

Title: Accounting for Bias in Broadcast Media Message Acceptance

Author: Dr. Patrick D. Allen, General Dynamics United Kingdom, Ltd.

Abstract: Influence operations must often deal with and through Media channels. Understanding the effects of Receiving Group bias and Media Group bias on message attention and acceptance are essential to successful information operations. Receiving Group bias will result in outright rejection of a message when the message is too misaligned with the current beliefs of the Receiving Group. Moreover, the Receiving Group's perceptions of the Sending Group, the Object Group, and the Media Group will all affect how well or poorly a given message is accepted by, or gains the attention of, the Receiving Group. Media Group bias occurs when the beliefs of the Media Group do not align with the message being transmitted, which will result in the modification of the frequency, Media Reach, and intensity of the original message. The paper also describes the Idea Battlespace, message purpose, dimensions of message content, two-party messages, and third-party messages.

Distribution Statement A: This paper is approved for Public Release, Distribution Unlimited.

Disclaimers: The views expressed in this document are those of the author and do not necessarily represent the views of General Dynamics, the Defense Advanced Research Projects Agency, or the governments of the United Kingdom or United States.

Overview and Scope

This paper focuses on “broadcast messages”—that is, messages that are transmitted one-way over some media intended to reach a broad element of the population. The principles described herein are also applicable to the acceptance of individual communications.

The paper is organized into 9 sections:

1. Message Purposes
2. The Idea Battlespace
3. Two-Party and Third-Party Messages
4. Receiving Group Bias
5. Three Dimensions of Message Content
6. Gaining Attention
7. Gaining Acceptance
8. Media Group Bias
9. Model Developments and Applications to Date

1. Message Purposes

Every message has a purpose. That purpose is what the message is trying to accomplish, which is fairly independent of the actual content of the message. The four message purposes are:

- a. To get Group X to Believe Y
- b. To get Group X to Not Believe Y
- c. To get Group X to Take Action Z
- d. To get Group X to Not Take Action Z

Note that it is sometimes easier to get a group to not believe something than to believe something, such as by casting doubt on a particular competing message. It is also sometimes easier to get a group to not take an action than to take an action (or vice versa), depending upon the perceived risk. Explicitly defining the purpose of the message using these four categories facilitates message planning, makes explaining the plan, and explaining how this message counters opposing messages and supports other friendly messages and actions.

2. The Idea Battlespace

The Idea Battlespace is a concept that describes an arena in which messages compete for dominance against each other. Dominance is described as gaining more attention and acceptance in the groups of interest than a competing message. The dominance of messages increases and decreases over time depending upon how much attention is brought to the message over time, and how much each of the groups of interest accepts the message. (See Figure 1.)

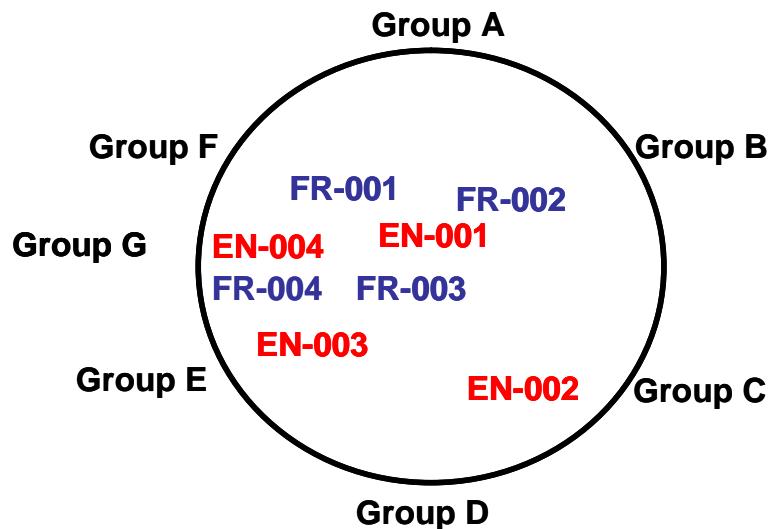


Figure 1. The Idea Battlespace

Membership of the groups in the Idea Battlespace will evolve over time. For example, in Figure 1, assume that the friendly messages (FR001, FR002, and FR003) are competing against enemy messages (EN001, EN002, EN003) and groups “A” through “F” are part of the initial arena. The enemy then transmits message EN004, such as “The War on

Terror is actually a war against Islam.” This brings group “G” into this Idea Battlespace, where G represents other Muslim nations. As a result, the friendly side must transmit a counter message FR004, such as “No, this is a war against violent extremism.” Membership in the Idea Battlespace arena will vary over time depending upon the messages transmitted to various groups.

