Modeling the Salience of Socio-Cultural Identities in the System PSYMDEV

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Abstract

PSYMDEV is a system designed to help the military analyst elaborate psychological messages that will be spread out using different sorts of media like tracts, video clips, radio programs, etc. The system relies on theories stemming from Psychology of Emotion (the Appraisal Theory and the Intergroup Emotion Theory) and Social Psychology (the Social Identity Approach, the Common Ingroup Identity Model). The inputs of the system are, on one hand, two social groups of the population, respectively called the *info-targets* and the *aim-group*, that are characterized by their respective values for social criteria like age, gender, social status, etc., and, on the other hand, an emotion that the info-targets must feel towards the aim group. The output of the system is a situation described in two steps by means of a *categorization scene* intended to induce a state of mind in the info-targets, either positive or negative depending of the nature of the emotion to be felt, and an *action scene* supposed to trigger the specific emotion. In this paper, we will focus on the design of the categorization scene.

Introduction

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 their 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.). In this paper, 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 selected by social criteria like age or political opinion, and we detail the first step of the process. The underlying idea of the system is to use in the reverse order the Intergroup Emotion Theory, a social extension of Scherer's Appraisal Theory, according to which a human being viewing himself as a member of his sociocultural groups, assesses the situation he is living or imagining by means of cognitive criteria. The set

of evaluations determines a specific feeling that he will experience. First of all, we present the theories stemming from the Psychology of Emotions and Social Psychology that underlie PSYMDEV. We then explain the notion of salience of a social identity that is essential to our system and we report a few computational works addressing the notion of social identity. We explain the purpose of PSYMDEV and briefly describe both steps of the system before presenting the modeling of the main elements involved in the system. We then focus on the description of the first step of PSYMDEV and illustrate it thanks to the presentation of an example. Our conclusion ends the paper.

The Psychological Theories Underlying PSYMDEV

The Appraisal Theory

Magda Arnold was the first to develop a "cognitive theory" of emotion in the 1960's (Arnold 1960). She introduced the notion of "appraisal" to explain the idea that an emotion is triggered and differenciated by evaluations of the current situation. Lazarus (Lazarus 1991) pursued research in the same vein, distinguishing two steps in the appraisal process: the primary appraisal and the secondary appraisal. In the primary appraisal, an individual focuses on the motivational relevance of the situation and its motivational congruence in terms of goals. In the secondary appraisal, the individual measures their coping potential (individual's efforts in thought and action to manage the situation and its consequences).

Based on those pioneering works, Scherer succeeded in developing a consensual theory of emotion. The Appraisal Theory of Emotions (Scherer, Schorr, and Johnstone 2001) postulates that the emotion that a human being (or any living organism), experiences, imagines or remembers in a given situation, results from the assessment of a few cognitive criteria that can be categorized into four families and answer the following questions: 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? (*Nor-*

mative Significance). Scherer's version of the appraisal theory includes 16 specific criteria that belong to the previous categories, (Scherer, Schorr, and Johnstone 2001). A combination of values of the criteria determines in a unique way a specific feeling, but the assessment of the different criteria is subjective. Thus, the same situation can trigger different emotions in people with different traits and coming from different cultures. Only the correspondence between a combination of values and a specific feeling is universal.

The Intergroup Emotion Theory

The Intergroup Emotion Theory (Mackie, Devos, and Smith 2000) 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. The only difference is that the intergroup emotion implies the cognitive evaluation of a situation that concerns the social identity of an individual (traits that connect the person to social groups) instead of involving their personal identity (the aspects that make the person unique). According to Scherer and Garcia-Prieto (Garcia-Prieto and Scherer 2006), the criteria that are sensitive to the social identity of a person are the ones that have a social connotation like the conduciveness, the causality/intentionality and the incompatibility with the social norms of the group(s) the person belongs to (Sander and Scherer 2009). Moreover, the feeling triggered depends on the strength of the identification of a person with their social group(s).

