Creating Order Out Of Chaos

February 2013
Creating Order Out Of Chaos

When I was searching for the theme for this e-book, I knew that I wanted to start at the beginning – with the foundation of behavioral profiling. With a behavior detection and assessment approach to separating the enemy from the crowd he hides amongst, everything begins with the baseline. Every observation, every decision, and every piece of actionable intelligence starts by understanding the norm in the area. Being able to look at the complexity of human behavior and turn that mass of information into something meaningful is all about creating order out of the apparent chaos. Some people think that this is too daunting of a task. This issue is about why they are wrong and why a new officer, in any field, can begin establishing their baseline their first day on the job.

The title and theme for this e-book is centered on that specific focus – Creating Order Out Of Chaos. I use the word “creating” for a reason as well. It isn’t about “finding” order and it isn’t about “searching” for order. There is nothing about observing behavior that involves aimlessly stumbling through a process or hoping that you will eventually figure it out. This is about using a purposeful approach to create the conditions that our nation’s protectors need to outsmart an ever-adapting enemy.

This is where we will begin, by removing the chaos from our observations, which is only possible if the underlying patterns that are present are first understood. This is possible in any setting and gets us beyond limitations of other approaches that only work in specific settings or situations. Once these patterns are understood, it becomes easier to begin predicting someone’s future actions by revealing their intentions. It also allows you to quickly find the people who warrant additional attention because they are the ones who break from the pattern that everyone else is following. This allows an observer to become confident in what they are seeing and the assessments they are making.

Identifying and communicating these patterns is the driving question for the main article in this issue, “Defining The Human Terrain – Revealing Core Patterns.” Following the discussion about how to establish the baseline for whatever area you find yourself in and how to attain this level of understanding quickly upon arriving in a new area, there will be two follow up pieces that discuss this from two different perspectives. The first response, “Learning Your Beat,” ties this concept, which is taught to deploying Marines, to the way that police officers strive to learn the dynamics of the neighborhoods they patrol each day. The second article, “Training Beyond The Physical Terrain,” looks at the issue of failing to learn the human terrain from a strategic perspective.

© The CP Journal
February
2013
This concept is expanded upon in this issue’s development video, where we begin identifying people who are familiar and unfamiliar with their surroundings. This video takes the process of establishing a baseline and finding anomalies for specific settings, such as a transit station.

The last article is in our Professional Warrior section, “Priming Your Brain, A Guide To Learning,” which discusses the link between learning and exercise. Becoming adept at these skills requires practice until it becomes a habit and readers can take steps that improve retention, increasing the likelihood that the lessons we teach are recalled in the times that they are needed.

We are excited to begin offering readers a high quality of articles and access to training resources not previously offered on the site to make sure our nation’s protectors have the access to what they need to get left of bang. These new materials, along with our existing content will aide you even further in separating the enemy from the crowd and taking control of your own safety in the fight against insurgents, criminals and any other potential threat.

Thanks for reading and welcome to The CP Journal.

Patrick Van Horne
@PatrickVanHorne

“Defining The Human Terrain – Revealing Core Patterns”
By Patrick Van Horne

“Learning Your Beat”
By: Lanny Roark

“Training Beyond The Physical Terrain”
By: Jason Riley

Video Development – Familiarity vs. Unfamiliarity
By: Patrick Van Horne

“Priming Your Brain – A Guide To Learning”
By: Rick Gonzalez
Defining The Human Terrain – Revealing Their Core Patterns

by: Patrick Van Horne

The Situation On The Ground

There are two ways for our nation’s protectors to get left of bang: either to identify the pre-event indicators that are present on the ground (the physical terrain) or to find those indicators communicated by people (the human terrain). Both components are what make up the environment, but in the search for the quantifiable information needed to make decisions on the battlefield, the physical terrain is often seen as more tangible and therefore more reliable. People can easily identify the affect that sunlight, wind, and moisture has on vegetation or the ground itself. Disturbances caused by a footstep are present for a longer amount of time than a posture or gesture is displayed on the body, allowing the observer to spend a longer time on scene to analyze that information if needed. However, in an urban environment with a heavily concentrated population, these indicators become very hard to find as the sheer number of people can contaminate the scene and skew the analysis. As the world’s population migrates from rural areas into urban centers, the need for our nation’s military to become more adept at separating the enemy from the crowd he hides amongst becomes an increasingly relevant skillset.

