



HUMAN TERRAIN MAPPING: A Critical First Step to Winning the COIN Fight

**Lieutenant Colonel Jack Marr, U.S. Army; Major John Cushing, U.S. Army;
Major Brandon Garner, U.S. Army; and Captain Richard Thompson, U.S. Army**

Lieutenant Colonel Jack Marr, U.S. Army, is commander of 1-15 Infantry, 3d Heavy Brigade Combat Team, 3d Infantry Division, currently deployed as part of Multi-national Division Center (Task Force Marne). He holds a B.A. from the University of Minnesota and an M.A. from Saint Mary's University. He has served in a variety of command and staff positions in light, mechanized, and airborne infantry units in the continental United States, Afghanistan, and Iraq.

Major John Cushing, U.S. Army, is currently the S3 of 1-15 Infantry. He holds a B.S. from the United States Military Academy and an M.S. from the University of Virginia. His previous assignments include a variety of command and staff positions in the 1st Cavalry Division and 3d Infantry Division.

Major M. Brandon Garner, U.S. Army, is the assistant S3 of 1-15 Infantry. He holds a B.A. in history from University of Texas at San Antonio. Previous assignments include command and staff positions in Iraq, Korea, and CONUS. Prior to assuming duties as the assistant S3, he served as the commander of C Company, 1-15 Infantry during both OIF-III and OIF-V.

Captain Richard E. Thompson, U.S. Army, is the commander of B Company, 1-15 Infantry. He holds a B.S. from Troy University. In previous assignments he served as a rifle platoon leader, 1-15 Infantry, during OIF-I and, while enlisted, as a squad leader and platoon sergeant in the 3d Ranger Battalion at Fort Benning, Georgia.

PHOTO: CPT Brian Jennings, commander of C Company, 1-15 Infantry talking with the sheik of Vin Jan Village, Iraq, August 2007. (U.S. Army, 1LT Aaron Wilkerson)

ACCORDING TO CURRENT U.S. MILITARY DOCTRINE, the path to victory in a counterinsurgency (COIN) runs through the indigenous population. Experiences in Iraq and Afghanistan, where the people are centers of gravity, have driven this doctrine. But before the counterinsurgent can win the people over, he must take the necessary steps to really understand and know them.

The U.S. military clearly was not attuned to this reality at the outset of Operation Iraqi Freedom (OIF). Today, however, most Soldiers with multiple tours in theater understand that U.S. forces must consider the population first in everything they do operationally. They have discovered that any attempt to separate the insurgents from the population must be coordinated with effective efforts to win the population's support. Soldiers know that to succeed at the latter, they need to understand the human terrain intimately: only deep understanding can point to the conditions essential for success. Therefore, the important question is no longer "why" or "if" Soldiers operating in COIN environments should seek detailed understanding of the population; "how" they obtain that understanding is the issue at hand. In other words, how can a tactical unit most effectively amass and process the information it needs to decisively influence the population in its area of operations (AO)? Using the practical experience it gained during OIF V, Task Force (TF) Dragon (led by 1-15 Infantry, part of the 3d Heavy Brigade Combat Team, 3d Infantry Division) can help answer this question.

An Enemy Within

As many veterans and students of the current wars recognize, 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 society, and their greater comprehension of the population's interests. Moreover, as is always the case in wars of foreign occupation, the insurgent enemy in this war does not wear a uniform and can easily blend with the population.

While preparing for its current combat tour, TF Dragon looked hard at units that were enjoying success in Iraq to figure out how to cope with the difficulties of COIN warfare. Overwhelmingly, the units that seemed to be winning the fight had made significant inroads with local leaders, had found proactive ways to understand and respect local cultural norms, and had addressed specific community needs. Although the task force recognized and understood this lesson early on, when it actually arrived in its area of

operations (AO), Soldiers found that very little of the ethnographic data it needed to conduct effective operations had been collected.

The available information was sparse and spread out across the continuity files of nearly every staff section. It was also old: there had been no consistent coalition presence in the area for nearly two years, and when the staff tried to verify the little information it had received, it often found that key personalities had moved out of the area or local opinions and loyalties had changed. The task force quickly determined that the first step of its COIN fight would be to acquire an understanding of its AO in human terms.

When it deployed to Iraq in mid-2007, TF Dragon inherited a heavily populated (400,000 people) area southeast of Baghdad. The AO was volatile, in part because it straddled a Sunni/Shi'a fault-line. The majority of the Sunnis lived along the Tigris River, the task force's western boundary. Shi'a tribes resided in the north (close to Baghdad) and along the eastern boundary (the Baghdad-Al Kut highway).