The Social Identity Approach

The Social Identity Approach comprises both the Social Identity Theory and the Self-Categorization Theory (Tajfel and Turner 2004). It addresses the ways in which people perceive and categorize themselves: individuals form self-conceptions that are based on a twofold identity: a personal or self identity, and a collective identity. Personal or self identity refers to our unique, personal qualities such as our personal beliefs, our abilities and skills, etc. The collective self includes all the qualities that arise from being part of a society, culture, family, groups, clubs, etc. For example, you may identify yourself as a protestant, male, football player, who is very popular with people at college.

The Common Ingroup Identity Model

Thus, within the framework of the Social Identity Theory, individuals are characterized by their social and cultural identity involving a set of external and internal traits, behaviors, beliefs, values, goals that are crucial for the assessments they make about a given situation. But individuals actually have multiple social identities that can be activated (that is, can be salient) and prevail over the others depending on the context within which they stand. The Social Categorization Theory affirms that people show favoritism towards members of their membership group(s) (their ingroup(s) compared to those of their outgroup(s), those people who don't belong to their ingroup(s). Conversely, they are inclined to prejudice and discrimination towards their outgroup members. The goal of the Common Ingroup Identity Model is to

reduce intergroup conflicts by reducing this bias. The idea is to modify in people the perception of their ingroup(s) and outgroup(s) by modifying their categorization. That way, people that were classified as outgroup members will be reclassified as ingroup members, (Dovidio et al. 2006);(Crisp and Hewstone 2007). The solution that has been proposed is to induce the perception of a common ingroup which is achieved by increasing the salience of an existing common superordinate membership (e.g.,a school, a company, a nation) or by making salient new elements that redefine group relations (e.g. common goals or shared fate). Identities are thus assumed to be structured within a hierarchy of inclusion.

More specifically, according to Crisp (Crisp and Hewstone 2007), the three best possible strategies to reduce the bias between two groups with their respective identities, are:

- If both identities have a common superordinate identity, the stress must be put on the salience of this identity, but without erasing the salience of the subordinate identities. As a matter of fact, for some type of strong identities like race or for minority groups, the bias may be increased instead of decreased due to the fact that the subordinate groups may feel that their own identity is threatened (Sander and Scherer 2009).

- If there is no superordinate identity, an alternative is to have both groups collaborating on a common task, with an equal status and towards a common goal (strategy inspired by Allport (Allport 1954)).

- Yet another option can be to decategorize people and then to avoid intergroup bias, by having members of both groups interact individually with each other and no longer as members of their respective groups.

Notion of Salience of a Social Identity

The salience of a social identity is determined by its *accessibility and its situational fit* (Turner et al. 1987). The *accessibility* of an identity is defined as the easiness or the spontaneity with which this identity is recalled. The *situational fit* is the extent to which a particular context activates an identity (Kopecky, Bos, and Greenberg 2010). The *accessibility* of an identity for an individual partially depends on the past experiences of the person, on their expectations and present motives, on their values, goals and needs, but some social identities are naturally more accessible whatever the individuals (e.g. professional status as regards marital status). Besides, some identities are permanent like ethnic group, others are flexible like political opinion. On the other hand, the subjective identification of an individual to their ingroup identity plays a crucial role in determining the accessibility of this individual to their identity.

The *situational fit* has two aspects: the *comparative (structural) fit* and the *normative fit*.

- The *comparative fit* is based on the MetaContrast Principle that defines the fit in terms of the emergence of the sharpness of a category (an identity) on a contrasting background.

Let's imagine the following situation: you attend a basketball game, Boston Celtics vs. Chicago Bulls. In the audience that stands on the bleachers of the stadium, you catch sight of several people that wear Boston Celtics' supporter

T-shirts, while most of the others wear Chicago Bulls' supporter T-shirt or a neutral jersey. Given that you wear a Boston Celtics' supporter T-shirt, you self-categorize yourself as such and you see the people wearing a Chicago Bulls' jersey as an outgroup.

Among a group of individuals, people who look alike tend to stand out among the other people, thus allowing their categorization and the activation of the corresponding self-categorization.

- The *normative fit* refers to the fact that for an individual to categorize spontaneously people into a social group, the people must behave in accordance with the typical way the members of the group are expected to behave. They must conform to the expectations an individual has concerning their external appearance and their behavior, the latter being even more important than the external appearance.

