

The Impact of the Northern Ireland Conflict on Social Identity, Groupthink and Integrative Complexity in Great Britain

ANDREAS HERGOVICH and ANDREAS OLBRICH

The long-lasting Northern Ireland conflict may have changed British social identity and political decision-making much more than international conflicts have in the past 50 years. Testing this hypothesis, this study is based on social identity theory, Groupthink and integrative complexity. 117 Economist articles, published between 1946 and 1990, were analyzed by trained subjects using a questionnaire. Statistical analyses revealed significant results for social identity theory and Groupthink. Thus, the salience of group-membership, the positive evaluation of in-group leaders, the negative evaluation of out-group leaders and the appearance of self-appointed mind-guards were higher during the Northern Ireland conflict. Moreover, there were significant differences with respect to the preference for group-solutions vs. leader-solutions, the pressure on dissenters and the appearance of self-appointed mind-guards between the two conflict-types. A further analysis of the data with a neural net (a feed-forward neural net with three layers) showed that on the basis of the psychological attributes it is possible to differentiate between international conflict and national conflict to a high degree. These results suggest that only a democratic inter-group process may resolve the conflict in Northern Ireland and that solutions from group-leaders may not be the best choices.

Predicting international and national conflicts has not been maintained by many researchers so far, except Janis' (1982) theory of Groupthink, Suedfeld and Tetlock's (1977) analysis of integrative complexity, Winter's (1993) investigation of the power motive, and in some rudimentary suggestions for social identity by Wagner (1994). Scholars of social conflicts have investigated various aspects of inter-group behavior and suggested sophisticated descriptive models of rather small inter-group conflicts (Fisher, 1990; Wagner, 1994). Although some models, like the General Problem Solving Model (Aldag & Fuller, 1993; Fuller & Aldag, 2001), lack empirical evidence, the variables themselves seem valid. For the most part the studies have the descriptive character of small group behavior (e.g. Realistic Conflict Theory; Sherif et al, 1961).

Some variables of Groupthink theory cannot be investigated directly within the correspondence of the international system because of a lack of information on group behavior and decision processes, or because they are held secret. The variables are mostly indirectly measured through the analysis of speeches, letters, diaries and official docu-

ments from international organizations (e.g. United Nations). Thus studies on the international system must be retrospective (Janis, 1982; Winter, 1993).

The main findings suggest that pressure on group representatives (group leaders), threats to fundamental values and norms are the main causes of erroneous decision making and fundamental failures of groups in social conflicts (Janis, 1982; Holsti, 1990; Fisher, 1990).

All past studies have investigated the impact of the variables on one specific conflict type (e.g. war or civil war) except McClelland's power theory (McClelland, 1975). The studies did not compare the various conflict types with each other, although these comparisons may reveal some interesting results and interdependencies of psychological concepts.

In order to compare the various conflict types it is necessary to look at nations which have experience of different conflicts. One such nation is Great Britain, which has had a variety of international and national conflicts in the past century.

Andreas Hergovich, University of Vienna, Department of Psychology, Liebiggasse 5, A-1010 Vienna, Austria. E-mail: andreas.hergovich@univie.ac.at (Correspondence concerning this article should be sent to this address).

Andreas Olbrich, University of Vienna, Department of Psychology, Liebiggasse 5, A-1010 Vienna, Austria.

Some historical notes on British history after WWII and the Northern Ireland conflict

After WWII the influence of Great Britain on its colonies decreased dramatically. Britain had not the military

and economic power to control the former colonies. After the loss of India, Burma and Ceylon gained independence. Many former colonies joined the Commonwealth to gain further economic support. In the 1950s and 1960s the other colonies were released into independence. In many cases this process was accompanied by military intervention.

From 1950 to 1953 Great Britain took part in the Korean war and in 1956 in the Suez war. Since 1946 British troops stayed in Greece and Cyprus to strengthen the anti-Communist alliances. This engagement ended in 1959.

In spring of 1982 Great Britain had to expel Argentine troops from the Falkland Islands. This was the last war in which Great Britain participated until the 1990s.

The conflict in Northern Ireland has a long history. Its first sources may lay in the 18th and 19th centuries when the Protestant and Catholic visions of self-regulation and independence diverged. The economic differences between Protestants and Catholics are the roots of social conflict. Skilled jobs were systematically reserved for Protestants, but lower-class Catholics from the impoverished countryside migrated to the cities, especially Belfast. In the 1960s the fragile stability of Northern Ireland began to erode. The demographic majority was held by the Protestants and this fact ensured that they were able to control the state institutions. By the late 1960s the situation escalated. The government often used force to disperse unarmed demonstrators from the streets. British troops entered Northern Ireland in the early 1970s, but they soon came to be regarded as unwelcome agents of a foreign power by the Catholics. On "Bloody Sunday" (January 30, 1972) British troops killed 13 Catholic civil rights protesters. The Irish Republican Army (IRA) was revived to protect the Catholic population from official and unofficial assault. Protestant unionists responded by forming their own paramilitary brigades. In March 1972 the British Prime Minister Edward Heath suspended the constitution and parliament of Northern Ireland, restoring direct control by London. This political decision brought no decrease in violence. Terrorist actions by all parties involved in the conflict sets back any attempt to resolve the conflict. In the early 1990s talks were held between all Northern Ireland's major constitutional parties except Sinn Fein, the political wing of the IRA. In 1994 the IRA and the unionist paramilitary groups announced the cessation of violence. In a jointly held referendum in Ireland and Northern Ireland in May 1998 the agreement received the approval of 94 percent of voters in Ireland and 71 percent in Northern Ireland. However, there was a wide disparity between Catholic and Protestant support for the agreement (96 percent of Catholics but only 52 percent of Protestants voted in favor of it). Today, after the failure of decommissioning all paramilitary groups, the peace process has come to an halt, although the democratic political process may continue.

