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The Mind as a Target: Psychological Operations and Data Fusion Technology

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Abstract

Psychological Operations (PSYOP) involve actions taken to change the perceptions and ultimately the behavior of a particular foreign audience. The conduct of PSYOP requires an accurate understanding of the targeted audience and the means of influencing that audience in terms of specific goals and objectives. To accomplish this challenging category of operations directed at the minds of the target audience, PSYOP planners need access to cultural, sociopolitical, and current-event/situation data. In addition to the need for this information to be accurate, there is the critical need for the information to be updated as close to real-time as possible. While there are initiatives underway that address these needs, a new potential may be found in the field of data fusion. The process of collection of multiple sources of data, and the correlation and combination of the data to model the target audience, is a form of data fusion. This paper introduces the discipline of PSYOP, the critical needs for data within the process of target audience analysis (TAA), and insight as to where automated data fusion processes might play a role in future PSYOP planning systems.

Psychological Operations

To understand the role of Psychological Operations (PSYOP) in today's information operations environment, it is necessary to define the term. AFDD 2-5 gives this definition as "planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals. The purpose of PSYOP is to induce or reinforce foreign attitudes and behaviors favorable

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14. ABSTRACT
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to the commanders' objectives."[i] The principles of PSYOP include: a credible message based on truth, a message chosen and shaped to create a positive impression on the target audience, and a message integrated into the overall military or political program of which it is part.[ii]

These principles apply for all of the categories of PSYOP. Strategic PSYOP is global in scope and promotes long term goals. Operational PSYOP targets regional audiences and is often used to gain support for a particular military operation. Tactical PSYOP –which is probably the most familiar to people because it is often seen in Hollywood depictions of PSYOP—is directed primarily at short term objectives that are supportive of the overall long-term strategic plan. Finally, there are consolidation PSYOP; foreign internal defense bolstering and support of force protection operations in hostile environments (these force protection operations seem to be the most common lately because of the high number of humanitarian missions going on around the world).

PSYOP Challenges in Today's Environment

There has always been a certain amount of difficulty employing persuasive communication between cultures with different communications processes. This makes it difficult to plan PSYOP and make educated estimates of PSYOP impacts in a particular campaign.[iii] The underlying processes that make this planning and estimation difficult are both cultural and anthropological in origin. These processes involve one's enculturation process or *cultural programming* that can cause people to evaluate everything they encounter from their own cultural baseline, and in so doing, ignore the vantage point of a person (read target audience) of another culture. Paul Bohannan, a social anthropologist, states the problem best:

> "*There is no more complete way to misunderstand a foreign civilization than to see it in terms of one's own civilization*." [iv]

Obviously, then, one problem that faces today's PSYOP planners is the question of how best to transcend one's own culture and communicate with another. Anthropologists argue that we must look at different cultures from a viewpoint that is, as much as

possible, removed from our own in order to understand the unique logic and structure each culture is based upon. Of course, the pitfall here is again the cultural bias that is instilled by our enculturation, the process by which we learn and acquire our culture.[v] Many scientists feel that the commonly accepted ethnographic posture of an independent, objective "participant observer" is an impossible one. So how do we overcome these problems? I believe discussion about universal meanings and truths is possible despite widespread linguistic cultural variation. The main reason I believe this universality of meaning is possible is because language is primarily arbitrary. Since differing languages do not completely halt communications between two different cultures (although they may complicate them), then there must be a greater, universal system of communication among and across cultures. Linguistic cultural variation is obviously a reality. When it comes to the structure of language, including phonemic structure and physical characteristics of languages, there are no natural connections between the sounds of words and their meanings.[vi] This in itself indicates that there is no universality in language. There are also differences in the ways some cultures express their thoughts. One way to illustrate this point is the comparison between the Whorfian position of language as a determinant of thought and the position of language as a reflection of rules and status and the various bases of stratification in a society.[vii] Whorf used as an example the contrasts between what he called Standard American English and Hopi. He claims that "there are differences in the ways of expressing the same thoughts" but he goes on to say "that it was a far cry from saying they reflect differences in thought." So, one can conclude that while language differences exist, it doesn't mean that there are differences as fundamental as the thought processes themselves.

Despite the above mentioned differences in language and culture, there are quite a few similarities among languages and cultures as well, lending support to the idea that there is a greater, overarching system that allows for cross-cultural communication. One of these similarities is that all languages have rules, or syntax, in their use as well as units of language that carry meaning (morphemes). Metaphors can be universal too—such as distance in relationships being compared metaphorically to animals, body parts, etc. While not all cultures share this trait, many do. Another commonality among languages is that while not all languages share a single language family, many do (like Indo-

European). There are also patterns of linguistic relativity (similar to cultural relativity). Perhaps these similarities are due to what Chomsky[viii] suggests is a common underlying structure of the human brain. He lends support to the theme of common system by stating that human languages are qualitatively different from all other forms of communication, and all humans have a universal grammar encoded in their brains.