Let's take the following example. You are in a railway station. Among the crowd, you catch sight of several people wearing very formal clothes, while most of the others wear informal clothes. Wearing yourself used jeans and a T-shirt, you categorize yourself among the careless people and view the strict ones as an outgroup. All of a sudden, there's an argument between the ticket seller, who is a black person, and a female customer. The latter pronounces a racist insult. Among the witnesses, some, regardless of their clothing, take sides for the ticket seller and others for the lady. Your anti-racist identity then becomes salient and you take sides for the ticket seller. It's then this last identity that dictates your behaviors. It has become salient all the more easily that it is important in your eyes (much more than an identity in terms of clothing). You then consider the members of the racist group as similar to each other, although they wear different clothes and this all the more easily that they conform to the image you have about the members of this social category.

Social Identity Modeling

Few models focus on the computational representation of social identities, (Kopecky, Bos, and Greenberg 2010). The *Simulate Cultural Identities for Predicting Reactions to events* (SCIPR) model, concentrates on political opinions as flexible identities. It uses a simple social network of influence. The Salzarulo's *MetaContrast* model illustrates the phenomenon of discrimination as defined in Turner's theoretical approach to self-categorization. This model shows how polarization and extremism can occur due to the combination of attraction to ingroups and repulsion of outgroups. The *Political-Science Identity* (PS-I) model aims at establishing a link between permanent identity like cultural identity and flexible identities like political identity to merge geographic clusters. Finally, the *Social Identity Look-Ahead Simulation* (SILAS) model is dedicated to permanent and flexible identities like ethnical, political and religious memberships. The authors attempted to determine how internal conflicts between identities may be solved by modeling common enemy dynamics.

Thus, all these models have the advantage to highlight the dynamic character of social identification. However, they present some lacks, because they fail at investigating care-

fully enough a crucial characteristic of social identities, namely their salience. In particular, none of these models proposes a faithful representation of the notion of situational fit.

Purpose and Presentation of PSYMDEV

In the context of asymmetric conflicts where the armed forces must intervene, they need to make the local population an ally. For that purpose, they spread out psychological messages to generate the desired thoughts, feelings and behaviors in members of the population selected by social criteria like age or educational level (the info-targets).

PSYMDEV aims at constructing messages that trigger in the info-targets specific feelings directed towards another social group (the aim-group, that may be identical to the info-target group) or absolute feelings like despair or boredom. It is based on the Intergroup Emotion Theory that it uses in the reverse order. It indeed generates a situation from a social group defining the info-targets and a specific feeling that this group must experience towards another social group, the aim-group. The situation will then have to be illustrated using a medium (tract, ad, loudspeaker, video clip, etc.) that can reach the info-targets. Actually, a situation consists of two scenes. To each scene corresponds a step of the process. The first step is based on an idea inspired by the Social Identity Approach: if the feeling to be triggered in the info-targets is a positive feeling, then the first scene (the categorization scene) should lead them to perceive the aim-group as an ingroup. Conversely, if it is a negative feeling, the aim-group should be perceived as an outgroup. Thus, the *categorization scene* to be generated is conceived in order to make salient relevant social identities for reaching these goals. The strategy used is based on the Common Ingroup Identity Model (see the corresponding previous section). The salience of the relevant social identities must be expressed through their normative and their structural fit. Thus, the categorization scene of a situation must include representatives of the aim-group and possibly the info-target group having the typical appearance and behaviors of their respective relevant identities as regards the type of feeling to be generated (normative fit). The salience of the concerned identities is also increased by introducing in the scene a contrasting background (structural fit). The second step, not presented here, aims at elaborating the second scene (the *action scene*), where an action is responsible for triggering a feeling. This action is determined by means of a correspondence between the values of the assessment criteria that define the desired feeling and the characteristics of this action scene.

Description of the Elements Modeled within PSYMDEV

Social Group Representation

Social groups are defined along 12 different dimensions or social criteria: age (c_1), gender (c_2), professional status (c_3), ethnic group (c_4), religion (c_5), political opinion (c_6), location (c_7), social status (c_8), educational level (c_9), marital status (c_{10}), parental status (c_{11}) and language (c_{12}). Each social criterion has a set of possible values: V_1, V_2, V_3,

V_4, V_5, V_6, V_7, V_8, V_9, V_{10}, V_{11} and V_{12}.

