Human Terrain Mapping

A Critical First Step in Winning the COIN Fight

LIEUTENANT COLONEL JACK MARR
MAJOR JOHN CUSHING
CAPTAIN BRANDON GARNER
CAPTAIN RICHARD THOMPSON

According to counterinsurgency doctrine, the struggle for a population's support is the core of the COIN fight. In order to truly get to know the population, you must really understand it. One could argue that the U.S. military was not attuned to this at the outset of Operation Iraqi Freedom, but Soldiers and leaders with the experience of multiple rotations in Iraq and Afghanistan do understand and actively accept these two ideas as central to our current fight. The population is the center of gravity and must be considered first in everything we do. The key to success is finding ways to separate the insurgents from the population. Therefore, it is critical that we understand the human terrain in which we operate. The important question is no longer "why" or "if" we need this information — but "how" we gather it. How does a tactical-level military unit amass the necessary information about the area in which it operates?

Task Force 1-15 Infantry (TF Dragon), part of the 3rd Heavy Brigade Combat Team, 3rd Infantry Division from Fort Benning, Georgia, inherited an area southeast of Baghdad during Operation Iraqi Freedom V that had not seen a consistent Coalition presence in nearly two years. The operational environment (OE) the task force faced straddled a Sunni/Shia sectarian fault-line with the majority of the Sunnis living along the Tigris River (our western boundary) and Shia areas in the north (close to Baghdad) and the east (along the Baghdad-Al Kut highway). The information gap between what we knew and what we needed to know was fairly significant. In order to fill this gap, the entire battalion began focusing on the systematic collection of information about the people in our assigned area of operations (AO) through a process we described as human terrain mapping (HTM). As a result of conducting HTM, TF 1-15 IN was able to better understand the population, gain the trust of local leaders, and demonstrate our commitment to local communities. This, in turn, led to the development of actionable intelligence on insurgent activities, the construction of a biometric census of military-age males, and improved security.

Photos by SGT Timothy Kingston

Soldiers with the 1st Battalion, 15th Infantry Regiment, 3rd Brigade Combat Team, 3rd Infantry Division, question a group of Iraqi men during a mission in Salman Pak, Iraq.

The Importance of Having a Human Terrain Map

The center of gravity in all counterinsurgency operations is the population; controlling the population is essential to the isolation/dislocation of insurgents. Isolating the insurgents facilitates a unit's efforts to deal effectively with both the enemy (through lethal targeting) and the local population (through non-lethal targeting). This enables units to drive a wedge between the insurgents and the population within which they hide. At the tactical level of this fight, this is the critical action. Developing a human terrain map of the task force AO was the best way we found to enable this control of the population, defined in FM 3-24, *Counterinsurgency*, as "determining who lives in an area and what they do." In simple terms, a human terrain map outlines who the players are.

As any veteran, leader or student of this war recognizes, insurgents hold the upper hand with their better understanding of local customs and politics, their ability to speak the language, their freedom of movement within the society, and their better comprehension of the population's interests. Unfortunately, the enemy in this war does not wear a uniform; this war comes without a program outlining the players.

In the preparation for our current combat tour, the leadership of TF 1-15 looked hard at the examples of units that were enjoying success on the battlefields of Iraq. Overwhelmingly, the units that seemed to be winning the fight had made significant inroads with local leaders and found proactive ways to understand and respect local cultural norms and address specific community needs. Although we recognized and understood this lesson, when we arrived in our AO, we found that very little of this data had been collected, and the information that was available was spread out across the continuity files of nearly every staff section. Furthermore, when we tried early on to verify the information, we found that people had moved, opinions had changed, and — in many cases — not much was known.

Therefore, the task force commanders and staff outlined a plan by which we could capture the human terrain mapping information in a medium that all Soldiers could monitor and understand. Once the formatting and baseline information requirements were set, we leveraged the shared situational awareness enhancing capabilities of the command post of the future (CPOF) to maintain a visual database. Each company in TF 1-15 IN was allocated a CPOF to post the results of their human terrain mapping. Each company identified the following data points about their AO: religious boundaries, key economic structures, mosques and sheiks. When incidents occur in specific areas, all companies could then plot the location and contact the local sheik to gain intelligence or ask critical questions.

We saw the first step of the counterinsurgency fight as determining the human dynamics of a particular area. We identified each tribe, town, city or village within which the enemy may seek refuge. We determined who supported the insurgents and what their needs and wants were. In essence, a human terrain map is the physical manifestation or tool to collect and catalog cultural and ethnographical information encapsulated in the historical counterinsurgency principle of "Understanding the Environment."

CPT Richard Thompson of B Company, 1st Battalion, 15th Infantry Regiment, talks with a group of concerned local citizens during a mission November 21, 2007.

