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**UNITED STATES MARINE CORPS**  
THE BASIC SCHOOL  
MARINE CORPS TRAINING COMMAND  
CAMP BARRETT, VIRGINIA 22134-5019

**PROFILING AND TACTICAL  
TRACKING  
B2A0225XQ  
STUDENT HANDOUT**

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## Combat Profiling and Tactical Tracking

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### Introduction

In today's dynamic tactical environment, the ability to see, observe, and interpret what is around us is a crucial skill to master in order to successfully operate on the battlefield.

Combat Profiling and Tactical Tracking are techniques by which we as individual Marines can see and assess the objects and people in that environment, and as leaders, build situational awareness and aid us in developing a situation. By employing these methods we seek to achieve a better understanding of the environment or possibly the threat allow us to make better tactical decisions when the time comes.

### Importance

Combat Profiling is a combination of time-tested, current-trend profiling, and behavior-patterning analysis. This analysis can effectively be used to detect enemies hiding within a civilian population.

Tactical Tracking allows Marines to gather information by analyzing the forensic evidence left by the enemy on the natural environment. This information will allow Marines to develop a better intelligence picture in regards to an enemy's size, activities, location, unit, time, equipment, and intent

Together, Combat Profiling and Tactical Tracking can be utilized to help Marines maintain the initiative in offensive and defensive operations.

### In This Lesson

In this lesson you will learn the basic techniques of Combat Profiling and Tactical Tracking which includes the following:

Topic	Page
Combat Profiling Defined	4
Establishing a Baseline	5
Combat "Rule of Threes"	7
Legal, Moral, and Ethical Parameters	7
Recognizing the Anomaly	8
Cultural Implications	11
The Six Domains of Combat Profiling	12
Hueristics	12
Proxemics	13
Geographics	16
Atmospherics	18
Kinesics	19
Biometrics	21
Tactical Tracking & Tracking Terminology	22

How Tracks are Seen	23
Dynamics of a Footprint	24
Characteristics of Human Gait	24
Observable Indicators	25
Summary	27
References	27

## Learning Objectives

### Terminal Learning Objectives

TBS-CMBH-1001 Given an area to observe, with or without the aid of observation devices, while wearing a fighting load, conduct observation to detect anomalies.

TBS-CMBH-1002 Given an area to observe, while wearing a fighting load, identify anomalies as threat or non-threat, without error.

TBS-CMBH-1003 Given an area that contains spoor, while wearing a fighting load, identify spoor in accordance with combat tracking indicators.

### Enabling Learning Objectives

TBS-ATFP-2103b Given an evaluation, define Cooper's Color Codes without omission.

TBS-CMBH-1001a Given an area to observe, with or without the aid of observation devices, while wearing a fighting load, maintain observation, to detect anomalies.

TBS-CMBH-1001b Given an area to observe, with or without the aid of observation devices, while wearing a fighting load, orient mental process to the situation, to raise situational awareness.

TBS-CMBH-1001c Given an area to observe, while wearing a fighting load, utilize optics to detect anomalies, without omission.

TBS-CMBH-1001d Given an area to observe, with or without the aid of observation devices, while wearing a fighting load, establish a baseline, to facilitate detection of anomalies.

TBS-CMBH-1001f Given an evaluation, define the Six Domains of Combat Profiling without error.

TBS-CMBH-1001g Given an area to observe, with or without the aid of observation devices, while wearing a fighting load, record information for reporting to higher, without omitting key components.

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TBS-CMBH-1002a Given an area to observe, while wearing a fighting load, perform enhanced observation techniques to detect anomalies.

TBS-CMBH-1002b Given an area to observe, while wearing a fighting load, establish a baseline to detect anomalies.

TBS-CMBH-1002c Given an area to observe, while wearing a fighting load, distinguish anomalies from baseline to determine threats.

TBS-CMBH-1003a Given an area that contains spoor, identify the dynamics of a footprint in accordance with combat tracking indicators.

TBS-CMBH-1003b Given an area that contains spoor, identify observable indicators in accordance with combat tracking indicators.

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## **Combat Profiling Defined**

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Combat Profiling is a method of proactively identifying enemy personnel or threats through human behavior pattern analysis and recognition. Combat profiling is a tool that Marines can use to improve their ability to move through the Decision Cycle. Combat Profiling influences actions at all levels of command; not only increasing individual survival on the battlefield, but assisting the commander in his Intelligence Preparation of the Battlefield. Combat Profiling equips Marines with a more thorough understanding of Human behavior and ability to read the Human Terrain. Whatever the threat; be it an IED, ambush, surveillance, or snipers, there are certain observable and measurable characteristics that the enemy must have to be successful. Combat Profiling works on people, places and events, vehicles, things, and in any culture or location.

Combat Profiling is a combination of time-tested, current-trend profiling, and behavior-patterning analysis. This analysis can effectively be used to detect enemies hiding within a civilian population. Combat Profiling relies on identifying typical human behavior patterns, through the six profiling domains, to establish a baseline. Humans, by nature, tend to follow predictable patterns of behavior.

Combat profiles are indicators based on the enemy's techniques, tactics, and procedures (TTPs); and their observable and measurable behavior patterns. When Marines identify the enemies' TTPs and behavior patterns, they can assist you to identify the enemy among the civilians. Profiles are deviations (anomalies) from a normal or typical behavior (the baseline) which would lead you to believe that an observed situation (persons, events, vehicles and objects) may have the potential for harming you or other people. These deviations are anomalies that stand out from the surrounding area's baseline.