This skill is accomplished by developing the ability to not only read and assess the people around us, but also to communicate what information the human terrain is providing. It is a long established principle that successfully defeating an insurgency comes from successfully earning the active support of the population. This is no different than law enforcement officers’ efforts to minimize the influence that gangs have on American cities. Herein lies the problem; without the ability to clearly define and
measure the *human terrain*, our ability to target insurgents effectively and earn the ability to influence the local population will always be lacking.

Defining the local population isn’t something that we have failed to attempt. We have just failed to do it well. We have tried to gain insight through a segmentation of the population based on demographic data or mapping tribal affiliation. We have tried to measure the success of our operations by looking for economic indicators, changes in the political structure, or the existing rule of law. We have tried to understand literacy rates, poverty rates, and social structure, without finding the valuable information we were after. While that information may help decision-makers at a higher and more detached level of command, they rarely provide any useful information to small-unit operations operating on the ground. The decisions that the Marines and soldiers on the ground make on a daily basis require a different set of metrics – indicators that can be read immediately, with minimal analysis, and can be assessed without the support of technology.

**Getting Dropped Into The Deep End**

The information pulled from successful counter-insurgency campaigns and countless after-action reports from Marine units returning from deployments show us that the units who are most effective at intuitively understanding this ambiguous human component of the environment are also the ones who have spent the greatest amount of time in an area. The continuous exposure to a single neighborhood over time allows an operator to develop a tacit understanding of the patterns that people set and identify when changes have caused a shift in that norm. Our current deployment cycles, however, will never allow for a deployment long enough to successfully implement an approach like this that would be reliable. There is also the inherent limitation of the length of time it would take for someone new in the area to develop this understanding. One unit that we spoke with mentioned that it would take them upwards of 15 patrols before members of the squad felt that they had begun to develop a working baseline. The insurgent who has lived in the village their entire life, already has an understanding of the environment, which lets them be a step ahead of a new unit that has just rotated into that area. While the unit is trying to a feel for the area (establishing a baseline), the insurgent has already begun searching for weaknesses in the new unit that can be exploited.

**The Underlying Patterns**

Because success or failure of an operation is a relative term (success is in comparison to a previously existing condition) there has to be a starting point for assessment. This means we must have a way to explicitly define what is normal for an area. The area’s baseline is that starting point. The baseline is made up of the patterns that individuals, groups, and an entire neighborhood or village sets and becomes the basis for future comparison. To do
this, we will analyze the baseline through three separate lenses using the Combat Profiling terminology.¹

The First Lens - Noncombatants

Before we can understand the enemy, we first have to understand the environment we are operating in. This is why the first layer of observations needs to be focused on “bigger picture” patterns of movement around the village. The initial goals are to identify the places where people go to get their needs fulfilled. These Habitual Areas are the places where people are being Proxemically Pulled for a specific reason. This could be for tangible needs, such as goods at the local market or restaurants, spiritual needs fulfilled at a place of worship, or the intangible goal of relaxation at a local park, playground, or beach. Once we know where people are going to end up, we can begin working backward to identify how people are getting there. Locals who are familiar with their area will know where the Natural Lines of Drift are, and will use those to move – taking the safest, yet most simple path of least resistance to the places they are going.

We focus our observation on the “noncombatant” behavior initially in order to find the metrics we will be using for future assessments. This behavior can also provide pre-event indicators for an attack, since any change in behavior could indicate their knowledge of a pending attack. This could be villagers avoiding the local marketplace (a habitual area) that is normally bustling with activity because they know insurgents are waiting in an ambush.