The requirement for new ethnographic information on its AO weighed heavily on the task force. Thus, the entire unit began focusing on systematically collecting and collating ethnographic information. Ultimately, TF Dragon worked the collection through a process the staff labeled "human-terrain mapping," or HTM.

Developing the HTM process amounted to creating a tool for understanding social conditions. As it collected and cataloged pertinent information, the

task-force staff tailored its plan in order to capture a broad range of details. An important aspect of the process involved putting the data in a medium that all Soldiers could monitor and understand. Once the formatting and baseline information requirements were set, TF Dragon employed the shared situational-awareness enhancing capabilities of the Command Post of the Future (CPOF) computer system. Each company was allocated a CPOF to post the results of its mapping on a common database, a matrix that included information about religious boundaries, key economic structures, mosques, and important personalities such as sheiks.

Over time, the staff mapped the boundaries of each tribe and the demographic makeup of every village, town, and city the enemy could possibly seek refuge in. It went on to add data about personalities who were known to be supporting the insurgents, and the needs and wants of the particular populations. Mapping this political, economic, and sociological information created a common human-terrain picture that enabled more proactive initiatives and faster, much more effective responses to events. For example, as incidents occurred in specific areas, the common map enabled all companies to plot the location of the incident, then identify the proper sheiks to contact for intelligence or answers to critical questions.

Human-terrain mapping thereby allowed TF Dragon to understand the population and demonstrate its commitment to improving local communities. By addressing what the people felt were their priority needs, the task force was better able to cultivate relationships of significant trust with neighborhood leaders. In turn, these relationships led to the construction of an effective biometric database of military-age males. This information resulted in improved actionable intelligence on



Task Force Dragon's area of operations southeast of Baghdad.

Mapping...political, economic, and sociological information created a common human-terrain picture that enabled more proactive initiatives and faster...responses to events.

insurgent activities, greatly improving security.

These positive results validated measures prescribed by Field Manual 3-24, *Counterinsurgency*, for “determining who lives in an area and what they do.” In figurative terms, the human-terrain map became an outline of who the players in the current game were. Thus, the task-force commander concluded that developing a human-terrain map was crucial to simultaneously clearing out the enemy and driving a wedge between the insurgents and the population.

Defining Tactical Human-Terrain Mapping

TF Dragon executed its data-collection effort through systematic people-to-people contact. The staff planned decentralized platoon-level patrols, conducted during daylight hours, that sought answers to specific questions about the population. These specific “information requirements” (IR) about each separate village and town included—

- The boundaries of each tribal area (with specific attention to where they adjoined or overlapped).
- Location and contact information for each sheik or village mukhtar and any other important people (government officials, Iraqi Security Forces, etc.).
- Locations of mosques, schools, and markets.
- Identification of the population’s daily habits (when they woke up, slept, shopped, etc.).
- Nearest locations and checkpoints of Iraqi Security Forces.
- Economic driving force (i.e., occupation and livelihood).
- Employment and unemployment levels.
- Population flow (i.e., people moving in or out of the AO).
- Anti-coalition presence and activities.
- Access to essential services (fuel, water, emergency care, fire response, etc).
- Particular local population concerns and issues.

To avoid being targeted, companies designed their terrain-mapping patrols to be “systematically unpredictable.” In this way, all areas could be covered without telegraphing to the insurgents which areas might be visited next. For example, TF Dragon’s Baker Company used the main road in its AO (running between Jisr Diyala and Salman Pak, near Baghdad) as a focal point and began with the villages on the east and west side of the thoroughfare. Each

day patrols changed sides of the road or moved north or south of the villages they had visited previously. After two or three days of patrolling, they took a day off, further disrupting any patterns they may have been inadvertently setting.

Patrols were 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 gain a firsthand look at his AO. The company fire support officer (FSO), acting as the company’s intelligence officer, accompanied the commander on every patrol. This enabled the staff to build a framework to address the three critical tasks. The commander focused on building relationships with key individuals, his FSO (augmented by part of the platoon) sought answers to IR, and the patrol’s platoon leader concentrated on security.

In addition to the three sub-element tasks, everyone within the patrol helped deliver information operations (IO) messages. These messages typically involved the rewards program (money for information about extremist activities), examples of the positive steps being taken by the local government and Iraqi Security Forces, and the benefits of cooperating with the coalition. Whenever possible, the messages took the form of pamphlets or one-page handouts given to local citizens. Prepared handouts and knowledge of current messages were considered TF Dragon’s IO basic load. They were the responsibility of every Soldier on patrol.