### **BASELINE+ANOMALY=DECISION**

Enemies, including criminals and terrorists, attack targets of opportunity (the soft target). The targets they choose to attack will give them maximum payoff. In order to conduct

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## **Combat Profiling Defined (Continued)**

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their attacks, they will have to conduct preparatory operations. They may steal cars or materials that are non-explosive to make IEDs. Individuals engaged in these activities could be doing them in preparation for attacks. It should be noted that enemies will attack hardened targets when the high payoff value is worth the cost.

Enemies will conduct planning and may even rehearse their activities prior to carrying out an attack. Part of their rehearsal may include committing some of the crimes mentioned above. If Marines know this is part of their enemies' TTPs, they will know what to look for and create additional opportunities to catch the enemy before they attack. It is important to understand that all terrorists are criminals; however, not all criminals are terrorists. Their small crimes seem harmless, but all of those crimes added together lay the foundation for larger threats such as IEDs and ambushes.

Various aspects of the enemy's personality and Tactics Techniques and Procedures (TTPs) are displayed before, during, and after an attack. This information is combined with other relevant details and physical evidence to develop a practical working knowledge of the threat location. Combat Profiling assists in identifying hidden threats from people, objects, vehicles and terrain. By utilizing combat profiling a Marine can detect a threat and make a legal, moral, and ethical decision.

The process of creating, updating, and maintaining a Combat Profile is time-consuming, yet a mandatory process.

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## **Establishing a Baseline**

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Everything has a baseline, places, events, cultures; and especially the Human Terrain. A baseline is a basis for comparison and a reference point against which other things can be evaluated. A Marine creates a baseline by looking at the current situation, determining the context and relevance of your observations. The Marine then measures that against the template and prototypical matches (File Folders). Baselines are dynamic and are in a constant state of flux. A baseline must be constantly updated to incorporate changes and to identify anomalies. This constitutes the first two steps of Boyd's Decision Cycle; Observe and Orient.

### **Anomaly**

An anomaly is a deviation from the baseline, anything that rises above; something that is there that should not be there. Or it could be something that falls below the baseline; it is something that is absent that should be there. Examples of an anomaly could be a vehicle out of place (rises above), the lack of people (falls below), or a sudden change in the mood of an area (both). The presence of such anomalies indicates a potentially important change; every anomaly must be analyzed. This represents the orient phase of Boyd's Decision Cycle.

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**Establishing a Baseline (Continued)**

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**Profiling Domains**

An anomaly is profiled under two different sub-sets of domains (six total domains), the individual body language and the environmental indicators

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**Individual Body Language**

Individual body language is the ways of communicating without actually speaking. Most often, we cannot control our own individual body language and are unaware that we are exhibiting a certain behavior. Often, the harder we try to hide it, the more evident this body language becomes.

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**Environmental Indicators**

These domains are based upon the interactions between different people and their surroundings.

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**Decision**

A Marine must make a decision based upon his analysis of the anomaly. The common language used allows a Marine to report and articulate his decision. This represents the third phase of Boyd's Decision Cycle.

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**Action**

A Marine must act upon this decision. The baseline + anomaly = decision. This is the fourth phase of Boyd's Decision Cycle. This will be one of the following;

(1) Kill.

(2) Capture.

(3) Contact.

(4) Leave it Alone. Leave it alone may only be chosen after some form of contact.

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## **Combat “Rule of Threes”**

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In most cases, a single cue is not enough to make a decision, unless that cue is an immediate threat to the Marine (the inherent right to self-defense as per ROEs and Continuum of Force). When three anomalies are detected, however, a decision must be made. It must be remembered that a single anomaly may warrant a decision; however, once three have been identified, a decision must be made.

### **Clusters**

Read all cues in a cluster, three or more is enough to make a rational decision. Once a cluster has been developed a course of action should be developed.

(1) Anytime you get to three, you must make a decision.

(2) If file folders are corrupted and there is insufficient information you will have a negative output. In other words, if we do not have at least three indicators we increase the likelihood of making an improper assessment.

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## **Legal, Moral, and Ethical Parameters**

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The Marine who is trained in Combat Profiling will be able to identify anomalies and make decisions faster than normal. The ability to cycle through the reasoning process at an accelerated rate must be tempered with an understanding that all decision must be legal, moral, and ethical. The identification of an anomaly is not an excuse to directly reason that a target must be killed, but that it must be analyzed within its context and relevance, as well within the legal, moral, and ethical perimeters.

### **Legal**

Conforming to, or permitted by law within the Rules of Engagement (ROE). A formalized standard practice or law that is not arbitrary or capricious.

### **Moral**

Pertaining to, or concerned with the principles or rules of right conduct or the distinction between right and wrong; ethical. Founded on the fundamental principles of right conduct rather than on legalities, enactment, or custom. A Marine's individual understanding of right and wrong.

### **Ethical**

Being in accordance with societies the rules, standards, and expectations for right conduct or practice, especially the standards of a profession. The expectations placed on a Marine who is representing America.

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## Recognizing the Anomaly

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Combat Profiling develops appropriate file folders based on the perceptual and cognitive principles of observation taught earlier in the course. These file folders are developed through an individual's life experiences the onsite, hands-on, real-life learning with a mentor who facilitates absorption of both explicit knowledge and tacit knowledge seen through context and relevance.

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### Explicit Knowledge

Explicit knowledge can be written down, transmitted, and understood by others. These are considered basic facts and formulas; for example math can easily be written down and taught.