3. Two-Party and Third-Party Messages

A message can be categorized as a two-party or a third-party message. A two-party message is where the Sending Group generates and sends a message to a Receiving Group. (See Figure 2.) A Two-party message is the preferred method of passing a message with purpose to “take action” or “not take action.” For example, when Al Sistani issued the Fatwa for all Iraqi Shiites to vote in the general election, that was a very successful two-party message.

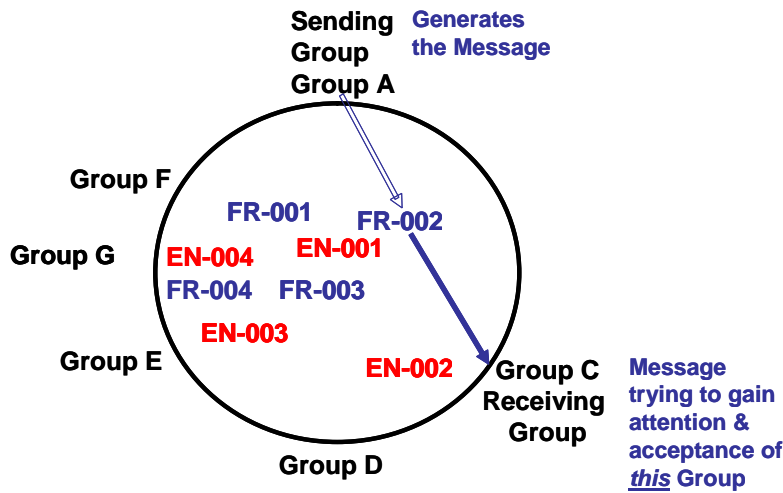


Figure 2: Two-Party Message Example

In contrast, third-party messages are messages sent by the Sending Group to the Receiving Group *about* an Object Group. (See Figure 3.) These messages may be positive or negative. As an example of a positive message, the Sending Group (United Nations) may send the Receiving Group (Iraqis) a reinforcing message that the Object Group (Elected Government) is their legitimately elected government. As an example of a negative message, the Sending Group (Elected Government of Iraq) may send a message to the Receiving Group (Iraqis) that the Object Group (Terrorist) is evil.

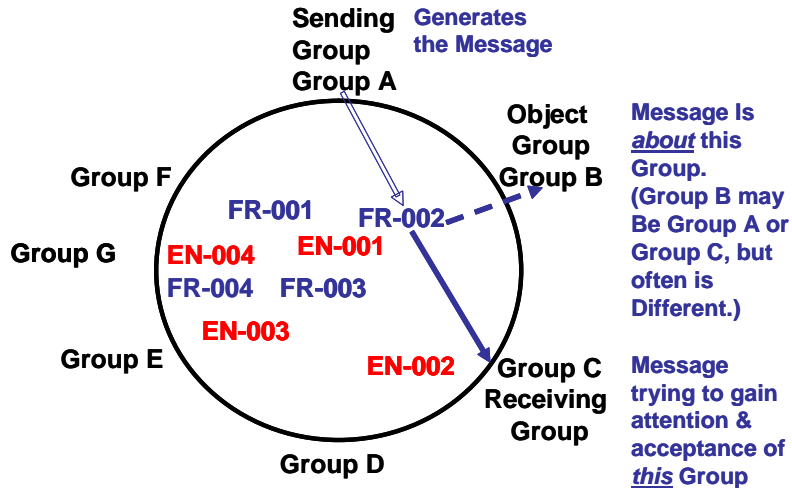


Figure 3: Third-Party Message Example

Third-party messages are more commonly used mechanisms of transmitting “believe something” or “not believe something” messages. In most cases, the purpose is to get the Receiving Group to believe something about an Object Group, whether that belief is something good about or bad. If it is something good, then a third-party message carries more weight than a two-party message (e.g., “Believe we are the good guys”) because it does not appear as self-serving.

Therefore, for any broadcast message, there are four types of groups to consider:

- The Sending Group
- The Receiving Group
- The Object Group
- The Media Group

Note that any message may involve multiple Sending Groups, Receiving Groups, Object Groups, and Media Groups, but it is useful to consider how the message will affect the perceptions of each group individually for purposes of planning and analysis.