A typical HTM patrol required a platoon to move tactically and establish a cordon around the area to be mapped. As the perimeter was being set, the commander and FSO moved to the likely center of the town and began to talk with citizens to determine where the local sheik or village leader lived. One of the specific requests the commander would make from the sheik or village elder was permission to enter the men of the village into the biometric data system (using handheld interagency identity detection equipment, HIIDE). Depending on the reaction to this request, the platoon might establish a centralized location and begin the process. If the sheik or elder demurred, the unit would earmark the village for a return visit when

they could continue to press the issue. However, most times the local leaders had no problem with the request; they viewed the biometric census as an opportunity to show their innocence and willingness to cooperate with coalition forces.

While the commander met with these individuals and Soldiers took the census, the FSO and his platoon augmentees would talk with as many of the military-age males as possible to get answers to the IR. Other Soldiers also talked to as many people as possible to pass on the day's IO messages. On average, these patrols took about two to four hours to complete.

Oftentimes, patrols were reinforced with civil-affairs (CA) teams, human-intelligence collection teams (HCTs), psychological operations (PSYOP) teams, or additional medical personnel. These military specialists provided specific areas of expertise to assist the patrols, and the TF used their skills to enhance the perceived importance of the tactical

unit. For example, having a unit medic treat a civilian with an acute problem, especially a child, provided direct evidence of the task force's goodwill and the tangible benefits to be had by cooperating with the coalition. Special-team augmentation also increased the overall number of contacts in the village, furthering the acquisition of IR answers. Additionally, it created opportunities for TF Dragon's "village teams" (elements combining CA, HCT, and PSYOP personnel) to reconnoiter and consider the kinds of effects they might want to produce on future visits.

Special care and planning was taken to ensure that augmentation teams did not interrupt or interfere with the relationship between the company and the population being mapped. TF Dragon emphasized the supremacy of the responsible company commander (the "land-owner") as the primary point of contact for each village's leaders. The task force wanted to preclude any confusion on the part of



U.S. Army, 1LT Matthew Barwick

Captain Rich Thompson, commander of Baker Company, 1-15 Infantry, talking with a local leader and his interpreter in Al Ja'ara, Iraq, August 2007.

the local leadership as to who would make decisions regarding projects or future support. This clarity was especially critical when dealing with CA teams, whom the people often saw as “money guys.” Through a deliberate effort, the task force made it clear that these teams supported the company commander, not the other way around.

After every patrol, the responsible platoon prepared a detailed analysis of the mapped area, and links were made to other villages based on sect, tribes, and terrain. The result was a census-like compilation of data collated by the task-force staff (primarily the S2, the effects/IO cell, and the CA officer). This compilation helped the staff develop and refine both its lethal and nonlethal targeting. It also produced a graphical depiction of where potential sectarian fault lines were, allowing the task force to focus its initial security efforts quickly so that all other logical lines of operation could commence early.

Task Force Dragon used this approach repeatedly to develop its human-terrain map. Balanced with other tactical missions, the overall process took about two-and-a-half months. Importantly, information contributing to the overall map was also gathered on offensive missions. During intelligence-driven raids, cordon and searches, and attacks, TF Dragon units used the same IR as on HTM patrols. Also, all military-age males found were entered into the HIIDES biometric data system, which helped the task force piece together a picture of the extremist groups operating in AO Dragon. The S2 simply checked the names of individuals taken into custody against the database built during previous HTM missions, and if someone had been in another unit’s AO earlier, he became a suspect; the task force would then investigate why he was moving from area to area. This cross-reference system enabled the S2 to begin to link individuals so identified to a possible extremist cell that lived in one part of AO Dragon, but conducted missions in another. Eventually, it allowed the task force to create a link diagram of possible extremist activities.

HTM—A Necessary Process

Although the value of the map itself was obvious, in retrospect, the physical process of doing the mapping might have been even more beneficial. If the type of information gathered had been available upon arrival (in a database, for example), the task force might have accepted an abstract, and perhaps false, sense of the environment. It would have done so while depriving itself of firsthand knowledge gained from building the map. By way of analogy, having a ready-made database would have been like learning to do math problems on a calculator instead of the hard way, via reasoning. In conducting HTM, the battalion learned how to square ethnographic data the hard way, a method that provided maximum benefit via direct analysis of particulars within the situation at intimate levels. From this perspective, the advantages of having Soldiers do HTM themselves appear numerous. Besides gaining greater knowledge of the AO, some of the more salient benefits follow.

- HTM provided a practical vehicle for gathering human intelligence (HUMINT). Human-terrain mapping facilitated coalition forces getting to know the leadership of the different tribes, villages, towns, and



U.S. Army. 1LT Matthew Banwick

Sergeant Cecil Ray, B Company, 1-15 Infantry, collects biometric data by processing a citizen of the Al Ja'ara area into the HIIDES system, August 2007.