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### Tacit Knowledge

Tacit Knowledge is knowledge gained through hands on practical experience that cannot be written down or easily transmitted. People are often aware of the knowledge they possess or how it can be valuable to others. Tacit knowledge is considered valuable because it provides context for people, places, ideas, and experiences. Effective transfer of tacit knowledge generally requires extensive personal contact and trust. These are more cognitive, beliefs, images, perspective, and mental models. For example; riding a bicycle is tacit knowledge, you must actually attempt to ride a bicycle in order to learn how to ride, but it is almost impossible to explain how to ride a bicycle verbally.

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### Context and Relevance

Context and relevance defines a baseline, we collectively measure knowns and unknowns against the baseline to determine the anomalies.

(1) Context. The background, environment, framework, setting, or situation surrounding an event or occurrence. An example would be the difference between a car parked on the side of a road with the hood up in America versus Afghanistan or Iraq. While they are both the same actions, the American car is probably someone broken down; but due to the fact that Afghanistan and Iraq are currently in a war, the context suggests that they have the potential to be VBIEDs.

(2) Relevance. The relation of something to the matter at hand. An example would be if a clown was to appear in a company formation, it would appear out of place because it has nothing to do with the matter at hand. Thus the clown would be an anomaly.

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## Recognizing the Anomaly (Continued)

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### Template Matching

Template matching is the technique to find small parts of an image which match a template of that image. A template is defined as a design, mold, item, pattern, or group of items that serves as a basis or guide for designing or constructing similar items. These are efficient for the mind to make. A template match is an exact match. An example would be specific car parts; they are an exact match to the part in a car. When a car is manufactured, the factory presses the parts out of exact templates.

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### Prototypical Matching

A technique for finding items by matching their similarity based on known or expected examples within that category. A prototype is an original type, form, or instance of something serving as a typical example, basis, or standard for other things of the same category. It is your brain recognizing something and matching it "close enough" to what it is. An example would be different types of planes; F-16s, 727s, MiGs all fly.

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### Orienting on the Anomaly

Combat Profiles are a series of "File Folders" that you compare everything you see, smell, taste, feel, touch. Your Midbrain (Cognitive Brain) will attempt to make order from chaos every time. You must train yourself to look and more importantly, to analyze what you are looking at.

**Denial.** Denial is the first phase of an unexpected observation, this is the most dangerous phase because a Marine may freeze. Temporarily a person may shift immediately to the "black".

**Recognize.** The ability to recognize is to identify as something or someone previously seen or known; or to identify from knowledge of appearance or characteristics.

**Recall Experience.** This is the ability to bring back from memory, recollect, or to remember experiences in one's life. These may not be limited merely to combat, but could be related to a person's childhood and adolescent experiences that shape his decision making.

**Recall Training.** This is the ability to bring back from memory, recollect, or to remember experiences that took place in one's training. This is why it is critical that we train our Marines in realistic scenarios that expose them to a wide variety of experiences.

**Recall Memory File Folders.** File folders are the multitude of memories that we develop throughout our life.

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## Recognizing the Anomaly (Continued)

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The more broad ranging and more in-depth they are, the quicker we will recall them to make a template match or a prototypical match.

(6) Conduct Analysis Of Facts. Once all the facts have been assembled from our observations and recalling, we conduct an analysis on these facts at hand. Remember from observation that there are two ways to see facts, the bottom-up method which is based solely on what is received by our sensory systems, and the top-down, which is what we think/want/believe we are seeing based upon our emotional state.

### Sequencing

The brain's need to make order out of chaos and place things in order or grouping (even when they do not belong there). This is also referred to as "visual fill" or "perceptual fill" which allows the enemy to hide in plain-site. This is why enemies tend to hide IEDs in garbage and trash on the side of roads; as you move past them your brain tells you it is just garbage.

### Channel Capacity

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The maximum data rate that can be attained or maintained over a given channel, the brain's ability to multi-task when under stress. Channel capacity is the maximum number of things that a human can pay attention to at one specific time. Under normal conditions a human can usually process seven items (plus or minus two depending on the individual). When placed under stress this number decreases to three.

Note: The number of items that can be processed under stress can vary significantly based upon the amount, or lack of, training.

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### Emotion and Memory Link

Emotion and Memory Link: An emotion and memory link refers to associating an emotional response with something that is learned. If individuals make strong enough emotion and memory links during training, they will instinctively refer to that training during periods of high stress (or boredom). Whenever individuals have an emotional tie to an event, object, person, or information, it will be easily remembered because it involves the more "instinctive" or "emotional" parts of the brain (Midbrain) as well as the more "rational" parts of the brain (Forebrain). The emotional responses tied to these memories will be strong, and can be positive or negative. The more realistic the training, the more intuitive the instinct becomes. As training becomes

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## Recognizing the Anomaly (Continued)

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more and more realistic, the brain has difficulty recognizing a simulated event and a real event.

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## Cultural Implications

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It is important to understand that all anomalies and profiles must be made through the context and relevance of the local culture. What may appear strange, or conversely insignificant, to our western culture; may have significant or no relevance at all to the local populace. It is therefore critical that we become familiar with the local culture in order to understand the implications and significance of anomalies. A better understanding of the culture will allow us to detect anomalies at a much greater speed.

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### Iconography

Iconography is the images and symbolic representations that are traditionally associated with a person or a subject. These are most commonly seen as depictions of religious figures, national leaders, pop-culture icons, or historical heroes to a group or faction.