4. Receiving Group Bias

The purpose of a third-party message is to get the Receiving Group to believe (or not believe) something about the Object Group. The intent is to change the current perception of the Receiving Group about the Object Group to a different state. To accomplish this, the Receiving Group needs first to pay attention to the message, and second to accept the message. However, neither the level of attention paid to a message nor the level of acceptance of a message is guaranteed. Due to Receiving Group bias, the Receiving Group may reject the message outright, actually resulting in the opposite effect than that desired by the Sending Group.

There are three common causes of negative Receiving Group Bias:

- Misalignment of the message with the current beliefs of the Receiving Group about the Object Group
- Receiving Group bias against the Sending Group regardless of message content
- Receiving Group bias against a Media Group

Positive Receiving Group Bias can also occur when the opposite conditions are true.

Figure 4 shows another view of the Third-party message from Figure 3, but in this case, we highlight both the conceptual path and the physical path and include the Media Group(s) in the picture. The path in the lower left from the Sending Group to the Receiving Group is the intended purpose of the message, to get the Receiving Group to believe something about the Object Group. To deliver this broadcast message, the message must be transmitted by some media (as shown in the upper right), which will either be one or more Media Groups, or something politically inert, like a leaflet drop.

The Receiving Group has a current perception of the Object Group, the Sending Group, and of the Media Group. If the *message* from the Sending Group aligns well with the current beliefs of the Receiving Group, the likelihood that the message will be accepted is fairly high. If, instead, the message is directly contrary to the beliefs of the Receiving Group, then the Receiving Group may reject the message outright. For example, if the Receiving Group's view of the Object Group is very positive, and the message from the Sending Group is very negative about the Object Group, then the Receiving Group is likely to reject the message.

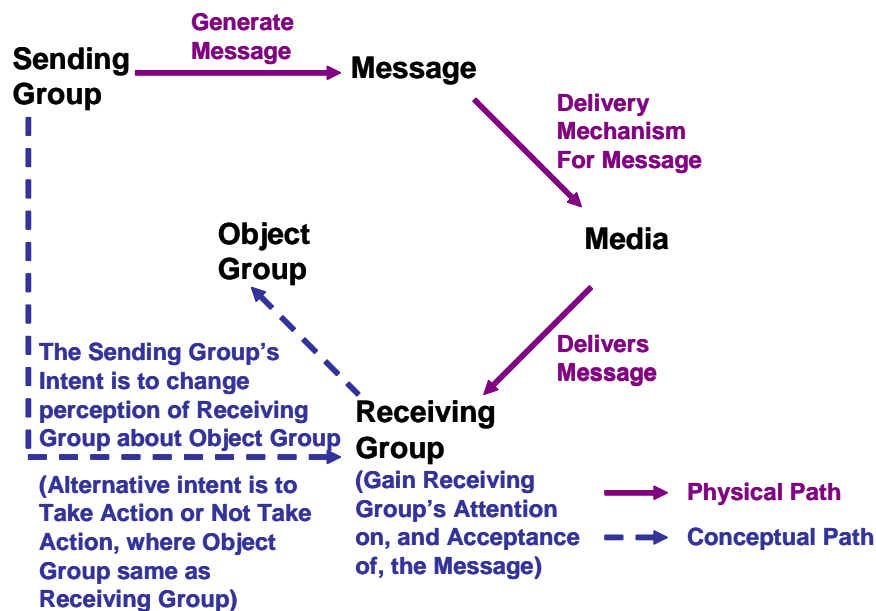


Figure 4: A View of Components (Groups and Perceptions) of Third-Party Message

Rejecting a message you do not like is a common human trait that extends across all cultures. For example, in a recent study, researchers took self-proclaimed die-hard Republicans and Democrats and presented each negative information about their party

while undergoing a “functional magnetic resonance imaging” (fMRI) scan of the brain. In every case, regardless of party alignment, the dorsolateral prefrontal cortex, the part of the brain most associated with reasoning, was apparently shut down by each subject to avoid having to confront the information the subject did not want to believe. Moreover, their brains provided positive reinforcement to the very action of shutting down that part of the brain. [Bourg, 2006]

The measure “misalignment of the message” is the difference between the current perception of the Receiving Group about the Object Group and the intended change in attitude of the Receiving Group. The greater that misalignment, the more likely the Receiving Group will reject the message. This is measured in our Media Model on a continuous Likert scale from -2 to +2. Thus, if the message from the Sending Group about the Object Group is -2 and the Receiving Group’s current view of the Object Group is +2, then the Receiving Group will likely reject the message outright.

