



Translational Research

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READING THE HUMAN GEOGRAPHY – AN OPERATIONAL GUIDE TO INTERPRETING THE CULTURAL LANDSCAPE

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Background and Definitions:

As "America's Expeditionary Force in Readiness", the United States Marine Corps trains, organizes and equips itself "to respond to any crisis... any place... any time..." [1], with little, if any, notice. Marines are expected to be able to "go now, 'figure things out' when [they] get there, and begin operating immediately... even in the most austere environments." [2]

To 'hit the ground running' in this way is extremely challenging, especially when, in today's complex security environment, it is not always clear what, where or when the next deployment will be. Therefore, in addition to operational readiness, regional preparation and some language capability, **Marines should be equipped with tools to be able to learn quickly about an area of operations (AO)** once they arrive. The discipline of human geography [3] provides a variety of techniques (mainly visual) that can facilitate the gathering, interpretation, and display of human information - particularly in difficult and/or culturally unfamiliar operating environments.

This paper focuses on one such technique - the ability to 'read' (or see and interpret) the cultural landscape. Effective landscape interpretation is an art that requires both skill and practice. This paper is designed to familiarize Marines with the processes involved.

The **cultural landscape** can be defined as the appearance of an area and the particular way its parts have been arranged to produce that appearance [4]. It is human-made and dynamic, created by the constant shaping of the

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physical environment by humans and their relationships. Landscapes [5] reflect the social, cultural, economic and political attitudes of the individuals or communities who occupy and shape the land. Therefore, **a careful 'reading' of a landscape can provide information about the people who create it, use it and live in it** [6]. More specifically for Marines, landscape interpretation can reveal significant insights into four key aspects of human geography as well as the **five dimensions of operational culture** [7]:

- (1) Interactions with the **physical environment** (for example, patterns of water use or materials used for building);
- The (2) **economy**, or the way that people in a culture obtain, produce and distribute goods (e.g. through agriculture, trade, etc.);
- (3) **Social and (4) political structures** (e.g. evidence of social networks and power structures);
- (5) Identity, values, **beliefs and symbols** based upon ethnicity, religion etc. (for example, sacred spaces or the use of graffiti to express identity)

For a Marine trying to make sense of an unfamiliar AO, its population, human geography and operational culture, an ability to 'read' the cultural landscape is invaluable, especially where comprehensive sources of regional/cultural information are lacking, or where conditions on the ground are fluid rendering standard reference materials incomplete or obsolete.

This paper is designed to familiarize Marines with the processes involved in 'reading' the cultural landscape. The first section presents guidelines on how to 'read', or see and interpret the landscape drawn from techniques and principles commonly cited by human geographers. In some cases, U.S landscape illustrations are included because they are likely to be familiar to the reader. Section two presents common landscape features and the sorts of information they can reveal to Marines. Section three provides brief examples of how cultural landscape interpretation can be applied in Afghanistan and section four presents some considerations for training Marines.

I. Guidelines for 'Reading' the Landscape:

'Reading' a landscape requires keen observational skills and an active, questioning mind. It is easy and very normal to travel through a landscape without really taking in or thinking about what is in clear sight. Due to a process called 'adaptation,' people tend to ignore visual information that they see frequently because they are conditioned to expect that it will be there [8] and have long ago internalized a cultural understanding of its

meaning(s). Moreover, in the 21st Century, most people are busy and have a purpose that inhibits their ability to slow down and develop deep situational awareness [9]. Therefore, in order for a Marine to effectively 'read' a landscape - either familiar or unfamiliar - he/she must slow down and use observational skills [10] to consciously look at and question each element in the scene.

For example, rather than just passively seeing a house in a village or town, a Marine needs to actively think about its size, its particular architectural style, the materials from which it is constructed, and the spatial and temporal contexts in which it exists (i.e. its absolute location and its position relative to other landscape features such as a road, surrounding houses, a water source, etc. and the time of day, day of week, season, etc. at which it is being viewed).