For each of these habitual areas, baseline establishment can begin by observing “pattern of life” information, such as when people begin arriving at that area, when it is first opened, the peak times of the day, when it closes, and how many people visit to provide an additional layer of quantifiable facts to your observations. Assessments can be made about the normal Atmospherics in the area to get a reading on the normal noise level, existing rule of law, and other indicators that show the population’s perception of safety.

¹ Note that we are looking at this simply to understand the environment that is expressed by the local population, not the enemy. This information will need to be assessed later against a picture of enemy activity to identify enemy patterns that indicate a relationship between the two.
We can also look at any messages that an insurgent has used to communicate their beliefs or affiliations, *Iconography*. These sentiments and the local’s acceptance of them may change over time and show that shift through graffiti, posters, and signs. Later in the process, this initial assessment of civilian behavior can be overlaid with enemy activity to identify their patterns and relationships as well. Over the course of your deployment, the human component of the environmental are what will provide the context to better understanding the population.

*The Second Lens – Relationships*

The second layer of observations relating to understanding the baseline is the relationship between the local population and the resident security forces. Specifically, we are looking at *Proxemics*, and seeing if locals are attracted to or repelled away from the military or police. Because security personnel maintain a position of authority and will often be the ones to close the distance with people they want to talk with as one example of Proxemics. These observations need to be coupled with *Kinesics* in order to confirm any assumptions. Identifying the six clusters of individual behavior (Dominance, Submissiveness, Discomfort, Comfort, Interested, Uninterested) will show an observer how the local populace responds to that presence of authority. As the support of the local population is often derived from their perceived sense of security, changes in these relationships can show a slow change in the baseline. Without first identifying these patterns, they would be otherwise missed and fail to show to provide the feedback needed to show success or failure over a period of time.

*The Third Lens – Personal Displays*

The final layer of observations relating to understanding the baseline environment is how locals communicate information about themselves to others. This can include *Personal Iconography* that shows status, beliefs and affiliations through clothing, tattoos, jewelry or other accessories they have chosen to display. Understanding how a political leader, religious leader, schoolteacher, taxi cab driver and farmer, differentiate themselves through *Iconography* can help you make predictions about their interpersonal relationships and potential actions upon arriving in a habitual area.

These three lenses: looking at large scale patterns of behavior, the relationship with security forces, and personal displays of iconography, can be observed immediately upon arriving in the area because they are seen in the noncombatant masses that fill the village.
These factors can be observed from an observation post with standoff, allowing a unit to begin developing their understanding of what to expect before they come face to face with potential threats, and can begin the process of revealing how the insurgent is hiding among the locals.

An Operational Impact For The Better

The goal of intelligence is simply to reduce uncertainty. Assessing the local population and the human terrain through these three lenses provides a quantifiable baseline and starting point. This is by no means the final answer, and we will never be able to completely see through the fog of war, but without metrics that can be clearly and confidently defined, we will continue to struggle to understand the environment we are operating in. This terminology and these lenses can be used to guide conversation among squad members to make sure that everyone has the same understanding. This ultimately can help to shorten the time required for a new unit to understand the village and become capable of looking for the enemy at an earlier point in their deployment.

Being capable of noticing and quantifying changes in the baseline over time is a requirement for determining how successful our patrols are. However, without a clear starting point, these subtle changes are missed and decisions are made based on subjective observations that may or may not be truly accurate. This greatly biases any determination about our progress and can cause a commander to question the quality of their intelligence. Without a set terminology, the commander is limited to the common post-patrol statement “Atmospherics are good, nothing significant to report.” Using the Six Domains offered in a behavioral analysis program provides that quantifiable method for Marines to define their neighborhoods in terms that provide them with actual useable information that matters.

All of this information about the local population’s core patterns is assessed through an analysis of their behavior that is primarily outside of their conscious awareness. This makes it more likely to be accurate, reliable, and objective. By using the domain terminology, we can harness the tacit understanding of an operator with more experience in an area and pass that intuitive knowledge onto the new units taking over the battle-space. By decreasing the time that we need to assess and understand the baseline, we can decrease the time that the enemy can operate with impunity. This not only improves our personal security, but also guarantees the success of the mission.