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### Significance of Color

Color is often used to signify an individual relation to group. These often have historic, religious, or ideological meanings. Some examples:

- Gang Affiliations: Bloods (red) and Crips (blue).
  - Flags.
    - Western/European countries tend to use Red, White, and Blue.
    - Communist Flags use red.
    - Muslim countries use red, green, black, and white.
  - Family affiliations, coats of arms.
  - Religious.
    - Catholics wear different colors at mass.
    - Muslim colors are white, red, green, and black.
    - Jews use blue and white.
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## Cultural Implications (Continued)

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**Socio-Economic Factors** Socio-economic factors are based upon how the overall economic situation of an area affects the social factors of daily life.

**Family Interaction** What is the role of the male and female in a family? How important is the immediate and extended family to the individual? What role does the family unit have in economy, religion, and government?

**Authority** How do people in a specific area view authority? Most western democracies respect the legitimate authority of the representative government. Other culture, however, will often view their initial authority is to either religion or family.

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## The Six Domains of Combat Profiling

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The six domains of combat profiling are Hueristics, Proxemics, Geographics, Atmospheric, Kinesics, and Biometrics. To provide a greater understanding of each of these domains, we will break down each of them into their subcomponents.

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### Hueristics

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Heuristics are a rapid method of mentally imprinting and labeling observed behaviors. Heuristics are stereotypes, a "Tactical Shortcut" for the brain, just enough information to draw a reasonable conclusion. The Marine already has file folders for some of these Heuristics; others he will have to develop by using the profiling methodology.

All of a Marine's impressions will come from Heuristics. These can be both good and bad, because a corrupt file folder can create a Heuristic that will give you an altered sense of reality, leading to negative results. Heuristics are separate from the other domains, because elements of all the other domains make up a Heuristic. A Heuristic is the brain making a prototypical match against your file folders. By having Heuristics, a Marine is able to draw a conclusion and accelerate through the Decision Cycle.

**Hiding in Plain Sight** In order to determine if something is "hiding in plain sight", a Marine must be able to master Heuristics. By increasing a Marine's file folders, or possessing the ability to create new Heuristics through the Combat Profiling Methodology, they will be able to identify the anomalies that betray the enemy attempting to hide in plain sight.

**Example** A Marine on post looks down a street and sees a car parked on the side of the road. The driver exits the vehicle and pulls out a piece of paper. He unfolds the paper across the hood of the car. He then orients his body and orients the piece of paper. He waves down a pedestrian who points to the piece of paper. It is reasonable to assume that the men are looking at a map, this is a heuristic. We do not have to look and the piece of paper and see streets, terrain features,

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## Hueristics (Continued)

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or grid lines to know it is a map; it is through the people's behavior and how they used the people that we know it is a map.

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## Proxemics

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The interpretations of spatial relationship within the context of Cultural Norms, Tactical Considerations, and Psycho-Social Factors in order determine the dynamics of human interaction and reactions to their surroundings. Proxemics is the act of betraying affiliations through the dynamics of proximity. Literally, this is your proximity (distance) to and from other people based off physiological, sociological, and physical principles. Proxemics are not limited to the relationship between people, it can be applied to a persons relation to things, places, and events. This happens at the unconscious, subconscious and conscious levels.

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### Relative Distances

The relative distance between groups of people is defined in four sub-categories. It must be remembered that different cultures will follow a different set of spatial relationships, for example American, Canadian, British, and Nordic Cultures tend to keep greater distances (Far Phase). Conversely, Latin American and Arab Cultures have much closer distances (Close Phase). A person's pitch and tone of voice will change in each one of these groups, as well as the non-verbal language described earlier, when they are in these different areas.

- Intimate Distance. The intimate distance for embracing, touching or whispering; generally only the closest of friends and intimates is less than six inches (close phase) or 6-18 (Far Phase).
- Personal Distance. The personal distance for interaction among good friends is 1.5-2.5 feet (Close Phase) and 2.5-4 feet (Far Phase).
- Social Distance. The social distances kept by most people when interacting amongst acquaintances is 4-7 feet (Close Phase) and 7-12 (Far Phase).

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## Proxemics (Continued)

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The interpretations of spatial relationship within the context of Cultural Norms, Tactical Considerations, and Psycho-Social Factors in order determine the dynamics of human interaction and

- Public Distance. The distance kept for public speaking is 12-25 feet (Close Phase) and 25 feet or more (Far Phase).

### Proxemic Push/Pull

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These distances will determine if someone you know, or an object, is "pulled" into a closer ring, or is "pushed" away because they do not fit in that category.

- Proxemic Push. Proxemic Push is the natural tendency for a person or group of people to move away from other people/objects which are unfamiliar or are perceived as threat. This can also occur when a situation or area is unagreeable or they do not want to associate with a specific person, group of people, or object.
  - Marines walking through a market place in an area where they are not supported by the indigenous population will see people moving away, children moving inside, shops closing down etc.
  - An average person noticing criminal or enemy activity will turn the corner to avoid being within the same proximity.
- Proxemic Pull. Proxemic Pull is the natural tendency for a person or a group of people to be attracted to other people, object, or areas which are familiar and perceived as friendly to them.
  - Kids running to the ice cream truck.
  - People trying to get close to celebrities or important individuals.
  - People in a meeting will sit in groups based upon who is familiar with whom.