In a similar manner, if the Receiving Group’s view of the Sending Group is very poor, then the content of the message may not matter. In that case, the Receiving Group will reject the message because of who sent it. For example, if the Israeli Government sends a message, supporters of Hezbollah are likely not to accept it regardless of its content.

Media Groups are not immune to Receiving Group bias. Whenever a message is being delivered by a Media Group, its own bias is usually apparent. If this bias is in the same direction as the Receiving Group’s bias, then the Receiving Group’s view of the Media Group will likely be positive. If, however, the Media Group bias is misaligned with the Receiving Group’s bias, then the Receiving Group may reject the Media Group. This rejection may result in the Receiving Group switching to another Media Group if an alternative is available, thereby reducing its future Media Reach.

Figure 4 shows a highly interactive or highly interrelated environment. Any group can be a Receiving Group, Object Group, Sending Group, or Media Group (if it owns a media channel), depending on the message type and purpose. Every message planner must consider the Receiving Group’s views of the Sending Group, Object Group, and Media Group to effectively plan to influence the Receiving Group’s perceptions. The planner must also account for likely Media Group Bias.

5. Three Dimensions of Message Content

We now elaborate further on the *content categories* or dimensions of messages. For example, messages with commercial content tend to focus on “take action” messages, such as purchasing a product, or getting listeners to call in to a radio program in response to controversial statements.

Messages with political content are either two-party take action messages (e.g., vote for us), or third-party “believe/not believe” messages. The content of these third-party believe/not believe messages can be divided into three categories or dimensions of content:

- To be for or against the *Legitimacy* of the Object Group
- To be for or against the apparent *Strength or Competence* of the Object Group
- To be for or against the apparent *Friendliness* of the Object Group toward the Receiving Group

“Bush stole the election!” was an oft-repeated accusation after the 2000 election. The purpose and content of the message was to get the Receiving Group (those who did not like the election outcome) to believe that the current administration (the Object Group) was not legitimate. Messages against the legitimacy of one’s opponents are common. For example, the U.S. does not consider Al Qaeda a legitimate political entity and sends messages to that effect, while Al Qaeda does the same in return.

“The Administration’s response to Hurricane Katrina was incompetent!” The purpose of this message was to claim that the Administration’s political appointees were incompetent, thereby showing that the Administration was weak or incompetent in protecting and rescuing U.S. citizens. In the Middle East, it is particularly important to show one is strong, and messages that an opponent is weak are also very common. For example, the large number of car bombs killing innocent civilians in Iraq over the last few years was an Al Qaeda effort to demonstrate that the Iraqi Government could not protect its citizens, thereby sending the message that they are strong while the Government is weak.

“They don’t really understand the common people!” This is a message used in an attempt to make the Object Group (usually some authority figure or company) appear unfriendly and uncaring to the Receiving Group (someone who believes they are struggling against unfair odds). Attacks on the apparent Friendliness of the Object Group toward the Receiving Group can be very effective. For example, the Iranian Fundamentalist candidate Ahmadinejad claimed in the 2005 election that the Moderates were elitists and not in touch with the needs of the poor and unemployed in Iran. It was a brilliant political message that deflated much of the political power of the Iranian Moderates in the 2005 election. [Loyd, 2005]

Comparing these three dimensions to existing accepted theories and attitude survey techniques, we find that Charles Osgood defines three dimensions to his semantic differential approach: *evaluative, potency and activity*. [Osgood, 1957] Evaluative is a measure of whether your group perceives Group A to be good or bad to you, which equates to our dimension of Friendliness. Potency is a measure of the perceived relative strength of Group A, which equates well to our strength or competence dimension. Osgood’s activity dimension defines a group as being active or passive. Something that is passive is less likely to be a threat or an asset, while something active is good if good to you and bad if bad toward you.

In contrast, our Media Model is focused on the political implications of changes in perception, and groups that are passive have very little impact on political conflicts, whether due to apathy or disorganization. Instead, the Media Model focuses on the

dimension of Legitimacy as being more relevant to political influence messages since the support or denigration of the legitimacy of a group has more political impact. Messages about legitimacy are common in modern media-based political debates, yet this dimension is lacking in Osgood's model. Thus, the Media Model theory accepts the two relevant dimensions of Evaluative and Potency as mapping to our Friendliness and Strength or Competence dimensions, and replaces the less applicable Activity dimension with a Legitimacy dimension.