Patrick Van Horne is the
CEO of The CP Journal
Learning Your Beat
A response to “Defining The Human Terrain – Revealing Core Patterns.”
by: Lanny Roark

What the military is only now beginning to utilize in regards to reading human terrain has been a prerequisite for successful urban law enforcers for decades. As Patrick stated in his article, the need for our nation’s military to become more capable of separating the enemy from the crowd he hides amongst becomes an increasingly relevant skillset. This skill set is what has defined and set apart the successful, street-smart urban law enforcement professional from all others. Though the collection and subsequent analysis of data concerning political, social and economic factors can and should be used by a higher level in the chain of command for strategic planning and decision-making purposes, such information does little to provide the domestic law enforcer or Marine the ability to spot the criminal element before a criminal act is executed. Herein lies an important component to understanding the difference between strategic decision-making and tactical decision-making. Tactical decision-making is necessary to keep the boots on the ground “left of bang” and free from the pitfall of “paralysis by analysis,” when there is little time and/or little information to work with.

Law enforcement agencies have struggled for years to find the right balance in regards to the amount of time an officer remains on a particular beat or district. Often the concern is allowing enough time for the officer to “know his beat” (establish a baseline for the area and hone his skills at spotting anomalies) versus preventing an officer from becoming too comfortable, which can lead to boredom, complacency, or worse, varying levels of corruption. In any event, just as current rotation schedules impact military personnel, unlimited time on target, whether for the beat cop or Marine, is nonexistent. As a result, both need tools that allow for an expedited establishment of the baseline and an expedited recognition of the anomalies. Urban warriors, whether they be domestically situated or occupying foreign soil, must be able to make quick, tactical decisions. They need to be able to address the “here and now” that keeps them left of bang. The ability to do such results from understanding real time group and individual...
behaviors that are indicative of a threat. This threat could be anything from the next gas station robbery, home burglary or the IED implanter or suicide bomber.

One of the most common complaints lodged against young, inexperienced police officers are the allegations of improper and unnecessary, stops, searches, and other contacts. The second most common complaint may well be the internal complaint from superiors and peers for lack of initiative, not being proactive, sub-par numbers, and general incompetence in effectively addressing crime and disorder. This often results from the inexperienced officer not recognizing benign, normal behavior for the area compared with truly criminal behavior. When you don’t know what you are looking for, or looking at, everything and everybody will either look completely innocuous or of criminal intent. Both of these inaccurate assumptions can have dire consequences. Failing to recognize a threat on the street corner or battlefield can be worse than mistakenly detaining an innocent party. Such actions, or lack there of, by police officers, do little to build public trust, and can hamper efforts at empowering residents to change an area plagued by crime and violence. The same can be said for counter-insurgency efforts fostered by military personnel. Good people want to know that we can discern the good from the bad quickly and deal with the bad efficiently and effectively. When we can’t do that, public trust erodes and the true criminal element becomes empowered to operate.

For the law enforcer, knowing ones beat means far more than knowing the geopolitical boundaries, major streets and intersections, the quickest ways to traverse an area, where the chronic complainers and crazies live, or which establishments offer the beloved half priced “cop deals” on everything from tires to torpedo sandwiches. Knowing your beat means first establishing the collective “norm” (the baseline) of the area of responsibility by viewing the surroundings with an understanding of not only the “what” associated with habitual areas, anchor points and natural lines of drift, but the “how” as well. Knowing how to use the personal knowledge of those geographic features to secure an area, identify threats, and collect intelligence for future operations can make the difference between furthering the mission objective or furthering the ability of the criminal element to thrive.

A basic tenant of being street savvy means being able to read and understand Iconography, and knowing how to use it to ones advantage. Proxemic pushes and pulls in an area can and do, tell a police officer a lot about how the police are perceived and the level of trust, respect, admiration, fear, or reverence a neighborhood may have for a particular officer or the force in general. Reading body language or Kinesic cues have saved many officers lives during that car stop, pat down, or simply a bar patrol. Baseline establishment, or “knowing your beat,” as established through these lenses, is as fundamental a tool for the police officer as is a sidearm, radio or field notebook, and so it must be for military personnel charged with a similar mission.