A related way for a Marine to approach landscape interpretation involves asking the following sequence of four questions:



Photo courtesy of the authors

(1) What can I see? - Direct observation. *A grey house made of wood, set back from the street, surrounded by a neatly landscaped yard, driveway and trees. There is one vehicle (SUV) in the driveway.*

(2) What is the wider context? - Spatial and temporal. *A suburban street in the US during daylight hours lined with well maintained houses and yards that look similar to each other.*

(3) What do my observations in context tell me? - Inference. *This is safe middle class neighborhood.*

(4) How can I be sure? - Validation. *The houses look well kept. There are no signs of violence, crime or damage. The car in the driveway is a new SUV. The yard surrounding the house is purely decorative so there appears to be no economic need to grow one's own food.*

2. Landscapes provide visual 'clues' to the human geography and operational culture of an area. People are reflected (often unintentionally) in their ordinary, run-of-the-mill landscapes. The cultural landscape is filled with readily visible signs that can be interpreted, monitored, analyzed, and mapped. The architectural styles of religious buildings, residences and outbuildings, as well as crop types and field patterns all may indicate the economic, ethnic or religious composition of a village, area, or section of a city.



Photos courtesy of the authors

For example, above are two Catholic Churches located in the same Northeastern United States town. The fact that they are Catholic is indicated by their prominent crucifixes, but it also tells the observer something about the type of people who live and worship in this area. In the United States, Catholic Churches tend to be located in areas populated by southern European, Irish and Hispanic immigrants - and their descendants. The Church on the left was built by an Italian community in 1917, while the Church on the right is Irish and dates originally from 1855 (although it was rebuilt in 1911). Their distinct architectural styles (especially evident in their towers) can be traced back to the cultural origins of the communities who sponsored, built, still attend and live close to these Churches.

3. ALL items in a landscape reveal something about the human geography and operational culture of an area and are important in their ability to provide clues. Commonplace objects can provide very significant information. Basic landscape features such as signs, pictures, graffiti, utility poles, satellite dishes, building materials etc. are often equally

if not more revealing than large, prominent features - especially when it comes to identifying cultural groups, localized economies, social networks and impacts of local security and development efforts.



[11]

Photo courtesy of the authors

For example, above are two houses displaying similar religious plaques. The house on the left is in the Azores and since wood is in short supply on the islands, it is of typical stone and concrete construction. The house on the right is in the United States where timber is widely available and comparatively cheap. Therefore it is of standard wood construction. In the Azores many houses have plaques depicting Christ or the Virgin Mary hung on an exterior wall. In the United States, the presence of such a plaque indicates the home of Azorean immigrants.

4. Landscape differences suggest real differences in human geography and operational culture. If one part of a country (or town) looks different from another, the human geography and operational culture of the two places are likely to be different. Similarly, if two areas begin looking more alike, their human geographies and cultures may be converging or specific socio-cultural traits may be diffusing between them. For example, the appearance of new and different church styles could indicate the diffusion of religious beliefs or arrival of immigrant groups (as in the two Catholic Churches described previously).



Photos courtesy of the authors

Above are two houses of typical wood construction located in the same northeastern United States town. The house on the left has two doors and several mail boxes which suggests that it is divided into at least two separate apartments. This 'Triple Decker' (simple three storey house) is characteristic of the type of house owned and occupied by lower income - usually immigrant - extended families. The houses around it are similar, suggesting a largely immigrant neighborhood. A few streets away is the house shown on the right. It has features Americans perceive as much grander and more ornate, and has only one main entranceway. This would suggest that it is occupied by a higher income family/individual. The houses around it are similar suggesting a high income / upper class neighborhood.

5. Landscape change suggests real changes in human geography and operational culture. Landscapes represent enormous investments of money, time and emotions. People will not change them unless they are under heavy pressure to do so. Changes in ordinary features of a cultural landscape can signal important shifts that need to be recognized and understood. For example, a pattern of changes in crop type or the removal of graffiti from city streets (as shown below) may indicate new economic conditions and/or a change in power dynamics. The construction (or destruction) of a certain institution - such as girls' schools - suggests a change in the influence of a particular cultural group.