Legitimacy does appear in another setting: theories on the psychology of mobs. Reicher et al. studied reasons for crowd generation and the tendency for violent action. [Reicher, 2004; Stott 2001] Reicher identified legitimacy as one of the key driving factors in crowd formation and violent action. That is, if the crowd perceived the authority figure(s) as being illegitimate or having taken an illegitimate action, then the mob feels it is justified in forming and taking violent action, such as the Boston Tea Party.

Therefore, the Media Model's three dimensions of Legitimacy, Strength/Competence, and Friendliness are supported by equivalent elements of other accepted theories of Psychology and Social Behavior.

6. Gaining Attention

The next concept is the need and mechanisms for attaining and sustaining attention for a message. The following are contributing factors to determining whether attention for your message will be achieved:

- Media Reach
- Attention-Getting Actions
- Varying the messages to repeatedly deliver the same theme

Media Reach is how much of which Receiving Groups a given Media Group's specific Media Channel can reach in its broadcast. Figure 5 shows an example of the Media Reach in Iraq based on Iraqi survey responses in late 2004. The Media Reach is defined by the percentage of a given Receiving Group that is usually listening to it.

Channel Blocking are actions taken to block the transmission of a message, such as jamming a frequency or physically stopping pirate radio operators. Channel Blocking is included in the Media Model as a reduction in Media Reach and message Frequency, but also carries a potential political repercussion for censoring the Media Group's channel.

Note that Media Reach by itself does not mean that the Receiving Group will pay attention to or accept the message. In order to have the Receiving Group pay attention to a message, messages often need to have some additional attention-getting action associated with the message. For example, commercials employ sexy people, or action scenes, cute animals, or other gimmicks to get viewers to pay attention to the advertisement.

For political messages, attention-getting actions usually take the form of some sort of threat, disruption, or violence. Figure 6 shows an escalating scale of attention-getting actions, from speeches, through demonstrations, through disruptive protests, through damaging violence, to casualties, to fatalities, to war. Western Media tends to follow the old adage “If it bleeds, it leads.” The more fatalities of an event, the more extensive highlighted coverage it receives.

Political groups have understood this for years. The “propaganda of the deed” was defined by the anarchy movement of the late 19th century. [Wikipedia, 2006] Violent actions would, like temper tantrums, gain attention to the message, whatever the message happened to be. Why do protesters attempt to disrupt traffic? Why are there violence, damaged property, and sometimes casualties at protests against the WTO? Why do terrorists behead people and put the video on the Internet? In each case, the answer is to get people to pay attention to their message. Al Qaeda knows that the Western Media uses this escalation scale to determine what gets broadcast the most and what generates the greatest chance for attention-getting. Al Qaeda needs to take dramatic actions to get money, recruits, and prestige to keep its concept of jihad alive and growing. [Jenkins, 2004] As Bin Ladin said, “It is obvious that the media war in this century is one of the strongest methods (of struggle). In fact, its ratio may reach 90 percent of the total preparation for battles.” [No Author, 2006]