A given social group may have an undefined value for one or more criteria. Let G be a social group, G = $(v_1, v_2,\ldots,v_{11}, v_{12})$, $\forall$ i, $v_i \in V_i \cup 0$ ($v_i=0$ means that criterionc_i has an undefined value for social group G).

We define the set of social criteria : C=$\{c_1, c_2,\ldots,c_{11}, c_{12}\}$. For each social criterion, c_i, V_i is structured hierarchically, so that, let G_{v1} and G_{v2} be the sets of the members of the social group defined respectively by value v_1 and value v_2 for criterion c_i : $\forall$ $v_1, v_2 \in V_i$ if $v_1 \ll v_2$ (v_2 is an ancestor of v_1), then $G_{v1} \subset G_{v2}$.

Social Identity Representation

Each value of one of the 12 social criteria mentioned previously is defined as an instance of the Social-Identity schema that represents a social identity and is described by typical features by means of the following slots:

- *Label (L)*: value of the social criterion (e.g. old associated with criterion age or Muslim associated with criterion religion),
- *Criterion (C)*: name of the associated criterion (e.g. age or religion),
- *Appearance (A)*: describes clothes and accessories worn by an individual having this social identity,
- *Values (V)*: (e.g. honesty, friendship, etc.),
- *Norms (N)*: describes typical behaviors (i.e. holding books, writing on a blackboard, etc.), ways of speaking relative to the identity. Not only characteristics of an individual that require vision are taken into account. Audible characteristics are also mentioned. Indeed, depending on the medium that will be used by the military analyst to convey their message, audible and visual features may be used to illustrate a situation. For instance, if, via loudspeakers, the analyst wants to describe a situation involving an old man, it's his voice that will help the listeners to categorize him as such.
- *Goals (G)*: We use Schank's classification of goals: Achievement Goals (AG), Preservation Goals (PG), Instrumental Goals (IG), (Schank and Abelson 1977). The values of the slot Goals is a hierarchy of goals from the most general to the most pragmatic.

A social identity can also be defined by the conjunction of the values of several criteria taken together (e.g. a married Muslim male). In most cases, the frame that represents this compound identity is not mentioned explicitly, because the respective values of slots Appearance, Values, Norms and Goals of the different identities add up to form the compound identity. However, it may happen that the compound identity has to be defined explicitly:

- If the previous slots have contentious values between the different identities;
- If the compound identity has not quite the same semantics as the conjunction of the original identities (e.g. a Jewish mother has their own characteristics that neither a Jewish, nor a mother has) or there are additional values for the previous slots that are not coming from the individual identities.

In PSYMDEV, we model two types of situations: the situations that must trigger in the info-targets feelings that are not directed towards other people like boredom or happiness and situations that are aimed at another social group. In this paper, we will focus on the latter. Among them, we distinguish:

- SAGIT situations, where the aim-group is directly responsible for the info-targets' feeling, because the latter are the target of an aim-group's action. Both groups must then be actors of such a situation.
- SAG situations, where the aim-group is acting in such a way that the info-targets experience the feeling, but the action is not made directly against them. Only the aim-group is then acting in this kind of situation. The cause of the feeling is then at least partially due to the fact that the action goes against the info-targets' values, goals or norms.
- COM situations, where both groups are collaborating on a common task with an equal status and a common goal.

Situations are defined within a specific context that emphasizes certain social criteria. There are 5 contexts, the *family context*, the *professional context*, the *educational context*, the *political context* and the *religious context* that respectively highlight marital status, parental status, gender, ethnic group and age, professional status and social status, educational level, political opinion and religion. To make specific identities salient, a situation will then be chosen among the ones relative to the corresponding context.

A situation is represented by a schema (Minsky 1975), that includes a *categorization scene* and an *action scene* and the common components of these scenes, the location and the period of time when the situation is taking place as well as the info-targets and the aim-group.

Frame **Situation** is then described by the following slots: slot *Context*, slot *Categorization-scene*, slot *Action-Scene*, slot *Info-targets* and slot *Aim-group* whose values are social groups, slot *Location*, slot *Period* (e.g. election-time).