Before



After



[12]

6. Since cultural landscape features provide clues to the human geography and operational culture of an area, they must be 'read' within their wider geographical, cultural, environmental and temporal contexts. Single landscape elements often yield limited or even irrelevant information. Interpretation of relationships and patterns of elements in the landscape can however provide extremely valuable information. For example, the presence of a vehicle outside a house may reveal very little on its own. However, in a context where no other houses have cars parked outside, it raises questions including, who owns it? What is it used for? Where does it go? How is it afforded?

In addition, all landscapes are embedded within a temporal context and can change depending on the time of day, day of the week, season or festival. For example, a space that is the camel market on Fridays may give the impression of being abandoned every other day of the week. This has serious implications for a Marine unit looking for somewhere to set up base.



[13]

The observer must also be careful not to 'mirror image,' or interpret landscape elements simply from his/her own cultural point of view. For example a fence in the United States (as shown on the left) clearly suggests a boundary and private property (i.e. an attempt to keep others out).



[14]



[15]

However, in another cultural context (such as in Mongolia, shown on the right) it could be temporary, a means to corral animals or simply to divide one type of crop from another on communal land. **Prior study and knowledge of an AO helps considerably. Marines must be extremely careful not to jump to conclusions, but instead to have an active questioning mind and to interpret landscape elements within the cultural context in which they exist.**

7. Most landscapes are intimately related to the physical environment.

Therefore, landscape analysis benefits from some knowledge of physical landscape elements (climate, landform, soils, etc.). This is particularly significant in rural environments where farming or subsistence activities are important. If a Marine has some understanding of soils, climate, etc. then he/she can figure out when, where, and why certain types of crops are grown (or not grown), and interpret what changes and anomalies in crop

patterns may mean. In addition, housing styles often reflect the physical environment. For example, they may have been developed to mitigate health threats with stilts being used to keep families above water during a wet season and above the biting range of disease bearing mosquitoes.



[16]

8. Landscapes may serve as a symbol. It is not unusual - all over the world - for prominent landscape features to carry symbolic/ sacred value. For example, in certain contexts a hill may be more than an area of high ground or a site for resource extraction; it may be a sacred mound or the home of a God and thus require or prohibit certain behaviors. For example, the Govardhana hill shown below, located in Uttar Pradesh, India, is sacred to various sects of Hindus.



[17]

Knowledge of local culture will help the Marine determine whether a landscape feature is in fact symbolic/ sacred. However, if in doubt, it is important to be aware of the possibility and to seek out additional information. The presence of a sacred structure, picture, or ribbons, prayers and offerings such as food, flowers and candles attached to or close by the landscape feature may provide helpful clues [18].

10. A word of caution: When reading the landscape, it is all too easy to misinterpret elements or to miss them altogether. Just because something is in plain sight does not mean it is easy to 'see'. Untrained outsiders may miss small, subtle things, or overlook the commonplace, but important ones.

Therefore, it is vital to use active observational and critical thinking skills and never to jump to conclusions. The key is to notice the landscape feature in the first place and then to analyze it in its social, cultural and environmental context. And then if its meaning still remains opaque, Marines should use questioning skills to try and establish whether the feature has any operational significance.

11. Common landscapes are often hard to study by conventional academic means.

In many areas formal resources for landscape interpretation are lacking or out of date, and where there are written materials available, the focus tends to be on the curious, dramatic or famous features of a landscape. For example a Google search of 'Afghanistan cultural landscape' yields thousands of references to the Bamiyan Buddhas and very few about field patterns and how they relate to land ownership. Therefore, in order for a Marine to gain relevant information from the cultural landscape, he/she must go out and actively 'read' and interpret it.

II. Common Landscape Features and their Interpretation:

There are seven key and often interrelated categories of landscape features to which Marines should pay attention:

- Building types, materials and styles
- Roads, bridges and other transportation routes
- Settlement patterns
- Field/agricultural patterns
- Fences, walls and outbuildings
- Commonplace items and features
- Sacred and symbolic items and features

Being able to 'read' these sorts of landscape features can reveal considerable insight into the four key aspects of human geography and the **five dimensions of operational culture** mentioned previously:

- (1) Interactions with the **physical environment** (e.g. patterns of water use);
- The (2) **economy**, or the way that people in a culture obtain, produce and distribute goods (e.g. through agriculture, trade, etc.);
- (3) **Social and (4) political structures** (e.g. social networks and power structures);
- (5) Identity, values, **beliefs and symbols** based upon ethnicity, religion etc.