### Proximity Negates Skill

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The closer your enemy is to you the less skill is needed to harm or kill you. By observing at a greater distance, a Marine increases the time between himself and a potential threat, giving him more time to make decisions.

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## **Proxemics (Continued)**

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- When a threat is perceived a natural instinct is to move away from it. Manipulating the time and distance gap by moving away (Proxemic push) from the perceived threat provides stand-off and creates valuable time for the observer to react to a situation.
- When a threat is not perceived, or in a comfortable environment, the natural inclination is to approach the situation (Proxemic pull), diminishing standoff and reaction time.
- Allowing someone to get close to you can tell you a lot about your relationship with that person. People who do not know each other will act differently when they meet compared to two people meeting who have known each other for a long time.
- Understanding the effective range of your enemy's weapons, their fields of observation, TTPs will assist a Marine in determining how close the enemy must get in order to have effects against friendly forces.

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## **Person of Interest (POI) Indicators**

Person of interest indicators include the following: adoration, mimicry, entourage and direction. When taken collectively, they may identify a Person of Interest (POI) within a group.

- Adoration. The outward sign of affection towards an individual by another individual or group. Adoration is commonly associated when a person or group holds an individual in a higher status. Adoration can be negative or positive (fear, gratitude, respect, etc). An example of this would a group of Marines coming to attention when a senior officer walks into the room.
- Mimicry. When one individual takes on the attributes of another individual by mirroring and matching their characteristics. This occurs because the stimulus of the individual's status is noted and others attempt to attain the same status.
- Entourage. When an individual is accompanied by at least one or more people who tend to show subordination or submissive behavior. An example is the Commander and his subordinate staff.

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## Proxemics (Continued)

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- **Direction.** The leader of the group will continually give direction to subordinates. These directions may be subtle or overt, conscious or unconscious. This includes verbal orders, gestures, the pace and direction of movement and the effect on the general atmosphere. An example of a subtle direction would be when the Commander enters the room, and all the individuals in the room begin working on their computers.

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## Geographic's

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The study of the physical geography/weather of an area and the Human Terrain within this area; the interpretation of the relationship between people and their physical surrounding to determine the significance of social interactions as it relates to their motivations. People who are familiar with the geographics of an area will act, walk and drive differently than persons who are unfamiliar. Geographics can further be described by anchor points, habitual areas, natural lines of drift (pathways), reference points, and landmarks. At the higher-levels, geographics will assist in the development of the Intelligence Preparation of the Battlefield (IPB). Geographics are a combination of two specific items, the geographical terrain and the inhabitants (Human Terrain) in this area.

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### Habitual Areas

An area where most individuals within a given group or sect would frequent without reservations. These are usually public areas or a place where most people in the baseline would feel comfortable and relatively safe.

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### Anchor Points

An area where only certain individuals within a given group or sect would frequent without reservation; individuals outside this group or sect would have reservations, feel uncomfortable, and general avoid this area. A location at which an individual from a particular group or sect have established as their own and can associate and maintain a level of comfort. Anchor points can be both good and bad.

- Gang Members in LA may choose the Gazebo in a nearby park to congregate while Gang Members in Detroit will choose the front entrance of a neighborhood liquor store. Both areas will exhibit graffiti and nuances such as icons to identify that specific gang or sect. This is referred to as "tagging" or "marking" gang territory. Note: Some times graffiti can be positive as well.
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- Biker Bars are public bars, but are typically filled with bikers and avoided by the general public. This would probably have posters for Sturgis and Harley-Davidson on the walls and bikes parked outside the bar.

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## Geographics (Continued)

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- Police stations are anchor points for law enforcement, criminals and terrorists would obviously feel uncomfortable and avoid these locations. These would probably have state and local flags, community relations posters, and other symbols related to law enforcement.
- The VFW is filled with a specific group of people, veterans. Unless people were familiar with the military, they would feel uncomfortable at the VFW. These would probably have military “moto” pictures, flags of the Marine Corps, Army, Navy, and Air Force. Additionally, members of the VFW typically wear some type of clothing that associates them with their military service while at the VFW.

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### Natural Lines of Drift (NLD) and Pathways

Most commonly associated with the path of least resistance. When NLD are used repeatedly, they become pathways. NLD can be predicted through obstacles and ease of accessibility.

- An example of a pathway is when you get up late at night and have to go to the bathroom. You do not need to turn on all the lights, rehearse the route, etc. You have done it enough, the route is familiar enough, and you never truly wake up completely. This is because the route has become “imprinted” in your subconscious and unconscious mind. This would not be the case if you were spending the night at a friend’s house, or in a hotel.
- In combat, when Marines or units become complacent, their patrol routes will begin to follow the natural lines of drift. If Marines continue to follow these lines, the enemy will target us along these lines. It is crucial in these incidents for leaders to ensure that patrol routes are varied and DO NOT always follows the natural lines of drift.
- Unfortunately, ASRs and MSRs are by definition natural lines of drift. Great care should be taken when moving along these routes and all attempts should be made to vary times of convoys.

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## Atmospherics

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The interpretation of environmental mood consciously through the five senses and subconsciously through intuition (the sixth sense). To the Marine, atmosphere is how a place looks, sounds, tastes, feels and smells. Every baseline has an atmosphere, so does every vehicle, crowd or event. Paying attention to changes in the atmosphere of a community or individual and how it affects the baseline, will allow you to capture or kill the enemy before they can stage an attack.