Frame **Categorization-scene** is described by: slot*Info-targets' behavior* and slot *Aim-group's behavior* whose values are typical behaviors of the social identity(ies) to be made salient (values of slot *Norms* for these identities), slot *Info-target's appearance* and *Aim-group's appearance* (values of slot *Appearance* for these identities).

Frame **Action-scene** is described by slot *Action-agent*: the agent of the action (the aim-group identities), slot *Action-Target*: the target of the action (the identities of the person or people towards whom the action is directed), this slot may be empty, slot *Attendees*: possibly a social group whose role is merely to provide a contrasting background, slot *Action*: an action typical of the agent's identity(ies) in the specified context of the situation. We won't detail the description of actions, that is not relevant during PSYMDEV's first step. Roughly, there is a correspondence between their characteristics and the values of the assessment criteria that define the feeling to be triggered, e.g. the values that are respected or violated by a given action.

Conception of Categorization Scenes

Which Social Identities to Be Made Salient in the Categorization Scene?

Let G_{it} and G_{ag} be respectively the info-targerts and the aim-group : $G_{it} = (v_1, v_2, \ldots, v_{11}, v_{12})$, $G_{ag} = (v_1', v_2', \ldots, v_{11}', v_{12}')$. Let define a social identity $si_{ij} = (c_i, v_{ij})$, $c_i \in C$, $v_{ij} \in V_i$ and the predicate Salient(s,si) that means "situation s makes salient social identity si". Let Sit be the situation to be generated. According to the Common Ingroup Identity Model (see the corresponding previous section) :

- *If the feeling to be triggered is positive:*

- If CSI = $\{i \in \{1, 2, \ldots, 11, 12\}, v_i = v_i'\}$, the $\forall i \in$ CSI, Salient(Sit, (c_i, v_i))) (SAGIT or SAG situation).

- If CISI = $\{i \in \{1, 2, \ldots, 11, 12\}$ u $\in V_i$, $v_i \ll$ u, $v_i' \ll$ u$\} \neq \emptyset$ then $\forall i$, i $\in$ CISI, Salient (Sit, (c_i, v_i)) $\wedge$ Salient (Sit(c_i, v_i')) $\wedge$ Salient (Sit(c_i, u))) (SAGIT or SAG situations).

- Otherwise, $\forall i$, ₁,$\{1, 2, \ldots, 11, 12\}$ Salient (Sit,(c_i, v_i) $\wedge$ Salient(Sit,(c_i, v_i'))) (COM situations).

- *If the feeling is negative:*

- If DSI $\in \{1, 2, \ldots, 11, 12\}$, $v_i \neq v_i' \neq \emptyset$, then $\forall i \in$ DSI, Salient(Sit,(c_i, v_i) $\wedge$ Salient(Sit,(c_i, v_i'))

How to Express the Salience of Social Identities?

In a previous section, we showed that the salience of an identity in a given situation is determined by its accessibility and its situational fit. An identity must be salient for a social group globally, so we cannot take into account the specific characteristics of an individual that make an identity more or less salient in their eyes, nor can we change the natural accessibility of an identity. So, we only have to put the stress on both components of the situational fit of a social identity in a given situation to make it salient: the *structural fit* and the *normative fit*.

In every case, the representative(s) of the aim-group and the possible representative(s) of the info-target group must have the external appearance and the behaviors corresponding to the typical values of their respective social identity(ies), to maximize the *normative fit*.

As to maximizing the structural fit, the idea is to emphasize the relevant social identity(ies) thanks to a contrasting background.

Whatever the kind of feeling to be triggered, positive or negative, two cases may occur:

- the stress must be put on common identities between the identity(ies) of the info-target group and the aim-group (SAGIT situation) or on the identities of the aim-group (SAG situation), then we merely have to add in the categorization scene of the situation a social group in slot Attendees which has one or several identities consisting of a criterion whose value is identical for both groups with a value that differs from the common value, to create a contrasting background.

- the stress must be put on identities that differ in the info-target group and the aim-group, then there is no need no create a contrasting background in a SAGIT or a COM situation, as the contrast is brought to each group by the presence of the other one in the categorization scene. If it is a SAG situation, a social group with identities contrasting with those of the aim-group must be added in slot *Attendees*.