1. Building types, materials and styles can reveal information on:

- The availability of and access to different resources for construction, e.g. wood, straw, mud bricks etc.;
- The presence and/or extent of a market economy;

- Land use;
- Family composition, size and number of dependents;
- Socio-economic status of the owners/inhabitants/local area. Most buildings will be constructed from commonly available materials. The use of less common materials suggests greater wealth and status. However it is important not to mirror image. For example, in much of the United States wood is a common building material, whereas in other places wood is less widely available and a sign of wealth (such as in the case of wooden Afghan doors);
- Societal resilience;
- Cultural/ethnic identity of the owners/inhabitants/local area.

2. Roads, bridges and other transportation routes can reveal information on:

- Movement patterns;
- Access to resources and markets in other places;
- The spatial distribution of power, support for the government and/or political control;

3. Settlement patterns (including apparent empty areas or lack of settlement) can reveal information on:

- Access to, control and use of resources e.g. water sources;
- Patterns of land ownership and use;
- Local social organization and networks;
- The spatial distribution [19] of socio-economic and political variables such as wealth, status, and power within a local area;
- The spatial distribution of different cultural, ethnic and religious groups within a local area.

4. Field/agricultural patterns can reveal information on:

- Land use, e.g. crops grown, intensity of use, yields, animals raised etc.;
- Fertility of the land, soil types, prevalence of erosion, etc.;
- Local climate, availability of water, need for irrigation etc.;
- Type of agriculture practiced, e.g. subsistence, market, some combination etc.;
- The spatial distribution of socio-economic and political variables such as wealth, status, and power within a local area;
- The spatial distribution of different cultural, ethnic and religious groups within a local area.

5. Fences, walls and outbuildings can reveal information on:

- Availability of and access to different resources for construction;

- Concepts of use, ownership and division of land and land-based resources;
- Concerns about privacy and threats from humans and predators;
- The spatial distribution of socio-economic and political variables such as wealth, status, and power within a local area;
- The spatial distribution of different cultural, ethnic and religious groups within a local area.

6. Commonplace items and features can reveal information on:

- Access to, control and use of resources, e.g. water and wells;
- Social networks and interconnections between the local area and other places, e.g. bus or taxi service; market with goods from outside; roofs made from non-locally available materials; presence of T.V antennae and/or satellite dishes;
- Identity and values, e.g. flags or pictures;
- Location of wealth, e.g. presence of a car where everyone else has bikes and scooters.

7. Sacred and symbolic items and features can reveal information on:

- The meaning attached to prominent physical features, e.g. prayer flags, offerings, etc.;
- Social and political networks and identities, e.g. graffiti, posters, signs, symbols, etc.;
- Local cultural, ethnic and religious identities, values and allegiances, e.g. signs, symbols, etc.

III. Application of Cultural Landscape Interpretation: Brief Afghanistan Examples

A. Water Collection:

According to a study by Klijin [20], the collection of well water in much of Afghanistan has traditionally been a function of several factors:

- 1) Physical - wells have to be drilled where water is available, which is determined by geology, soil etc.
- 2) Social, Cultural and Economic -
 - a. In wealthier families, traditionally men are the sole water collectors. In poorer families, due to economic necessity, women collect the water.
 - b. Wealthier groups traditionally maintain public wells for poorer groups, as a form of almsgiving. However, this sets up a situation of reciprocity [21] between the two groups.
 - c. To keep women out of sight or separated, some wells are set apart and designated as 'women-only'. At others, specific times

of day are allocated for water collection by women, while others are allocated to men.

Therefore, by reading the landscape and observing

- a) where wells are located;
- b) who uses them
 - i) men and/or women
 - ii) which households;
- c) who is responsible for maintaining them; and
- d) the times of day they are used by different groups,

a Marine can learn many details about the socio-economic status of particular areas and/or households, and the makeup of social networks and local power hierarchies.

