Modeling Psychological Theories of Emotion and Social Identity for Helping the Conception of Psychological Messages: the System PSYMDEV

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1. Purpose and Theoretical bases of PSYMDEV

1.1 Purpose of PSYMDEV

In asymmetric conflicts, the armed forces generally have to intervene in countries where the internal peace is in danger. They must make the local population an ally in order for them to be able to deploy the necessary military actions with its support. For this purpose, psychological operations (PSYOPS) are used to shape people's behaviors and feelings by spreading out messages thanks to different media (tracts, loudspeakers, video clips, etc.).

We present PSYMDEV (PSYchological Message DEViser), a system that helps the military analyst to construct messages that trigger specific feelings in members of the population, by designing a twofold situation that can be illustrated by images or video clips or sounds.

1.2 The psychological theories underlying PSYMDEV

The system PSYMDEV relies on, on the one hand, emotion theories: the Appraisal theory (Scherer, Schorr, and Johnstone, 2001) and the social extension of the latter, the Intergoup Emotion Theory (Mackie, Devos and Smith, 2000) and, on the other hand, the Social Identity Approach (Tajfel & Turner, 2004) and the Common Ingroup Identity Model (Dovidio et al., 2006; Crisp & Hewstone, 2007).

The Intergroup Emotion Theory (IET) suggests that the emotional experience of a person as a member of a group is identical to the experience they live as an individual, as it is described in the Appraisal Theory. More specifically, the Appraisal Theory of Emotions postulates that the emotion that a human being experiences in a given situation, whether the latter is lived, imagined or remembered, results from the assessment of four basic cognitive dimensions:

Is the situation relevant to me, does it affect my well-being? (*Relevancy*). What are the implications of the situation and how do they affect my well-being and my short-term and long-term goals? (*Implications*). To what extent can I face the situation or adjust to its consequences? (*Coping*). What is the significance of the situation as regards my social norms and my personal values? (*Normative Significance*). Each of these dimensions corresponds to several more specific criteria.

According to Garcia-Prieto and Scherer (2006), the criteria that are sensitive to the social identity of a person are the conduciveness/obstructiveness of the goals, the causal agency and the responsibility (Implications), the control power and the adaptability (Coping) and the compatibility with the social norms of the group(s) the person belongs to (Normative significance).

The Social Identity Approach consists in both the Social Identity Theory and the Self-Categorization Theory. It addresses the ways in which people perceive and categorize others and themselves.

The Social Categorization theory postulates that people are inclined to show favoritism towards their ingroups and prejudice and discrimination towards their outgroups. The goal of the Common Ingroup Identity Model is to reduce intergroup conflicts by reducing this bias. The idea is to modify the social perception in leading people to classify outgroup members as ingroup members. Three strategies are presented: making salient a common superordinate identity, having both groups collaborate on a common task, with an equal status and towards a common goal or decategorizing people.

2. Conception of the System
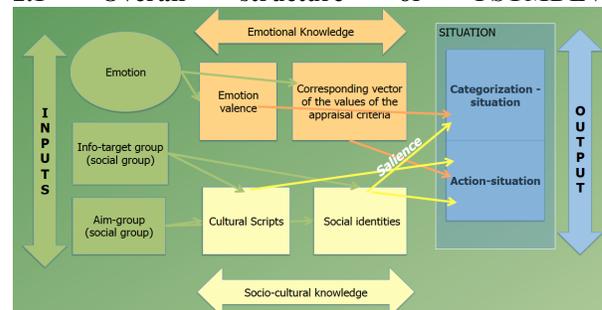
2.1 Overall structure of PSYMDEV

Figure 1- Overall structure of PSYMDEV

All the components are modeled within a frame-based representation.

The inputs are, the info-targets and the aim-group, and, an emotion that the info-targets must feel.

First, social groups are defined along 12 *social criteria*: age, gender, professional status, ethnic group, religion, political opinion, location, social status, educational level, marital status, parental status and language. A social group is described as an instance of the frame *Social-group* defined by the slots relative to each criterion. Secondly, each value of one of the 12 social criteria mentioned previously is defined as an instance of the frame Social-Identity that represents a social identity and is described by the following slots: *Label*: value of the social criterion (e.g. old associated with criterion age),*Criterion*: name of the criterion (e.g. age),*Values:* (e.g. honesty, friendship, etc.), *Norms*: describes typical behaviors, ways of speaking or dressing relative to the identity, *Goals:* Schank's classification of goals is used, (Schank 1977).

The emotion is felt by the info-targets and directed towards the aim-group. The frame Emotion is defined by: slot *Valence*, slot *Conduciveness/Obstructiveness*, slot *Causal agency*, slot *Responsibility*, slot *Control*, slot *Power*, slot *Adaptability*, slot *Normative significance*.

The output of the system is a twofold situation including a *categorization-situation* and an *action-situation*.

The output of the system actually corresponds to two steps necessary to achieve the goal that consists in triggering an emotion in the info-targets.

2.2 The first step of the process
The first step is based on the Social Categorization Approach and the Common Ingroup Identity Model. It aims to highlight the salience of relevant social identities, so as to induce in the info-targets a positive or negative state of mind. Indeed, if the emotion to trigger is positive, the idea is to shape the perception of the info-targets in order for the aim-group to be considered as an ingroup. For that purpose, making salient the common social identities that both group share or in the absence of such identities, choosing a common superordinate identity, or if it doesn't exist, highlighting a common goal or fate for both social groups, will induce the impression of belonging to a common ingroup and will then imply a positive bias from the info-targets towards the aim-group. If the feeling to trigger is negative, conversely, the perception of the info-targets must be shaped in order for them to consider the aim-group as an outgroup and to feel prejudice towards it. For this purpose, the categorization-situation will outline for both groups the social identities they don't share with each other. If such identities don't exist, the identities of both groups will be equally salient and no initial state of mind is induced prior to the triggering of the specific feeling that will be achieved by the action-situation directly.

2.3 The second step of the process
This step aims at triggering the concerned specific emotion thanks to the action-situation. The conception of the latter is based on a correspondence between the values of the slots of the action-situation and the values of the slots of the emotion to be triggered.

3. Conclusion

PSYMDEV's strength and originality relie on its strong theoretical bases and its use, in the reverse order, of an extension of the Appraisal Theory to social groups, the Intergroup Emotion Theory.

4. References

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Author Biographies

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