© The CP Journal
February 2013
The successful warrior (Marine or cop) does not view each of these domains in a singular or isolated fashion. Rather each domain must be viewed collectively and/or simultaneously. There is an interdependent relationship that each domain has upon the dynamics of the other. Just as looking through a pair of NVG’s, binoculars or an RCO enhances the ability to see geographic terrain, allowing for the safe ingress or egress of an area, or bringing our target into better focus; viewing people and the utilization of their surroundings through the proper lenses allows us to bring the target of criminal and insurgent behavior into better focus.

Lanny Roark is a retired San Diego police officer and a contributing writer to The CP Journal

Training Beyond The Physical Terrain
A response to “Defining The Human Terrain – Revealing Core Patterns.”

by: Jason Riley

What is the “human terrain”? As Pat notes in his article, although the word has been thrown about for the past few years, it has not been clearly defined. A recent thesis written at the Naval Postgraduate School puts the matter plainly:

The term “human terrain” encompasses a wide variety of concepts and meanings. It came into widespread use following the events of September 11th as a catch all phrase to describe the human dimension of the operational environment, including groups’ and individuals’ feelings and inclinations. However, as a stand alone term, human terrain has not been officially defined by the DoD. Although its use is widely prevalent, human terrain is currently an imprecise term, which is vague and nebulous.

Human terrain implies two specific requirements based upon its name. First, the activity, action, behavior, or trait originates from an individual human or a group of humans. Secondly, the trait must be tied to a geographic location. These traits may be an observable action as well as cognitive (examples: identity, motivation, values) or not readily observable (examples: family affiliations, language, education level). (E. B. Eldridge and A. J. Neboshynsky, “Quantifying the Human Terrain” [Thesis, Naval Postgraduate School, 2008], 18-19.)

Our military forces have excelled at defining, categorizing, reading, navigating, and maneuvering the physical terrain. We’ve incorporated aspects of the physical terrain into every element of our military training. We have done this both because we operate in
physical environments, and because we know that whoever controls the ground has a critical advantage in any conflict. Our Marines and soldiers, enlisted and officers, are trained in land navigation and map reading. Our leaders are able to conduct detailed assessments of the terrain in order to plan operations. We can easily categorize the accessibility of a piece of terrain by a quick look at a map, and can identify key terrain without much effort.

Unfortunately, we have neglected a critical piece of our operations, the human terrain. Since Sept. 11th, our military has been in a scramble to understand one of the most basic elements of human life—people. As the authors of the aforementioned thesis describe, the human terrain is basically a look at human activity and interaction within a particular geographic environment. But even this definition is almost too broad to be useful. One of the issues is that the human terrain, like the physical terrain, can be viewed from various perspectives. A pilot sees the ground differently than a rifleman. A squad leader sees an area different than a company commander. The same is true for the human terrain. A Marine rifleman sees the populace and their activity different than does a Psyops officer. However, while physical terrain is described using common terminology, which every military person should know, the human terrain has not been given the same common language. This is unfortunate because a lack of a common “human terrain” lexicon slows down communication, causes misunderstanding, and keeps our forces from effectively collaborating. The Six-Domains of Combat Profiling (Biometrics, Kinesics, Proxemics, Geographics, Iconography, and Atmospherics) provide the terminology which all levels of operators can use to speak about the human terrain. As Pat argues, the Six Domains provide our military forces with the ability to easily quantify the human terrain, and enables cross-communication. We encourage soldiers, Marines, commanders, and everyone operating overseas to make the Six Domains “household” terminology. Not only will doing so help communication, but will also begin to build a Combat Profiling mindset among everyone in the military. This will enable proactive thinking and the type of situational awareness necessary in the types of irregular warfare our military fights in the modern era.