8. An Example Illustrating a Few Cases

The context is Egypt a few months after the arrest of ex-president Muhammad Morsi.

The info-targets are the social group SGit consisting of married parent males, aged over 25, Egyptian, Muslim, pro-Morsi living in Egypt, and speaking arabic. The aim-group is the social group SGag consisting of married parent males, aged over 25, military, Egyptian, Muslim, Anti-Morsi, living in Egypt and speaking arabic.

SG_{it} = (over-25, male, 0, Egyptian, Islam, pro-Morsi, Egypt, 0, 0, married, parent, arabic)

SG_{ag} = (over-25, male, Military, Egyptian, Islam, Anti-Morsi, Egypt, 0, 0, married, parent, arabic).

Different social identities are defined, for instance (we use previous abbreviations):

Pro-Morsi (L: Pro-Morsi, C: Political Identity, A: civilian clothes, V: Justice, Freedom of expression, Democracy, N: to shout slogans, to carry Morsi's portraits), G: (AG, to restore Morsi's duties), (IG, to demonstrate))

Muslim (L: Muslim, C: Religion, V: Family, Fraternity, N: to pray as a body, to give money or food to poorer than oneself, G: (AG, to achieve one's Muslim duties), (IG, to pray at the mosque, to attend the Friday preachment, to fulfill the charity for the poorest (zakat))

Egyptian (L: Egyptian, C: Ethnic Group, V: Sharing, Honor, Respect, N: to offer bed and board, to offer a present when invited)

Egyptian male (L: (Egyptian, Male), C: (Ethnic Group, Gender), N: to support financially one's family, to make the important decisions, G: (AG, to marry, to have a family, to have a good job, to be respected, to have good relationships with others), (PG, to maintain a good harmony within one's family, to take care of one's family, to perpetuate traditions))

Military (L: Military Forces (Anti-Morsi), C: Professional status, A: soldier-clothes, V: Order, N: to watch, to supervise the civilians, G: to maintain the order)

In the categorization scene, all the representatives of the identities that must be salient have to conform to their respective typical appearance and norms and must be highlighted by a contrasting background.

If the feeling is positive:

The common identities: over-25, male, Egyptian, Islam, Egypt, married and parent must be made salient. We can then choose:

- either a situation within the Family Context:

It can be a SAGIT situation: in this case, it pictures an individual from the Aim-Group, a soldier, who is invited for dinner in the house of an individual from the Info-Target group and he brings a trinket (norm: to offer a present when invited). It can be a SAG situation: in this case, a soldier is

putting on his uniform to go working (norm: men work to support financially their family). The representative of slot *Attendees* value is his wife.
- or a situation in the Religious Context:
SAGIT or SAG situation: a group of soldiers (Aim-Group) are patrolling near a mosque (norm: to watch, to supervise). The representatives of slot *Attendees* value are civilians.

If the feeling is negative: The different identities: no specified professional status vs. military, pro-Morsi vs. anti-Morsi must be made salient. The chosen context is then the Political Context: SAGIT or SAG situation: demonstrators are walking in the streets of an Egyptian city (norm: to shout slogans, to carry Morsi's portraits), military are present.

Conclusion

In this paper, we have described the first step of the system PSYMDEV that aims at helping a military analyst to conceive psychological messages. Given a specific feeling to be triggered in the info-targets towards an aim-group, PSYMDEV generates a situation that must induce this feeling. Our work has been influenced by some existing computational tools that deal with culture, like the Upper Ontology of Culture (UOC, (Blanchard, Mizoguchi, and Lajoie 2011)), the Target Audience Simulation Kit (TASK, (Taylor et al. 2010)) and other works from the Soar Technology Laboratory (Taylor et al. 2007). The UOC project focuses on the conceptualization of three culture-related domains: models of cognitive domain, affective domain and context. UOC provides guidelines for cultural systems to ensure their interoperability. The TASK system goal is the same as ours: developing effective messages, but in a marketing context. Both tools, UOC and TASK, use the Appraisal Theory for modeling the emotion process. Our system takes its originality from the fact that the Appraisal Theory is interpreted in an intergroup context thanks to the Intergroup Emotion Theory. Moreover, the system uses this theory in the reverse order.

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