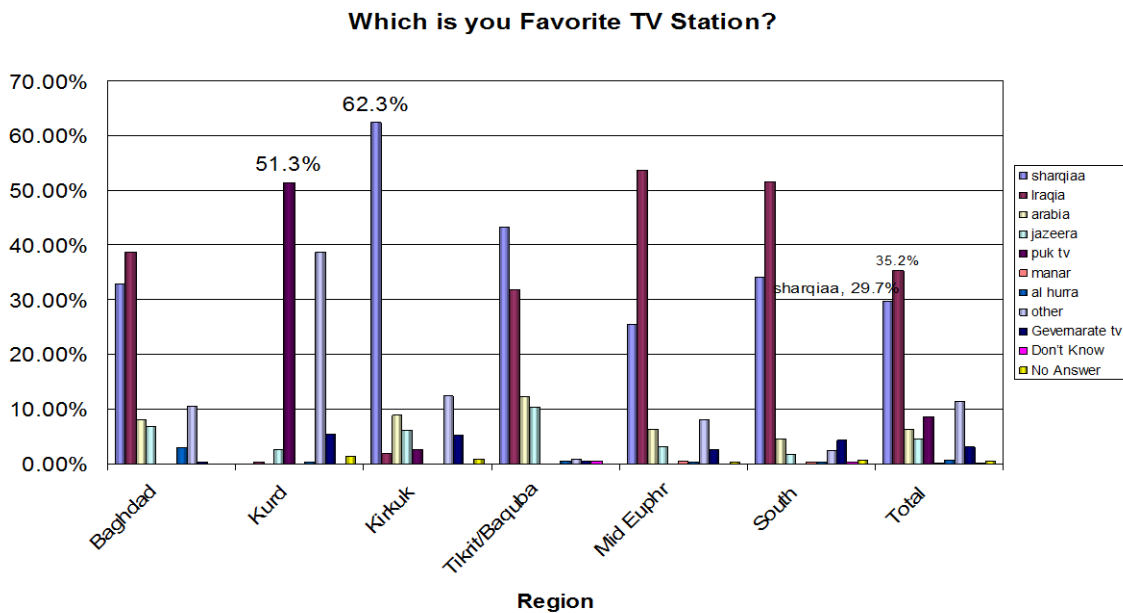


Figure 5: Sample Most Popular Media Reach in Iraq circa Fall 2004

The third way to attain and sustain attention from the Receiving Group is to vary the mechanism or details of the message but retain the same theme. Receiving Groups will soon become bored with the same message repeated over and over again, and simply “switch it off.” To keep the Receiving Group paying attention to the message, how the message is delivered needs to be varied, but the same theme needs to be repeated.

For example, Al Qaeda’s “big three” themes are: The War on Terror is a War against Islam; the West is stealing your oil; and The Americans are sex crazed and after your women. Each theme is supported by a set of different messages which are used to gain attention to each message and avoid boring the Receiving Group. By employing variety, whether based on outright lies or based on some facts, they pound in these three themes over and over again.

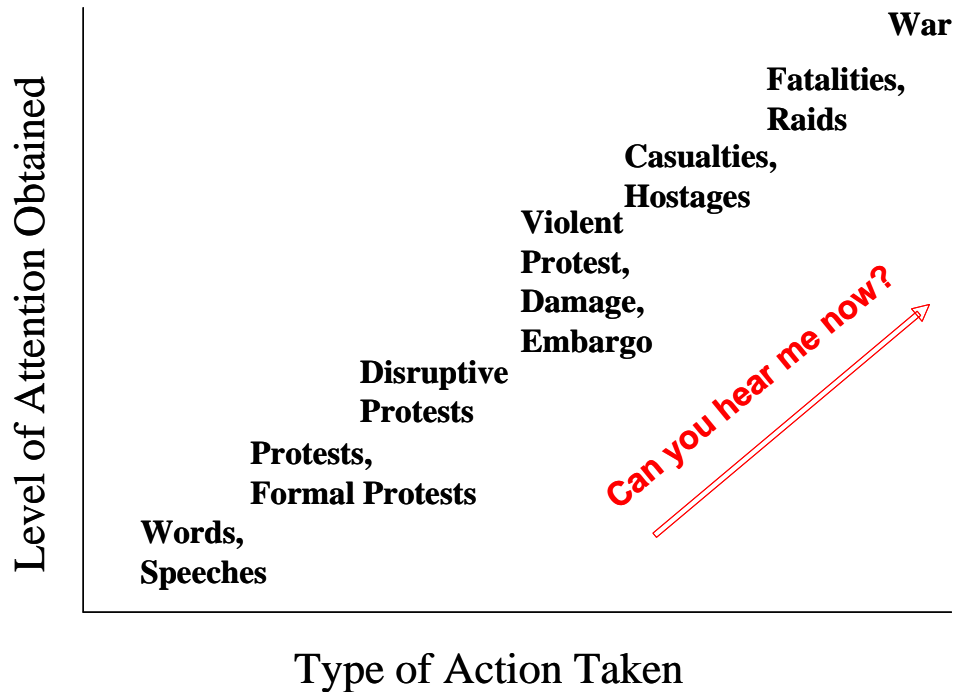


Figure 6: Escalating Scale of Attention-getting actions

7. Gaining Acceptance

There are four factors in the Media Model that contribute to the acceptance or rejection of a message:

- Awareness of the effects of Misalignment
- Using a popular (or not unpopular) Sending Group
- Avoiding inappropriate attention-getting actions
- Staying consistently “on theme” with the message set

First, the message planner must be aware of the effects of Misalignment between the message and the current perceptions of the Receiving Group. Acceptance will more likely occur when one attempts to shift the perceptions of the Receiving Group in smaller increments.