While the connection between language, symbols, and their meanings differ across cultures, the very fact that there is a relationship between a symbol and a meaning is universal. All of the similarities mentioned above cut across cultural symbolic systems and meanings, indicating that there can be universal meanings and truths, despite widespread linguistic cultural variation.

Current PSYOP Initiatives

There are initiatives underway to simplify the process for PSYOP planners by supplying them with the knowledge and background to transcend their own cultural boundaries and communicate more effectively with people of other cultures. One such initiative is the cross-cultural PSYOP decision support system (DSS).[ix] The purpose of the PSYOP DSS is to improve the current PSYOP campaign planning process in which a panel of experts is convened to analyze a culture—or more specifically, a target audience within a culture—and design a PSYOP campaign that will be understood by the culture/audience and effective in influencing it. The end result of this tool will be a software-based quick response (the model will be used for either crisis planning or deliberate planning) planning model that will eliminate the need for a time-consuming expert panel process.

Data Fusion Support to PSYOP

As one of the pillars of IO, PSYOP has become an increasingly important discipline, both in terms of supporting the other pillars, and as an instrument to be relied on by the other IO disciplines. PSYOP is at once a weapon to use and to defend against. It is because of these PSYOP roles that we must search for more ways to develop PSYOP and its applications, especially in relation to the commonly known Observe, Orient, Decide, and Act (OODA) loop that is the command and control model describing the interactions

between opposing military forces[x]. One area that seems to show promise is data fusion, which encompasses the processes involved primarily in the observe, orient, and decide elements of the OODA loop described above, and could be instrumental in supporting PSYOP in its offensive and defensive roles. The reason for this is that data fusion processes affect both the intelligence preparation of the battlespace (IPB) and the actual conduct of the conflict, where the OODA loop can be the target or the tool of the attack.[xi] It follows that the processes involved in conducting target audience analysis for PSYOP (IPB, OODA iterations including pre-testing and post-testing of products) closely parallel data fusion processes and could benefit from the advanced networks and fusion systems tools that speed up the OODA loop.

Data fusion can also contribute to defining measures of effectiveness (MOE) for PSYOP by being applied to uncover patterns of behavior in the target audience. Once defined, these MOEs can be applied with greater ease and accuracy due to the fusion systems that improve resolution, content of information, and timeliness.

Summary

As the Air Force is defining its role for the future, the PSYOP community residing in all branches of the service is also planning its expanding role in IO, with an eye turned toward a better understanding of the cross-cultural communication process and the mind as a target. Because IO requires the coordinated understanding of the targets that exist in all domains (to include the mind), there is an opportunity present to leverage data fusion processes in supporting PSYOP and IO in general, from a planning perspective as well as in offensive/defensive roles.

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[i] Air Force Doctrine Document 2-5.3.
[ii] Glen, Curtis. *An Overview of Psychological Operations (PSYOP).* (Federal Research Division, Soviet Union-Eastern European Section (4A). Washington, D.C.: USIA), 1990.
[iii] Muirhead, John, "Psychological Operations: The search for a Cross-Cultural Communications Model" *Proc. of 39th Annual Conference of The International Military Testing Association,* 14-16 October 1997.
[iv] Bohannan, Paul, *Social Anthropology,* (New York: Holt, Rhinehart & Winston), 1963.
[v] Rosman, Abraham, and Rubel, Paula G., *The Tapestry of Culture,* (New York: McGraw-Hill, Inc), 1995.
[vi] Rosman, Abraham, and Rubel, Paula G., *The Tapestry of Culture,* (New York: McGraw-Hill, Inc), 1995.
[vii] Rosman, Abraham, and Rubel, Paula G., *The Tapestry of Culture,* (New York: McGraw-Hill, Inc), 1995.
[viii] Rosman, Abraham, and Rubel, Paula G., *The Tapestry of Culture,* (New York: McGraw-Hill, Inc), 1995.
[ix] Cross-Cultural DSS is a long-term research effort sponsored by AIA/DO2. Principal investigator is Dr Jerry Barucky of Metrica, Inc. See Final Technical Report "Evaluation of Cross-Cultural Models for PSYOP", Barucky, Connell, Karabaich, Muirhead.

[x] Waltz, Ed, "The Data Fusion Process: A weapon and Target of Information Warfare" *Proc. of 10th National Symposium on Sensor and Data Fusion*, 14-17 April 1997.
[xi] Waltz, Ed, "The Data Fusion Process: A weapon and Target of Information Warfare" *Proc. of 10th National Symposium on Sensor and Data Fusion*, 14-17 April 1997.