If you worked in a prison each day you might come in to a noisy, hostile environment (your baseline). If today, you walked in to “dead quiet” and calm, something has changed (anomaly).

If you manned an OP each day and observed a marketplace, your baseline might be a noisy, busy environment that is full of people of all ages and genders. Today, you observed a calm, barren market with only males present.

Atmospherics for a Marine can be glaringly obvious, such as shops closing as the patrol approaches, to very subtle, such as fewer children than normal in a particular area.

Atmospherics can include hostile incident indicators that often seem to occur spontaneously. These indicators can alert Marines to imminent danger. The most obvious indicators are the sudden absence of normal routines, patterns and attitudes of the local populace or the presence of abnormal activity.

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### Examples

- Stores, markets, or street vendors closed suddenly or without explanation.
- Dramatic change in civilian attitude toward patrol members.
- Unfamiliar individuals or vehicles within the patrol area.
- Vehicles riding unusually low due to overloading (ferrying people, weapons, explosives).
- Anti-American graffiti in the area.
- Civilian workers failing to appear at firm bases.
- Sudden change of civilian sentiment in newspaper articles and radio and television broadcasts.
- Families sending women and children to live elsewhere.
- Unusual absence of pedestrian traffic, empty porches,

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## Kinesics

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The interpretation of body movements, gestures, facial expressions, etc., as a means of communication; also included are grooming habits and the positioning of the body in space. This is often referred to as “body-language”. Kinesics can be mimicked, faked; but like biometric cues, it is difficult to control a body’s kinesics. An example would be when actors are trying to portray different emotions when filming movies, often it takes multiple “takes” because they have difficulty matching body language and spoken words. Good actors are able to match their language with their body language. Additionally, actors are only able to portray their characters for a finite amount of time before they have to revert back to original state as a human. Very experienced actors try to get around this by using “method acting”.

People give and respond to literally thousands of nonverbal messages everyday. People react to wordless messages emotionally, often without understanding why. People notice minute details because they reveal how we relate to one another, who we think we are, and who we want to project we are. Studies suggest that up to 65% of communication between humans is non-verbal, and it is generally agreed that 99% of all emotional communication is non-verbal. This will allow a Marine to understand a person's emotional connection to a person or thing.

Learned, Innate, and Mixed Kinesics: Kinesic cues may be learned, innate, or a mix of the two.

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### Learned

Learned Kinesics are ones that we pick up based upon the culture that we grow up in. We see others do this and we accept this kinesics as part of our own way of communicating. The eye-wink, thumbs-up, and military salutes/gestures are examples of learned gestures

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### Innate

These are kinesics that are "hard-wired" into our DNA and are displayed by all human no matter what culture we were born into eye-blinking and throat clearing are examples of innate kinesics.

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### Mixed

Mixed cues are ones that being with an innate cue, but are then shaped by the culture that we are raised in. Laughing, crying, shoulder shrugging, and most other signals are "mixed" because they originate in as an innate action, but cultural rules later shape their timing, energy, and use.

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### Facial Expressions

Typically, facial expressions of disgust, surprise, and other primary emotions are universal across cultures. People are raised to lie with facial expressions; a person who may want to kill you might approach you with a smile on their face.

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## Kinesics (Continued)

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### Examples

Examples of body language include, but are not limited to:

- Scratching the head occurs when the person is confused, when the person is attempting to be deceptive.
- Running fingers through the hair can be a nervous tic, or a sign of subconscious affection.
- Rubbing the back of the head can signify a headache or that the person is being deceptive.
- The placement of the hands on the hips is a power signal. On a male, this placement directs the fingers towards the genitals and pushes out the elbows to make the subject look larger.
- Rubbing the hands together includes wringing of the hands or rubbing the palms together slowly or vigorously. Wringing of the hands signifies nefarious intent or nervous energy. Rubbing the palms together slowly signifies the same thing, while rubbing the palms together vigorously signifies anticipation of a successful outcome.
- Balling of the fists always signifies anger and aggression.
- Tapping the feet indicates impatience. When a person taps their foot slowly, they are unconsciously walking away. When they tap their foot quickly, they are running away.
- Direction of the toes indicates where an individual is focusing their attention. Toes pointed at you indicate the individual is interested in you, where as their toes pointed at the door indicates they are ready to leave.

### Considerations

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Kinesics is a very in-depth domain and several important items must be remembered.

- Always remember to establish a baseline before determining Kinesics.
- Kinesics must be read in cluster, one single Kinesics cannot indicate intent, there must be other Kinesics displayed in order to draw a conclusion.
- Different people may have different Kinesics, these are not a one-size-fits all.

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- Kinesics cues will tend to differ between genders, even within the same culture.
  - Culture effects kinesics, you must understand the culture before you can properly identify kinesics. Examples of body language include, but are not limited to:

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## **Biometrics**

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Biometric cues are the interpretation of physiological reactions which are autonomic, instinctive, and unlearned reactions to a stimulus. This is something that your body is doing that is almost impossible control (Note: The amount of training and practice it would take to control these is beyond the capabilities of the average person, one example would be Aldrich Ames). Some examples are histamines, adrenaline, and endorphins which all elicit a human body response such as redness, swelling, sweating and fixed pupils. Understanding these indicators can warn of intent. Note: The term "Biometrics" are individual, measurable traits that are specific to an individual. Examples of biometrics are an individual's finger prints, retinal scan, or heat signature that identifies a specific individual.

### **Histamines**

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Histamines cause a reddening of the skin and cause the local area to itch. This physiological response can be caused by anger, nervousness, or embarrassment. The redness is most noticeable on the face, ears and neck.