Traditionally most wells have been public. However, in recent years, the digging of private wells has become increasingly common. This is a practice that has come into Afghanistan from outside and may indicate the spread of external influences as well as social, cultural and/or economic changes. For example, since private wells enable women to gather water without spending time in common areas, their spread may suggest that stricter traditions of purdah [22] have penetrated. Alternatively, some wealthier families may choose to drill private wells in order to forgo the expense of maintaining public wells, due to declining economic circumstances or drought, for example. The digging of private wells can have a significant impact on local power relationships, the way information flows, social hierarchies, and reciprocal relationships, as well as on the livelihoods and health of poorer families.

This type of landscape interpretation and analysis has direct operational application for the Marine. For instance, bolstering the ability of certain individuals or groups to maintain public wells could be used as a way to strengthen people's loyalty or obligations to a particular traditional leader that counterinsurgents may trust or want to empower. Conversely, providing alternative water sources could help diminish the power of a leader who may be working against the government or supporting insurgents.

B. T.V. Antennae:

In Afghanistan T.V. antennae are a common and highly revealing landscape feature. The presence of T.V. antennae is typically a function of the following factors:

- 1) Economic - televisions are relatively expensive. A household has to be able to afford one.
- 2) Social and Cultural - religious or political rules may prevent (or allow) television ownership and usage.

Therefore, by observing

- a) which houses have T.V antennae;
- b) in which areas of a town T.V. antennae are clustered; and
- c) who gathers to watch the T.V.s,

a Marine can gain information about

- a) the spatial distribution of relative wealth and technology;
- b) who has access to particular types of information and news (and therefore possible topics for discussion and rapport building);
- c) the makeup of social networks and hierarchies;
- d) and the presence (or absence) of extremist political and religious influences.

For example, especially in rural areas, the households where people gather to watch T.V. are likely to be those with more economic and social influence.

A changing antennae landscape usually indicates increasing or decreasing wealth and access to information. Moreover, an increase in T.V. antennae in areas experiencing little local economic growth may indicate the receipt of remittance money [23] and thus help identify and map households/families that have members living in cities or abroad. This in turn may help with the identification and mapping of rural-urban social networks.

Increases and decreases in antennae may also relate to perceptions of security. In Taliban controlled areas, for instance, bans on television and fear of punishment have led people to take down their antennae. Decreases in antennae accompanied by increases in video tapes/DVDs for sale in stalls or bazaars may suggest that peoples' access to information is shifting from T.V. (and by extension government and media sources) to extremist and insurgent sources.

Such changes in an antennae landscape may be correlated with the closure or destruction of girls' schools, the disappearance of music and barber shops, and the neglect or destruction of Sufi shrines, and then used to map the ebb and flow of insurgent influence and support.

IV. Some Considerations for Training Marines:

Since many cultural landscape features may not be obvious, or may mean different things in different places and contexts, this paper presents a set of general principles to help Marines read the landscape and avoid misinterpretation.

As a next step, lessons-learned from landscape interpretation practices already in use in theater (for example, by Civil Affairs, Foreign Area Officers, Human Terrain Teams etc.) could be compiled and incorporated.

In addition, Marines could be provided with some indication of what specifically to look out for in their AOs. Guides showing diagrams, photos, and maps of common but meaningful landscape features could be developed for particular cultural environments. In Afghanistan these could include house types and building materials; field and crop patterns; well locations and types; outbuilding locations and styles; wall types and patterns; mosque styles and locations; and village morphologies.

Once the above steps are completed, a course of instruction could be developed that provides for different levels of training and education for different personnel. Reading the landscape is both an art and a skill, and there is not the time to turn every Marine into an adept landscape interpreter. However, it should be possible to develop a continuum of increasing cultural landscape knowledge, skills and understanding - both general and specific - such that at any time in any local AO, every Marine can identify and report back on significant cultural landscape features, while a few can then incorporate these features into more complex socio-cultural analyses.

Notes:

[1] James F. Amos, General, U.S. Marine Corps, "35th Commandant of the Marine Corps Commandant's Planning Guidance," U.S. Marine Corps (2010), p. 10.

[2] *ibid.* p. 5.

[3] Human geography is the study of where people and their activities are located and why.

