields and the disposition of land, the differences in vegetation patterns, choice of crop type, or farming practises that relate to the change in soils and moisture levels dependent on deeper geophysical structures.

The other view considered in this study, that of the Inward Eye, is offered as another way to break through the invisibility in this landscape. This approach looks at the aerial images and the ground photographs for the inner response they elicit, for that part within us touched by a remembered moment of impending storm, or the beautiful perfection of a newly white winter morning. It asks of us to look into the views of this place to smell the oil from the sun-faded combine in the field, or hear the low complaint of the truck engine straining against its load of grain in the soft soil beneath the stubble.

This approach to viewing aerial or ground imagery that uses the *Measuring Eye* and the *Inward Eye*, is necessary for the considered understanding of a landscape before embarking there on any design intervention. Ultimately it is seeing the landscape through both view points, and with the whole dimension of one's being. The seeing is the photographs, and is beyond the photographs which capture the views. It is more than counting and quantifying the images. It is asking the five senses, as well as the capacity to feel and imagine to respond to those images.

We can all see a landscape, or learn to see it, like this. It is like looking at a painting, or listening to a piece of music, or reading a sonnet. Using this approach is dependent on one's perceptual ability, a skill that can be learned and honed through practise. In this way, our ability to analyze place using the Inward Eye is not dependent on our familiarity with a landscape. Familiarity with a landscape means only that the set of experiences and images the viewer draws on, has been created by that place. We take this set with us to every situation that requires a sensory or intuitive response, whether it is interpreting a fine film or understanding a foreign landscape.

We are all 'outsiders' to any environment that is not our own. Indeed, this approach is perhaps even more important when carrying out work in another culture, where the need to understand fully the meaning and sense of that place is critical to a successful and respectful design intervention.

The Inward Eye affords us the luxury of being able to bring not only fresh eyes to the analysis, but new associations, our associations, to what we newly smell, or hear or touch. Intuition and awakened memories serve us well in this instance; we need only allow them space in our thought processes, to be cognizant of them and to heed them.

The value of the Inward Eye is that sensory response and awakened memory can open a new way of seeing. In this study, the

model pairs the Inward Eye analysis with the objective views of aerial and ground photography of a small portion of the Manitoba prairie. To express the 'findings' of the subjective analysis, the model uses a form of literary expression by the writer and by others.

There can be other kinds of analyses and other means of expression in the application of this model. It could be applied to much larger or much smaller sites. Other types of objective analytical models might be paired with the subjective analysis. This model could be used in conjunction with other kinds of research about place such as personal interviews, oral histories or community expressions of place. Finally, instead of a literary response of poetry or prose, the findings of the Inward Eye might be expressed in paint on canvas, images on film, as well as in earth, stone, water and vegetation. [Cosgrove & Jackson in Palka, 1995]

The challenge here is redefining the terms of reference of how we see the landscape, and how we look beyond the surface at the hidden layers and meanings. "The complimentary perspective of a landscape of imagination implies a discovery of and a weaving together of both the physical and the sensual, the real and the imaginary, the external and the internal. The task of translating this into a viable practice of landscape design depends on innovative landscape technologies." [Jacobs 1998, p. 5]

If we value the fullness of the human experience, we can learn to heed both the language of the landscape and the language of our inner eye in our first encounters with a new place. We can then add the importance of the sensory experience to the beginning of the design process, that is, to the analysis, as well as to the end, with the ultimate goal of enhancing the meaning of a place and the lives of those who live there. Perhaps then as landscape architects we will have earned the right to intervene in that landscape, and can then do so with both passion and with respect, with pragmatism and with poetry.

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