- Blushing in the face and ears when embarrassed in a histamine response.
- Extreme anger will cause reddening of face.

### **Adrenaline**

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The addition or absence of adrenaline can cause a person to turn pale in preparation for fight, flight or freeze.

- Pulses can become visible in a persons chest and veins.
- Hands, legs, and even the entire body may start shaking.
- As the body temperature increases, individuals will start to perspire, often to a point that is visible to others. Histamines cause a reddening of the skin and cause the local area to itch. This physiological response can be caused by anger, nervousness, or embarrassment. The redness is most noticeable on the face, ears and neck.

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## Biometrics (Continued)

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### Pupil Dilation/

### Constriction/Sweating

The amount or lack of dilation in the human eye is a physiological and biological response to an external stimulus.

- The pupil will dilate for a fraction of a second when an individual sees something it likes in order to take in more of the picture.
- Both dilation and constriction will occur when under the influence of alcohol and narcotics. The addition or absence of adrenaline can cause a person to turn pale in preparation for fight, flight or freeze.

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## Tactical Tracking

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By conducting tactical tracking, the tracker gathers information by analyzing the forensic evidence left by the enemy on the natural environment. This information will allow Marines to develop a better intelligence picture in regards to an enemy's size, activities, location, unit, time, equipment, and intent.

The combat hunter pursues an enemy (quarry) by reading the natural terrain and identifying disturbances man creates in nature. Combat hunters are able to track their quarry by using their intuition and honing their field craft, allowing them to better interpret the environment. Tracking is an individual and team effort that requires the integration of small unit tactics, acute sensory perception, and critical thinking. It can be offensive, defensive, overt, or covert, and is applicable in a variety of environments, missions, and conflicts. A combat tracker must have initiative and be in peak physical condition, as tracking requires a high-level of physical fitness and endurance. Combat tracking requires a trained team that possesses tactical awareness, common sense, patience, and aggression. Tracking is mentally and physically demanding, requiring the Combat Hunter to think critically and maneuver for extended periods of time.

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## Tracking Terminology

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As a tracker follows a track, he builds a picture of the enemy in his mind by asking himself these questions: How many quarries am I following? What is their state of training? How are they armed and equipped? Are they healthy? What is their state of morale? Do they know they are being followed? To answer these questions, the tracker uses available indicators that are signs (spoor) that indicate an action occurred at a specific time and place. By comparing indicators, the tracker obtains answers to his questions. "A set of tracks tells a story. One step a word, several steps a sentence, a whole line of steps a paragraph and then the whole story a bulletin board in the sand". This trackers mindset sums up in a few short words exactly what a tracker does when he first observes a set of tracks. He scans the area to obtain a quick picture and then painstakingly starts to identify each "word", each footprint or mark he sees. As the "words" grow, in sequence, he starts to read the "story" and as the story develops, he begins to understand how and when things happened.

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## Tracking Terminology (Continued)

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<b>Spoor</b>	A set of tracks laid upon the ground and visible to a tracker. Spoor is interchangeable with the words “tracks”, “set of prints,” or “sign”. For example, “following the spoor”.
<b>Follow-up</b>	A follow-up is the physical act of a tactically-trained tracking team following spoor.
<b>Quarry</b>	The person or unit that is being tracked by the tracking team.
<b>Active Track</b>	Conducting a follow-up while the quarry is still moving.
<b>Passive Track</b>	Conducting a follow-up when the tracks are “cold” and have been in place for some time. Normally used for intelligence gathering purposes or to look for enemy activities.
<b>Time and Distance Gap</b>	The difference in both time and distance between the tracking team and the quarry.

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## How Tracks Are Seen

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Much of what you learned in observation will assist you in seeing the tracks when conducting a follow-up. The skills of observation will greatly increase a tracking team’s ability to identify tracks. Tracks are identified by the following.

<b>Texture</b>	The natural smoothness or roughness of an area will be affected by the movement of the quarry.
<b>Outline</b>	These are outer limits, or edges of the track. These unnatural sharp edges do not exist in nature. Often, the entire outline will not be present, but a partial outline will still contain these unnatural edges.
<b>Shape</b>	The recognizable form of something manmade, this is typically footwear, but could also include equipment. Similar to outline, these shapes will stand out because they are unnatural to the environment.
<b>Color</b>	As the quarry walks across an area, the disturbance of the natural area will cause the area to have a different color. Unnatural color change can be caused by variations and disturbances in moisture, vegetation, and soil.
<b>Shine</b>	Disturbing both the ground and vegetation from its natural state will cause light to reflect differently. This difference from the natural surrounding can easily be identified.

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## How Tracks Are Seen (Continued)

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**Nature** Nature has its own rhythm, but usually without regularity. Something in nature that is spaced at regular intervals will stand out as an anomaly from the natural state of the environment.

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## The Dynamics of a Footprint

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A footprint is comprised of three main elements, the Primary Impact Point (PIP), the Foot Roll, and the Terminal Point.

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### Primary Impact Point (PIP)

This is the first part of the foot to strike the ground. Generally, the heel will be the PIP when walking forward at a normal pace. When walking backwards, sprinting, or climbing steep terrain, the toe will be the PIP.

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### Foot Roll

This is the sole of the foot rolling through its length from rear to front. The rolling motion made by the foot as the weight of the body is moved over the foot; the middle part of the foot.