Second, one way to avoid outright rejection of a message is to use a surrogate but popular Sending Group. Commercials and organizations seeking donations commonly use this approach by having a popular celebrity endorse their product or become the spokesperson

for them. In the political realm, using a more popular (or less unpopular) figure to present a message is a common way to avoid rejection of the message. For example, Colin Powell's speech to the UN was intended to employ a more popular figure to deliver the message.

Third, while it is important to gain attention with actions, there is a risk that such actions will anger the intended Receiving Group. For example, during the Kosovo campaign, the Coalition hijacked the time slot of the most popular TV show in Serbia to present our "case" directly to the Serbian people. While this action succeeded in reaching the widest proportion of the intended Receiving Group, it also created substantial resentment because they did not get to see the latest episode of their most popular TV soap opera. [Allen, 2007]

Lastly, the probability of message acceptance increases with repetition. The human mind tends to look for the "weight of evidence." When a person sees "repeated apparent corroboration" of a claim, regardless of whether each claim is valid, it carries weight. So if the same accusation, valid or not, is repeated over and over, the very fact of repeating the "accusation theme" with different "message examples" causes people to wonder whether or not there might be something to the accusation. A theme that is a claim or accusation is very powerful, and critical to framing the subsequent discussion and gaining the initiative. [Allen, 2007]

8. Media Group Bias

There are media channels and Media Groups. A media channel is a method of broadcast, such as TV, radio, or leaflets. A Media Group is a set of people with the ability to broadcast on one or more channels. As a result, *every Media Group has its own set of beliefs and perceptions*. If the messages being sent through them are aligned with those beliefs, then the message will be transmitted with little or no modification or apparent bias. If, instead, the message being transmitted does not align with the beliefs of the Media Group, the bias of the Media Group will be applied to the delivery of that message.

Media Bias is the tendency for a Media Group to enhance or diminish a message it is transmitting based on the alignment or misalignment of its beliefs with the message. For example, Al Jazeera believes the terrorists are the good guys in this struggle, so any negative messages about the terrorists will be diminished while any positive messages will be enhanced. That is why Al Jazeera always refers to "The War on Terror" as the "So-called War on Terror." In a similar manner, Al Jazeera will always portray any actions by terrorists as being heroic.

In the U.S., liberal-leaning Media Groups will attempt to diminish or downplay messages that are pro-conservative, while more conservative Media Groups will attempt to downplay messages that are pro-liberal. Note that the Media Model does not explicitly represent any Media Group as being biased or unbiased. It simply represents the alignment or misalignment of the Media Group's beliefs with the beliefs of the message

being transmitted, which will naturally result in the message being transmitted being diminished or enhanced.

There are some standard ways in which Media Groups downplay messages they dislike and play-up messages they like. For example, newspapers put on the front page messages they want to highlight and “bury” in back pages messages they want to downplay. TV broadcasts not only “lead” with messages they agree with, they repeat them over and over again and/or broadcast them at peak times. Other ways to diminish a message are to be clearly derisive of the message, such as casting doubt upon, or being dismissive of, any references they disagree with.

In the Media Model, we represent the tendency of Media Groups to modify the Media Reach, the Frequency, and the Intensity in an upward direction for messages they agree with, and downward for messages they do not agree with. Media Groups try to expand their reach for messages they support and diminish their reach for messages they do not. The frequency of the message is how often in a given time period the message is repeated. Media Groups that like the message they are transmitting will increase its frequency, and decrease the frequency of messages they do not like. Likewise, the intensity of the original message will be enhanced by the way it is delivered by the Media Group if it likes the message, and decreased if it does not.

Due to this natural, human tendency for Media Groups to selectively support or diminish the likely impact of messages through their own inherent biases, *all Media Groups should be viewed by the general public as political groups*. They are active members in efforts to promulgate some messages and to diminish the promulgation of other messages. At the moment, it is hard to imagine that any of the major media organizations in the world are wholly objective or independent, since each Media Group tends to attract both members and audiences that share a set of common beliefs.