Defining Tactical Human Terrain Mapping

The human terrain mapping effort that TF 1-15 began in the early summer of 2007 was a deliberate process designed to gain ethnographic information about our operating environment. With nearly 400,000 people in the Dragon AO and little Coalition presence within the past couple years, the requirement for this ethnographic information was great. In order to accomplish this, we planned and executed a deliberate process of decentralized patrols to answer specific questions about the population we secured. The goal was to answer specific information requirements (IR) about each separate village and town. These IR included:

- Defining (graphically) each tribal area (with specific attention to where they adjoined or overlapped with neighboring tribes)
- Location and contact information for each sheik or village muhktar and any other important people (government officials, Iraqi Security Forces [ISF], etc.)
- Location of mosques, schools, and areas of commerce/markets
- Identification of the population's battle rhythm or pattern of life (when do they wake up/sleep/shop/etc.)
- Nearest ISF locations/checkpoints
- Economic driving force/employment (how do they earn a living?)
- Employment/unemployment levels
- Are people moving out of the AO or moving in?
- Anti-coalition presence and/or activities
- Access to essential services (fuel, water, emergency care, fire response, etc.)
- Local population concerns/issues

HTM information was gathered by platoon-level combat patrols, conducted during daylight hours. To avoid pattern-setting and predictability, companies planned these terrain mapping missions in a systematic, yet unpredictable to the enemy, pattern. In this way, all areas would be covered without telegraphing to the insurgents which areas might be visited next. For example, our Baker Company used the main road in their AO (running between Jisr Diyala and Salman Pak, near Baghdad) as the focal point and began with the villages on the east and west side of this main thoroughfare. Each day they would change sides of the road or move north or south of the villages they had visited previously. After two or three days of patrolling, they would schedule a day with no patrols, to further disrupt any patterns they may have been setting.

Patrols were planned and organized with specific objectives and purposes for each sub-element. The three major tasks were security, IR gathering, and relationship-building. As the composition of most patrols was centered on a mechanized infantry or tank platoon, some augmentation was required. Generally, the company commander was present on patrol to ensure a firsthand look at the AO. Additionally, the company fire support officer (FSO), acting as the company's intelligence officer, accompanied the commander on every patrol. This enabled us to build a framework to address the three critical tasks. The commander focused on building relationships with key individuals, while his FSO (augmented by part of the platoon) was focused on answering the specific IR, and the platoon leader concentrated on security.

In addition to these three sub-element tasks, everyone within the patrol would contribute to the delivery of Information Operations (IO) themes and messages. Generally these themes would include: the rewards program (money for information of extremist activities), examples of the positive steps being taken by the local government and/or ISF, and the benefits of cooperation with the Coalition. Whenever possible, these messages were delivered in the form of pamphlets or handouts given to local citizens. Knowing these messages and having handouts prepared was considered the Task Force Dragon IO basic load, which was the responsibility of every Soldier on the patrol.

A typical HTM patrol would be conducted in the following manner. The platoon would move tactically and establish a cordon around the specific area to be mapped. As this was being set, the commander/FSO would move to the likely center of the town, or begin immediately to talk with citizens to determine the residence of the local sheikh or village leader(s). While the commander met with these individuals, the FSO (and any augmentees) would begin talking with as many of the military-age males as possible to answer the IR. One of the specific requests the commander would make with the sheik or village elder was permission to enter the men of the village into our biometric-data system. Depending on the reaction to this request, the platoon might establish a centralized location and begin this process. If the sheik/elder was uncomfortable with this request, the unit would earmark the village for a return visit when they could continue to press this issue. However, most times the local leadership had no problem with the request and viewed the biometric census as evidence of their innocence and willingness to cooperate with Coalition forces. Throughout the entire patrol, Soldiers would talk to as many people as possible to pass on the specific IO themes/handouts. On average, these patrols took about two to four hours to complete.

Often times, patrols were reinforced with Civil Affairs teams, human intelligence collection teams (HCTs), Psychological Operations (PSYOP) teams, and/or additional medical personnel. These military specialists provided specific areas of expertise to assist the patrols, and were leveraged to enhanced the perceived importance of the tactical unit. For example, having a unit medic treat a civilian, especially a child, with an acute problem provided direct evidence of the goodwill of our units, and provided a tangible benefit to cooperation with the Coalition. Additionally, having special teams along increased the overall number of people talked to in the village and increased the number of human sensors that could report on our IR. This augmentation also provided excellent start points for our Team Village (an element combining CA, HCT, and PSYOP teams), which could target specific effects for follow-on visits.