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### Terminal Point

This is the last place of the foot to leave the ground. Generally, the toe will be the terminal point while walking forward at a normal pace. When walking backwards, the heel will be the terminal point.

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## Characteristics of Human Gait

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As a person moves across the ground, their footprints will leave six observable elements. The characteristics of human gait are; stride, straddle, pitch angle, pressure, dwell time, rhythm, and balance. The measurement of the six characteristics will change depending on the quarry's activity, speed, terrain, load, and physical condition. The analysis of these six characteristics assists the tracking team in determining the quarry's action indicators. Only through practical application and research can a tracking team learn to identify the variations correctly. Through constant training, a tracking team will be able to determine such variables as; age, gender, physical conditions, physical disabilities, attempts to hide tracks, carrying a load, pace, weight, stature, mental state, moving day or night, etc.

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### Stride

The distance from one footprint to the next in the quarry's direction of movement (left foot to right foot). This is best determined by measuring the distance between the primary impact points. An average human stride under normal conditions is approximately 30 inches.

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### Straddle

Distance between the inside edge of the left foot to the inside of the right foot, i.e., if the person were standing still with their feet close together, the straddle is the distance measured in between the two feet at the closest point.

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## Characteristics of Human Gait (Continued)

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<b>Pitch Angle</b>	The orientation of the foot, to the line of travel. A foot that pitches outward is called a positive pitch. A foot that pitches inward ("pigeon toed") is referred to as a negative pitch. A foot that remains parallel to the line of travel is called neutral pitch. This is best determined by estimating or measuring the angle of the foot in relation to the center line of travel.
<b>Pressure</b>	The total weight of the quarry (to include any load carried), through the foot, putting pressure onto the ground.
<b>Dwell Time</b>	Amount of time the foot is on the ground making the print. The longer the dwell time the better the detail in the footprint.
<b>Rhythm &amp; Balance</b>	Rhythm and Balance by itself is not an action indicator. It is the culmination and interpretation of the human gait measurements interacting with the environment. Rhythm and balance is an observation of the track line that yields a consistent re-occurring pattern or an interruption of an established pattern or baseline. In forward movement, good rhythm and balance signifies coordinated body function and a sense of purpose and direction. Conversely, a lack of rhythm and balance signifies uncertainty, confusion or a lack of specific intent.

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## Observable Indicators

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Observable indicators are those changes to the natural state of the environment, sought by the tracker, indicating that the quarry passed that way. Once the tracker becomes adept at recognizing the wide variety of indicators yielded by the ground and terrain over which he is passing, he will notice that they form a "track-line" of continuous clues that provide the tracking team with a route to follow. Displacement takes place when anything is moved from its original position. A well-defined footprint in soft, moist ground is a good example of displacement. The footgear or bare feet of the person who left the print displaced the soil by compression, leaving an indentation in the ground. The tracker can study this sign and determine several important facts. For example, a print left by worn footgear or by bare feet may indicate lack of proper equipment. Displacement can also result from clearing a track by breaking or cutting through heavy vegetation with a machete; these tracks are obvious to the most inexperienced tracker. Individuals may unconsciously break more branches as they move behind someone who is cutting the path. Persons carrying heavy loads who stop to rest can also make displacement indicators. Prints made by box edges can help to identify the load. When loads are set down at a rest halt or campsite, they usually crush grass and twigs. A reclining man can also flatten the vegetation. The following are the types of observable indicators or clues sought by the tracker:

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**Observable Indicators (Continued)**

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<b>Ground Spoor</b>	Marks and impressions of footwear, other body parts or equipment, left on the ground by your quarry. Ground spoor can be identified by characteristics of regularity, flattening and confirmatory transference. Regularity could be a constant uniform tread pattern, or the rhythm of footprints. Flattening is the impressions left on the ground created by pressure from the quarry. Transference is the unintended movement of spoor from its natural location to another surface or object (example: muddy footprints across a parking lot).
<b>Sign</b>	This is any indicator other than ground or aerial spoor. The movement of the quarry across the environment will reveal a color change on broken surfaces (example a freshly overturned rock will reveal darker, moist soil underneath.) Disturbance is any change to the environment out of balance with the surrounding natural state. Broken dirt seals around rocks, mud, or dirt moved to rocks or other natural debris, and water moved onto the banks of a stream are also good indicators. Dew droplets can be displaced, or stones and sticks overturned to show a different color underneath. Changes in the normal life of insects and spiders webs may indicate that someone has recently passed.
<b>Litter</b>	This is any man-made artifact that was either accidentally dropped or deliberately discarded or hidden. A poorly trained or poorly disciplined unit moving over terrain is apt to leave a track of litter. Unmistakable signs of recent movement are gum or candy wrappers, sunflower seeds, ration boxes or packages, cigarette butts, remains of fires, and bloody bandages.
<b>IED/Booby Traps/ Landmines</b>	Indicators may consist of trip wires, disturbed ground, items of interest that a Marine may wish to investigate, protruding branches across trails, metal spikes in the ground, unnatural hollows or depression, spoor left while emplacing, and brushed ground
<b>Blood Spoor</b>	Blood spoor is dropped or splashed onto the ground as a result a wound. The level of blood smears and the amount of blood will indicate the position and severity of the wound.
<b>Body Waste</b>	Any body fluids such as urine or feces deposited on the ground, trees, bushes, or rocks will leave a stain. This may also include any item placed in the mouth then ejected or vomited. Analysis of feces can also indicate the health of the quarry.