Human-terrain mapping facilitated coalition forces getting to know the leadership of the different tribes, villages, towns, and cities...

cities of a particular AO. After earning the respect and trust of village sheiks and elders through person-to-person contact, Soldiers found the locals more willing to provide intelligence. As units moved through the various villages and towns of AO Dragon, they consistently found local citizens who had been hesitant to call the task-force tips hotline or go to its combat outposts, but were more than willing to provide information if engaged at a personal level.

- As often as possible, the task force tried to integrate its supporting human-intelligence collection teams into HTM patrols, which provided excellent opportunities to make initial intelligence contacts and develop sources. The practice also produced good inside knowledge of local citizens and a ready-made cross-reference capability, improving the task force's ability to determine the reliability and motivation of informants.

- HTM put a human, personal face on contacts with the population, abetting the task force's effort to enlist the population against the insurgents. One company used an interpreter to assist in getting to know the local citizens. Another conducted joint HTM patrols with local Iraqi policemen and concerned citizens. As one company commander put it: "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 [and] tribe. I feel it put a human face on our company and opened the door to many of the initial dialogues that we are [now] currently exploiting with great success."

- HTM was critical to building trusted networks. The number-one tenet of the 3d Infantry Division's COIN handbook states, "It's all about the people." Building a trusted network means creating personal relationships between coalition tactical leaders and the leaders of the population they secure. Once those relationships were built, task-force units

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

- The patrolling required to map the human terrain was vital to the initial tone set by TF Dragon: it put coalition Soldiers in the streets immediately, sending a clear signal to the insurgents and the people about who was in charge. If the enemy tested U.S. force strength, Soldiers were out of their vehicles with gun barrels and eyes set in every direction, prepared to maneuver instantly. Soldiers conducted every HTM patrol as if the enemy was watching and assessing them. Thus, HTM simultaneously brought U.S. forces closer to the locals and deterred enemy contact.

- HTM provided unforeseen opportunities to demonstrate resolve to the population. While getting to know local leaders and meeting with them in their villages, the companies of TF Dragon often conducted hasty raids on weapons traffickers and IED emplacement cells pointed out by villagers. These raids showed the locals that task-force Soldiers were dedicated to making their village more secure. Furthermore, they proved to local leaders that when they gave Soldiers critical intelligence information, those Soldiers would act on it.

- HTM provided ground-level insight into local politics, motivations, and differences—and this served as the start point for reconciling Sunni with Shi'a. Understanding the differences between the two sects' areas was easy; finding a nexus for reconciliation was not. However, once a unit met and befriended leaders in both areas, those leaders had something in common: a partnership with coalition forces. In one particular area, Sunni and Shi'a families lived together with different sheiks leading each sect. Unfortunately, these sheiks were not eager to work with one another to reconcile their differences. To add to the area's problems, Al-Qaeda in Iraq often attacked both groups as a means to keep their foothold. After working numerous HTM patrols in those areas, the local company commander earned the trust of both the Sunni and Shi'a. This enabled him to initiate discussions between the two sheiks based on the common goals of security and economic development.

- Nothing can replace personal reconnaissance in importance. This is a principle that has existed in U.S. Army doctrine for decades. Even though the data entered into biometric databases includes addresses and street names, this information is often difficult to include in map overlays. Furthermore, different people may refer to local areas by different names. Many roads in rural areas are difficult to travel; conducting reconnaissance during HTM operations can assist a unit in figuring this out.

As the U.S. Army continues to examine the human-terrain mapping aspect of counterinsurgency warfare, TF Dragon Soldiers would offer a caveat based on their experience: do not rely solely on a computerized, automated solution to HTM or on the creation of a singular special-staff section to provide human-terrain insight. From what TF Dragon learned, a unit would best benefit from going out and collecting this information initially on its own, or, if it inherits such information from a previous

unit, by developing a process to continuously reassess that information.

Summary

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, sometimes in very subtle ways. By developing a human-terrain map, a unit can acquire a greater sensitivity to and deeper understanding of its AO, enabling it to leverage the complex human relationships that make COIN succeed or fail. But the goodness of a human-terrain map lies not just in the “having”; the “doing” offers perhaps even greater dividends. Building the necessary human relations with the population you secure is not hard—it just takes time and effort. In short, TF Dragon’s experience has shown that making a human-terrain map is time and energy well spent. **MR**

Center for Army Lessons Learned

10 Meade Avenue, Building 50 Ft. Leavenworth, KS 66027 COM: 913-684-3035 DSN: 552-3035

Now in Print

Now in Print

Now in Print

Check out the CALL Web site for the latest publications.

NIPR Website: <http://call.army.mil> RFI: <https://call-rfi.leavenworth.army.mil/rfisystem>