Jason Riley is a Captain in the Marine Corps Reserves and a contributing writer to The CP Journal

Video Development
Identifying people who are familiar and unfamiliar with their surroundings

© The CP Journal February 2013
by: Patrick Van Horne

The CP Journal exists to find new and creative ways to enhance a reader’s ability to observe the different aspects of human behavior that we present on the site. The Video Training section of each issue is designed to test a reader’s ability to do this in realistic environments that a reader might experience, while also providing feedback to ensure the reader is getting the most out of the video.

Why Video?
There are a few different schools of thought on how to develop specific file folders in a student. A lot of times when we are writing articles for the community or presenting the material in a class, we rely on pictures and still images to get the point across. Pictures are great because you can put an image on the screen and discuss the details of the different gestures and postures in great. The picture approach works at the early stages of learning because it lets us explain the details of an observation while limiting and controlling the amount of stimulus a student is receiving.

The negative side of using pictures however is that life doesn’t work that way. Life comes at us in streaming video – not still images – with countless bits of information and stimuli demanding our attention. The sheer volume of people around us, most of which are completely innocent, distract us from identifying the people we are looking for. Training through video, in a setting where users are likely to use the lessons, increases the likelihood that someone will be able to apply these observations in their life when we haven’t already raised your suspicions by putting a picture on the screen.

So we are trying a new approach to focus our development on specific file folders in a way that closely resembles real life. We are going to use a series of videos to show an area to provide context to the task by showing the larger area and then focus down to a specific section to focus on a specific observation.

What Is The Setting?
We are going to do this in Grand Central Terminal in New York City. Why GCT? Because we aren’t on the practice field anymore. With over 700,000 people passing through the station each day (the traffic exceeds a million people during the holidays) and the constant terrorist threat to mass-transit stations, there is no better place to use as a training ground than this. We will continue to use this as the setting for our observations because if you can establish a baseline for Grand Central, observing people smaller areas and areas with less people will become increasingly accurate.
The Way It Will Work

Here is how it will work. The first video is going to provide an overview of the terminal. This is your “baseline” time and a chance for you to attain a certain degree of context and understanding of the area as a whole before we focus on a specific section. Think of this as the time spent observing a marketplace from an observation post for a short amount of time to establish a baseline before you patrol in.

The baseline video clip is one minute long, so feel free to watch it as many times as you like to begin establishing the norm for the station before we shift to a more confined area. Don’t worry about details or specifics just yet, begin with the big picture and observations from the domain of Atmospherics.

Step 1: Watch the video and establish the baseline before reading on.

(This is just one image – we recommend you watch the video on the site)

Overall: I would assess this is as having Positive Atmospherics because there is a general sense of safety and security here. Some of the observations that I think are important from an initial look are:

The Collective:
- Noise level: Overall, the noise level is pretty low. People aren’t really talking to each other, but the combination of the individual conversations and movement creates a low din.
- Activity level: Is pretty high. This is the beginning of rush hour and there are quite a few people in this main lobby.
- Order/Disorder: The general sense of safety is pretty high, the area is clean, and no overt criminal acts are going on that are causing people to react uncomfortably.

The Environment:
- Geographics: Area is a habitual area; anyone can come or go from here without any barriers to entry. The purpose for people entering this area is to travel by train. There are some tourists here who may not be travelling and therefore have a different purpose for visiting.

Groups of People
- Size of groups: People are typically alone or in a small group with one other person. The exception is families travelling with a few children.

Individual People:
- Individuals: Most people are moving with a purpose to get to their train, while a few people are standing around. Because people are typically moving with a purpose, I would assess that most people are familiar with their surroundings.

Notes – the assessment for groups and individuals is pretty light at this point because this is the first layer of observations and focused more on the collective mood and behavior of everyone present. We are still looking at this with a wide lens. The observations for groups of people and individuals will serve as a second lens to observe through.