Special care and planning was taken to ensure that these special teams did not interrupt or interfere with the relationship between the company/platoon and the population that was being mapped. We placed a lot of importance on the supremacy of the responsible company commander (the landowner) as the primary point of contact for each village's leaders. We wanted to preclude any confusion on the part of the local leadership as to who would make decisions regarding projects or future support. This is especially critical when dealing with Civil Affairs teams, who can often be seen as the "money guys" in the eyes of the population. Through a deliberate effort, we made it clear that these teams supported the company commander and not the other way around.

After every patrol, the responsible platoon/company would prepare a detailed analysis of the area that was mapped, and links were made to other villages based off of sect, tribes, and terrain. The result was a census-like compilation of data that was then collated by the task force staff. The primary actors at the battalion level are the S2, the effects/IO cell, and the S5. This helped us in the development and further refinement of both lethal and non-lethal targeting. HTM also resulted in a graphical depiction of where potential sectarian fault lines may be which also gave us a point to focus our initial efforts to quickly establish security so that all other logical lines of operation could be worked.

We used this approach to deliberately develop our human terrain map. The overall process took about two and half months when balanced with other tactical missions. Of note, information contributing to our overall HTM was also gathered on offensive missions. During intelligence-driven raids, cordon and searches and attacks, the platoons/companies used the same information requirements as on our HTM-patrols. Foremost of all, all military-age males were entered into the HIIDE (Handheld Interagency Identity Detection Equipment) biometric data system. This enabled an additional data point for piecing together the intelligence picture on the

extremist groups in AO Dragon. It also allowed the intelligence officer to cross reference the person against the database built during previous HTM missions. For example, if we had met an individual during an HTM patrol in Baker Company's AO and he turned up on the objective during a Crusader Company mission, we were able to begin to question why this person is involved in two different areas of the battlefield. We know extremists do not stay within the nicely drawn boundaries we assign to units. The cross reference allowed the intelligence officer to begin to link the person to a possible extremist cell that may live in one part of AO Dragon, but conduct missions in another portion. This allowed us to begin to create an initial link diagram of possible extremist activities.

The Importance of Doing Human Terrain Mapping

In retrospect, we would also point out from our experience that *having* a human terrain map is not nearly as valuable as *doing* human terrain mapping. Human terrain mapping provided an effective technique to learn and begin to understand the battlespace which we were responsible for. In other words, if the type of information we gathered had been available to us when we first arrived (in a database, for example), we might have had a false sense of how well we understood our environment. There is a tremendous advantage gained in the actual process of gathering ethnographic information. By way of analogy, having a ready-made database would be like learning to do math on a calculator instead of learning math problems the hard way. In conducting HTM, we learned how to multiply the hard way.

The benefits of having to do HTM are numerous, but seven particular points are worthy of specific mention.

HTM provides a practical start-point for gathering HUMINT. Human terrain mapping facilitates Coalition forces getting to know the leadership of the different tribes, towns, villages, and cities of a particular area of operations. By earning the respect and the trust of the village sheiks and elders, the locals are more willing to provide intelligence. As our units moved through the various villages and towns of AO Dragon, they constantly found local citizens who had been hesitant to call our "Tips Hotline" or come to our combat outposts, but were more than willing to provide information.

As often as possible, we tried to integrate our supporting HCTs into HTM patrols, which provided an excellent opportunity to make initial contacts and develop sources. It also provided good inside knowledge of local citizens and a ready-made cross-reference capability, providing a better framework for determining the reliability or motivations of informants.

HTM puts a human face on contact with the population being secured. An intended second-order effect of HTM is to enable a unit to move into unfamiliar territory and start to separate the insurgents from the population.

A Soldier with B Company, 1st Battalion, 15th Infantry Regiment, provides security during a joint operation with members of Concerned Local Citizens (CLC) in Iraq.

In the words of one company commander: "I believe it was vital to the initial impression of the locals in our AO that they saw us out walking amongst them, knocking on doors, shaking hands and asking questions specific to that family/tribe. I feel it put a human face on **our company** and opened the door to many of the initial dialogues that we are currently exploiting with great success."

HTM is critical to building trusted networks. The number one tenet of the 3rd Infantry Division's COIN "Warfighting Handbook" states that: "It's all about the people." Building a trusted network involves personal relationships between Coalition leaders at the tactical level and the leaders of the population they secure.

Once those relationships are built, units are better able to deliver and assess the effects of IO messages and PSYOP products, determine if local governments are talking to their constituents, and — if necessary — minimize unrest among the population through consequence-management procedures.

HTM has an indirect effect on the enemy. We believe that being out walking and patrolling was vital to the initial tone set by 1-15 IN. If the enemy tested our strength, we were out of our vehicles with a gun barrel and set of eyes in every direction and prepared to maneuver instantly on contact. We approached every HTM patrol as if the enemy was watching and assessing us. Human terrain mapping brought us closer to the locals and deterred enemy contact.