[4] Karen M. Morin, "Landscape and Environment: Representing and Interpreting the World," in Holloway, Rice and Valentine, *Key Concepts in Geography*, London: Sage Publications Ltd. (2003), p. 320.

[5] The terms 'cultural landscape' and 'landscape' are used interchangeably to refer to the cultural landscape. This is distinct from the 'physical landscape' which refers only to the physical (i.e. non-human) aspects of an area/environment.

[6] D.W. Meinig, Ed., *The Interpretation of Ordinary Landscapes: Geographical Essays*, Oxford: Oxford University Press (1979).

[7] Operational Culture is "those aspects of a culture that influence the outcome of a military operation; conversely, the military actions that influence the culture of an area of operations." B.A. Salmoni and P. Holmes-Eber, *Operational Culture for the Warfighter*, Quantico, VA: Marine Corps University Press (2008), p. 15.

[8] USMC., "Combat Hunter, Concurrent Review," (2010), p. 31.

[9] In a given context, situational awareness means "knowing what is occurring, understanding what could occur [and] projecting the options that

could exist." *Tactical Decision Making*, Washington DC: Marine Corps Institute, p. 46.

[10] Teaching observational skills is beyond the scope of this paper. However, the 'Combat Hunter' program provides helpful instruction in this area (see [8], Chapter 2.)

[11] Dan Iggers, *Catholic Plaque, Mosteiros*. (2010).

<http://www.flickr.com/photos/fortinbras/5285576674/in/set-72157625531937329>
Accessed on 8/25/2011.

[12] Moreland City Council, *Smith Street, Brunswick West and Graffiti at different places in the car park at the Glenroy shopping strip between Gladstone and Finchley Avenue on Pascoe Vale Road*. (2009).

<http://www.moreland.vic.gov.au/environment-and-waste/cleaning-moreland/looking-good/dirty-dozen/before-after.html> © Moreland City Council. Accessed on 8/25/2011.

[13] Photo courtesy of Laurie Rush.

[14] Daniel Farrell, *Finished Fence*. (2007).

<http://www.flickr.com/photos/danielfarrell/1009023249/> Accessed on 8/25/2011

[15] Alex_and_Stacy, *Windshield Fence*. (2009).

<http://www.flickr.com/photos/avatarr8/3692533926/> Accessed on 8/25/2011

[16] Dhaag23, *House on Stilts (Assam)*. (2010).

<http://www.flickr.com/photos/dhaag/4676195959/> Accessed on 8/25/2011

[17] Shivganesh, *The Sacred Hill*. (2007).

<http://www.flickr.com/photos/ganju/360553940/> Accessed on 8/25/2011

[18] Laurie W. Rush, *Cultural Property on the Battlefield*, Fort Drum, NY: U.S. Army.

[19] Spatial distribution is "the arrangement of something across the earth's surface." J.M. Rubenstein, *The Cultural Landscape An Introduction to Human Geography*, Upper Saddle River, NJ: Pearson Education, p. 497.

[20] Floortje Klijn, *Water Supply and Water Collection Patterns in Rural Afghanistan - An Anthropological Study*, DACAAR. (2002)

[21] Reciprocity is "the idea of an exchange between people that creates a relationship - "what goes around comes around" and "you scratch my back, I'll scratch yours." [For example,] you buy somebody a coffee and, in U.S. culture, there is an implied need for him to reciprocate - return the favor - at some indeterminate point in the future... Reciprocity is used to... Create and maintain relationships - the specifics of a local culture dictate the type and intensity of the relationship that the exchange creates; Store resources - many cultures use reciprocity to build social networks that store wealth in the form of favors or resources that can be called upon in time of need." Marine Corps Intelligence Activity, *C-GIRH Cultural Generic Information Requirements Handbook*, Quantico, VA: MCIA (2008), p. 40-41.

[22] Purdah is a mainly Muslim process "that involves the seclusion of women from public observation by means of concealing clothing (including

the veil) and by the use of high-walled enclosures, screens, and curtains within the home." Encyclopedia Britannica.com

[23] Remittance money is money sent from one place to another, usually by people working away from home.