For a little more context – people enter this main lobby area from the four entrances either from the city streets or from the train tracks. The signs with train departure information are just off the screen on the left side of the frame and there is a support booth in the middle of the lobby (the lit up booth on the left edge of the frame).
Step 2: Watch the next video and identify the unfamiliar person

Now that you have a feel for the area as a whole, we are going to make our way to the area in the box to observe people moving from the left to right. Think of this view as a rooftop position responsible for assessing people at a closer range than from the original observation post.
Watch the video once straight through. The goal is to identify the person unfamiliar with their surroundings. To identify someone unfamiliar, that means you have to compare and contrast, labeling each person that comes through as either familiar or unfamiliar.

This is what I saw:

The picture on the left is my baseline and what I would expect to see here. Everyone is looking forward, everyone is walking in a straight line and taking the most direct route from Point A to Point B (showing they know the natural lines of drift for the area), and people have minimal situational awareness. I look for minimal situational awareness because we need to keep in mind the definition of familiarity – it is someone who has been in that setting enough times to become comfortable there. If someone is comfortable, they do not perceive any threats, which could cause them to reduce their situational awareness to zero.

In contrast, someone who is unfamiliar with their surroundings will often show a higher degree of awareness. Think about this logically from how you behave when you don’t know where you are going. You are probably looking around for signs, looking at your directions or the map on your phone, or deferring to someone with you who does know where they are going. This naturally raises your awareness and it is how we can identify the man in the circle on the picture on the right who is looking around and deferring to the woman with him.
Watch the video again and focus on all of the indicators that you might pick up on to further reinforce this unfamiliar point. If you think there are more indicators that I missed, put them in the comments section below. If you are inclined, look at the relationship between that man and the woman and determine who is likely the dominant person in that group.

**Step 3: Determine If It Fits The Baseline or Not?**

There are two ways to confirm if this person is truly unfamiliar with Grand Central Terminal, either to observer him further finding additional information that either confirms or denies our conclusion, or to contact him and elicit that information through conversation. I did neither, but might classify someone dressed in business attire that is unfamiliar with the station as an anomaly since the baseline for the station is familiarity. Of course there are numerous reasons why he isn’t familiar with the station, with the very obvious reason being that is the purpose for transit stations in the first place, to bring people into a city who don’t already live there.

Keep in mind that people often shows signs of unfamiliarity when they *first* enter a new area. This is so they can get their bearings. At a train station, trains don’t always arrive on the same track, so a person entering the lobby may need a second to figure out what section of the station they are in before moving on. There is a woman at the beginning of the clip who does this. She walks into the screen from the right (coming out of a track), looks at the train schedule boards (off screen on the left) and then makes a U-turn to move towards her destination.

The goal of the video isn’t to determine if this man is an anomaly or not, it is to build your file folders for people who are both familiar and unfamiliar with their surroundings. How that applies to your field and the setting you are is a decision that you will have to make. Watch the videos a few times, repetition helps learning and increases the likelihood that the lesson is recalled when you need it. Go back to the first video (the baseline clip) and identify any people that you feel are also showing signs of unfamiliarity.

Patrick Van Horne is the CEO of The CP Journal

---

*Priming Your Brain – A Guide To Learning*

© The CP Journal February 2013
A short while ago, I realized that I am fortunate enough to work in a profession where intelligent, successful people surround me. These people, the athletes and members of my gym, come from a wide assortment of economical, social, and educational backgrounds. Professions in my gym range from doctors, lawyers, life coaches, real estate agents, and Marine Corps Officers. While these members are diverse in many aspects of life, they share a communal respect for health and fitness. As a gym owner, I am naturally going to be surrounded by people who understand the value of fitness. What I’ve found, though, is that even with such diversity, there is a common thread of overall intelligence and success.

One might argue that successful people will find ways to spend their money, and joining a gym is one way to do it. Others might argue that these people are successful because they understand that mental health is directly related to physical health. Regardless of what brought these people into our gym, their prior successes and intelligence, we see a positive trend in the perception of mental capacity. We have members reporting feeling better during work and school.

What the members are describing is an increased cognitive function that directly correlates to physical exercise. I would like to explore further how fitness can affect cognitive processes.