HTM provides unforeseen opportunities to demonstrate our resolve to the population. During the process of getting to know the leadership and meeting with them in their villages, the companies of TF Dragon oftentimes conducted hasty raids on weapons traffickers and IED emplacers that the citizens of the village pointed out. These raids proved to the local leaders that our Soldiers were dedicated to making their village more secure. Furthermore, these raids proved to local leaders that when they give us critical intelligence information, coalition forces will act on it.

HTM provides ground-level insight into local politics, motivations, and differences — and this can be the start point for reconciliation. Understanding the differences between Sunni and Shia areas is easy; finding the start point for reconciliation is not. However, once a unit has met and befriended the leaders in separate areas, those leaders now have something in common — a partnership with us. For example, in one particular TF Dragon area, Sunni and Shia families lived amongst each other with different sheiks as their leaders. Unfortunately, the sheiks in these areas were not eager to work with one another to reconcile their differences. To add further confusion to the area, AQI (al-Qaida in Iraq) often attacked both the Shia and the Sunni as a means to keep their foothold. After working numerous HTM patrols in these areas to outline the villages and determine who their leadership truly was, the company commander was able to earn the trust of both the Sunni and Shia leadership. Using this as leverage, he has been able to start discussions between the two sheiks based on the common goals of security and economic development.

HTM gives tactical-level units much better firsthand knowledge of their areas of operation. Nothing can replace the importance of personal reconnaissance. This is a principle that has existed in our doctrine for decades. Even though the data entered into biometric databases includes addresses and street names, this information is often difficult to include/catalog on map overlays. Furthermore, different people may refer to streets/locations by different names. Additionally, many roads in the rural areas are not trafficable by Coalition vehicles: conducting this type of reconnaissance helps a unit to figure this out.

As the U.S. Army continues to examine this aspect of counterinsurgency warfare, we would warn — based on our experience — against a total reliance on a computerized/automated solution to this problem or on the creation of a singular special-staff section to provide human-terrain insight. From what we've learned, a unit must either go out and collect this information for themselves initially, or develop a process to continuously reassess the information they have, if they inherited a developed map from a previous unit.

Counterinsurgency is probably the most difficult form of warfare because it forces military professionals out of their "comfort zones," and into the complex realm of interacting with human beings. Central to this is gaining the population's support, which often requires a simultaneous effort to drive a wedge that will isolate the insurgents. With a human terrain map, a unit is better postured to understanding — and exploiting these complex human relationships. However, our experience has taught us that the goodness of a human terrain map is not just in the "having;" the "doing" is just as important. Our experience shows that the human terrain map is time and energy well spent. Building the necessary human relations with the population you secure is not hard — it just takes time and effort.

LTC Jack Marr is currently serving as the commander of the 1st Battalion, 15th Infantry Regiment, 3rd Brigade Combat Team, 3rd Infantry Division at Fort Benning, Georgia. He is a graduate of the School of Advanced Military Studies and U.S. Army Command and General Staff College. He has served in various command and staff positions including serving as an S-3 and executive officer of battalions in the 82nd Airborne Division, a small group instructor for the Infantry Advanced Course, and commander of both A Company and HHC, 2nd Battalion, 8th Infantry, 4th Infantry Division.

MAJ John Cushing is currently serving as the S3 for the 1-15th Infantry, 3rd BCT, 3rd ID. He received a bachelor's degree from the United States Military Academy and a master's degree from the University of Virginia. He is a graduate of the U.S. Army Command and General Staff College. He has served in various command and staff positions to include serving as brigade planner, 2nd Brigade, 3rd ID; commander, B/1-64 Armor and E-9 Cavalry, 2nd BCT, 3rd ID; and as an instructor with the Department of Systems Engineering, United States Military Academy.

CPT Brandon Garner is currently the assistant S3, 1-15 Infantry, 3rd BCT, 3rd ID. He received a bachelor's degree from the University of Texas - San Antonio and is a graduate of the U.S. Army Command and Staff Service School. He has served in various command and staff positions in the Continental United States, Korea, and deployed in Iraq, to include commander, Company C, 1-15 Infantry; and Armor XO and platoon leader, C and D Co, 3-8 CAV, Fort Hood, Texas.

CPT Richard Thompson is the commander of B Company, 1-15th Infantry, 3rd BCT, 3rd ID. He received a bachelor's degree from Troy University in Alabama. He is an Infantry Captains Career Course graduate. He has served in every leadership position in an infantry company from team leader through company commander. He has 11 years prior service in the 75th Ranger Regiment.