9. Model Developments and Applications to Date

The Media Model’s development was planned as a three-phase program. Phase I and Phase II have been implemented under DARPA’s Conflict Modeling, Planning, and Outcomes Experimentation (COMPOEX) program. The Phase II Media Model includes a quantitative representation of:

- The Idea Battlespace
- The Four Message Purposes
- Two-Party and Third-Party Messages
- Receiving Group Bias
- The three dimensions of message content (Legitimacy, Strength of Competence, and perceived Friendliness)
- Media Reach
- Channel Blocking
- Gaining Attention (except for attention-getting actions)
- Gaining Acceptance

- Media Group Bias

The Phase II Model does not include the following features, although they are planned for inclusion in the Phase III Media Model:

- Attention-Getting Actions
- Gaining the Initiative (earlier messages set the conditions for later messages to have to address)
- Media Self-Selection
- Channel Blocking repercussions

The Media Model was used in a US Joint Force Command Limited Objective Experiment (LOE) in July 2007. 41 groups were represented in the model, of which 22 were Media Group / Media Channel pairs. The scenario began with 25 themes from various Sending Groups each supported by a number of messages, and a substantial number of additional themes and their supporting messages were added during the LOE. Both positive and negative third-party messages were used, focusing primarily on Legitimacy and Friendliness dimensions based on the connections available to the Political Model in the tool suite.

The Media Model outputs showed that some Receiving Groups did reject some messages outright, and some Receiving Groups shifted in the direction opposite of what was desired by the original messages. The subject matter expert participants confirmed that these reactions were realistic outcomes. The participants also employed surrogate Sending Groups to deliver other messages, and these other messages achieved better Receiving Group acceptance. Additional efforts by the participants included extending Media Reach through various physical means, and selected channel blocking. Further benefits were obtained when visualizing the clusters of groups that shared common beliefs and their relative “distance” from groups whose beliefs they did not share.

Overall, the SME participants of the LOE considered the Phase II Media Model to be a significant improvement over previous Media Models, and it was essential to the achievement of the LOE objectives.

Summary of Observations

The Idea Battlespace is a useful construct in which to discuss how messages compete with each other for the goal of dominating the perceptions of the Receiving Groups that make up the arena. Explicitly defining the purpose of each message helps categorize and visualize how messages compete with each other. Distinguishing between two-party and third-party messages helps clarify the various participants and roles in each message, including the Receiving Group, the Object Group, and the Sending Group, as well as the Media Groups. Explicitly defining the dimensions of the *content* of the messages helps determine the area of focus in trying to convince the Receiving Group to believe or not believe something, such as the legitimacy, strength or competence, and friendliness of various political groups.

Receiving Group Bias can cause outright rejection of messages too misaligned for acceptance. Media Bias usually results in decreasing intensity, frequency, and Media Reach of messages the Media Group disagrees with, and increases these factors for messages the Media Group agrees with. The Idea Battlespace is a complicated arena that requires extensive visualization, planning, monitoring, pro-active messages and rapid responses to gain and retain the initiative. The Media Model assists in the accomplishment of these required planning tasks.

References

Allen, Patrick D., *Information Operations Planning*, Artech House, 2007,
<http://www.artechhouse.com>

Bourg, Jim, "Political bias affects brain activity, study finds," MSNBC online news, 24 January 2006, <http://www.msnbc.msn.com/id/11009379/>

Jenkins, Brian Michael, "The Operational Code of the Jihadists," Briefing for the Army Science Board, the RAND Corporation, 1 April 2004

Loyd, Anthony, "Hardliner victorious in Iran," The Times Online, 25 June 2005,
<http://www.thetimesonline.co.uk/article/0,,251-1668211,00.html>

No Author, "Declassified notes offer glimpse into al-Qaida," Associated Press, reported on MSNBC, 12 May 2006, <http://www.msnbc.msn.com/id/11881112>

Osgood, C. E., G. J. Succi, and P. H. Tannenbaum, *The Measurement of Meaning*, University of Illinois Press, Urbana, IL, 1957

Reicher, S., Stott, C., Cronin, P., and Adang, O., "An integrated approach to crowd psychology and public order policing," *Policing: An International Journal of Police Strategies and Management*, vol. 27 (4), 2004, pp.558-572.

Stott, C.J., Hutchison, P., and Drury, J., "Hooligans abroad? Inter-group dynamics, social identity and participation in collective disorder at the 1998 World Cup Finals." *British Journal of Social Psychology*, vol. 40, 2001, pp. 359-384.

Wikipedia, "Propaganda of the Deed," updated 12 May 2006,
http://en.wikipedia.org/wiki/Propaganda_of_the_deed

NOTE: This paper, without abstract, overview or references, was published in *IO Sphere*, Summer 2008. The full citation is:

Allen, Patrick D., "Accounting for Bias in Broadcast Media Message Acceptance," *IO Sphere*, the Joint Information Operations Warfare Command, Summer 2008,
<https://www.jiowc.osis.gov>