The Brain Connections

Every function of the body relies on an intricate communication network that starts in the brain. Every piece of information you receive through your senses is relayed to your brain for analyzing, processing, and synthesizing. Inside the depths of human brain, we have a network of cells that communicate electronically. This communication system is how one part of our brain communicates with another and how information is transmitted to the body. The cells that communicate with each other are called neurons.

A neuron is a cell designed to transmit information from one cell to another. A neural network looks like the roots of a
tree, however, a closer examination reveals that each neuron is separate from the others. A neuron will send messages through an axon, or a long stem that extends from the cell body. The message will travel through space called a synapse, and reach another neuron. A neuron has a receptive area called a dendrite. The information that is passed from neuron to neuron is called a neural transmitter.

When you learn something new you have to create a new connection between two neurons. Early on, this connection is weak and fragile, and can be broken, causing you to forget whatever you just learned, but the more times you perform an action, the more you strengthen that connection, and the easier it becomes. What is surprising though, is that mixing exercise in with your learning can dramatically improve the strength of this connection and how likely you are to recall that new piece of information later on.

**Exercise – The Science Behind The Application**

It has been shown that rats can increase the number of synapses (the connections between neurons in their brain) after completing acrobatic training. When I say acrobatic training, I am talking about more than the hamster wheel of pain. I’m talking about a complex assortment of obstacles requiring the rats to create ways to overcome obstacles. This means that as we age we can improve the number of connections between cells by learning new movements.

Find an exercise program that teaches you new and complex movement. Develop skills in Olympic weightlifting, gymnastics, or acrobatics. Learn and develop new skills, such as rock climbing, Brazilian jiu-jitsu, or boxing. The more coordinated activity involved, the more you will benefit from the affects of motor learning and the brain.

It has also been shown that physical activity in rats increased the density of blood vessels in the brain. This means there were a greater number of nutrients supplied from the blood to the brain. This is an unexpected, yet beneficial side effect of acrobatic feats – increased blood flow to the brain – that helps learning (developing those neural connections) that isn’t possible when trying to learn when you’ve been sitting at a desk for long periods of time.

Research also shows that exercise can help induce neurogenesis, or the formation of new nerve cells, in the hippocampus. The hippocampus is the area brain where memories are stored. This cell creation is due to the production of substances released during exercise called Brain Derived Neurotrophic Factor (BDNF). BDNF assists in the growth of new neurons and preventing older connections from dying off. Our brains are plastic, which means they have the ability to change depending on use. This neuroplasticity of our brains is referred to as “use it or lose it”. The brain will prune away unused or weak connections. As we age, skills we do not practice as often can be lost.
Controlling How You Learn

If you are new to training, to reap the benefits of aerobic activity, start by walking daily. As you feel comfortable, increase the distances and the intensity. The goal is to get your heart rate up and keep moving at least three to four times a week for 20-30 minutes at a time. Most law enforcement, security, first responder and military jobs demand long periods of inactivity followed by periods of intense engagement. Train this way. Your workouts should be brief, yet intense. If you want to engage the aerobic metabolic pathway, try interval work. That means short periods of intense work followed by rest. Repeat several times.

However, to truly maximize your physical and mental potential, you may want to find the minimal effective dose for exercise. That means to find a program that will give you the aerobic benefits and motor learning benefits at the same time. Incorporate a strength-training program for the increased benefits of metabolic and muscle development. Incorporate functional movements that require coordination, learning, and mastery.

In Conclusion

It is clear that exercise, specifically aerobic exercise and the learning of new motor-developing tasks can increase your cognitive functions. I don’t know if this explains why there is such a large population of successful, driven and intelligent people that frequent my facility, but it helps.

In our gym we do all of the steps I talked about above. We are a CrossFit affiliate in Carlsbad, CA. The athletes in our gym work on a strength-based lift, then focus on a technique-based movement and hit a short-duration high intensity workout, which is usually followed by a cool-down or a static strength building gymnastic movement. Our goal is simple, and physical in general, to build a well-rounded athlete. Building the smarter athlete is a beneficial side effect.

Rick Gonzalez is the owner of Crossfit Carlsbad and a contributing writer to The CP Journal

Article References


© The CP Journal 2013