Inter-group relations and inter-group conflict

Taylor and Moghaddam (1987) define any aspect of human interaction which involves individuals perceiving themselves to be members of a social category, or being perceived by others as belonging to a social category, as inter-group relations. Social conflicts are defined according to Rubin, Pruitt and Kim (1994, p. 5): "Social conflict means perceived divergence of interest, or a belief that the parties' current aspirations cannot be achieved simultaneously".

Social identity theory

One prominent theory describing conflicts is social identity theory (Tajfel & Turner, 1986). According to social identity theory, individuals are motivated to derive a positive social identity from their group membership. To achieve a positive social identity, they compare their own group with other relevant groups. A positive differentiation leads to a positive social identity. Social conflict is one way to increase positive differentiation and therefore achieve positive social identity (Wagner, 1994). Wagner postulated that conflicts should make membership in a group more salient. During inter-group conflicts, the members of each group perceive their own in-group as homogenous and in-group leaders are evaluated positively.

Rabbie and Bekkers (1976) found that leaders often tend to compete with other groups when their position in their in-groups is threatened by internal crises. In this situation, inter-group competition makes the social identity for the in-group salient and therefore strengthens the position of the leader. Leaders may apply this strategy unconsciously and afterwards rationalize their decisions with "conclusive facts" (Wagner, 1994). Wright, Taylor and Moghaddam (1990) found that collective protest only occurs under conditions of complete group impermeability. When there is a small chance of joining the privileged group, protest is mitigated. This result was confirmed by a study done by Lalonde and Silverman (1994). They found that the salience of group membership and complete group impermeability must be given in order to activate collective protest. If the salience of group membership is low, individual action is performed by the members of the disadvantaged group. These two findings may be the basis for a hypothesis for the occurrence of civil unrest and civil war. These conflict types may occur because of the loss of fundamental human rights such as voting, and there is no possibility of leaving the disadvantaged group and joining the superior one. One strategy of preventing collective non-normative behavior could be the opening of the advantaged group to a rather small number of individuals of the disad-

vantaged group. This could be realized through education, tests and other individual behavior.

Another strategy is to define super-ordinate goals and thus form a group which includes the two groups (Mum-mendey & Wenzel, 1999). This super-ordinate goal must be sufficiently ill-defined (to permit multiple interpretations and to integrate various group differences), and be of limited scope (contain only a few defining dimensions and not concern itself with problematic dimensions) The differences and the great variance of positions must be explicitly stated in the definition of the super-ordinate goal and it has to be rather complex, containing as many positions as possible. Positive examples of prototype definitions are the ideal of multiculturalism in Canada's official policy in the early 1970s and the introduction of "double citizenship" in Germany in the late 1990s.

Integrative Complexity

Integrative complexity of thought is defined as a combination of differentiation and integration of elements of a problem. Evaluative differentiation refers to the capacity and willingness to acknowledge the legitimacy or reasonableness of alternative perspectives on a problem. Conceptual integration refers to the capacity and willingness to develop integrative methods of cognition which specify ways of compromising or trading off conflicting perspectives and values (Tetlock, 1994). The integrative complexity dimension has two extremes: on the one end undifferentiated, uni-dimensional decision-making strategies are used, on the other the various arguments are differentiated and a complex integrative solution is aimed at. The observable level of integrative complexity changes as a function of situational factors including stressors such as excessive or insufficient information, time pressure, and threat, individual factors such as value conflict and the approach of death, and social factors such as status, the audience, and the need to account for one's decisions to some constituency (Tetlock, 1985; Milburn & McGrail, 1992; Suedfeld, Bluck & Ballard, 1994)

Social stereotypes heat up social conflicts and the self-conforming effects tend to influence information processing and furthermore decision-making. Integrative complexity decreases in the face of military conflicts (Tetlock, 1985). Black/white-thinking and simplified problem-solving are the main indicators of this decrease. High integrative problem-solvers consider many facts in their decisions and try to satisfy all conflict parties. Low integrative decision-makers, on the other hand, know the facts but do not have the ability to make conclusions. Suedfeld and Tetlock (1977) analyzed international documents (speeches, correspondences, articles) which were published before

World War I, the war in Korea, Marokkan crises, Berlin crises and the Cuba crisis. They found that the integrative complexity was significantly lower before war and militarized disputes. Stress, restricted communication, simplifications and pressure to make decisions decrease the integrative complexity of decision-making.

Suedfeld, Tetlock and Ramirez (1977) analyzed speeches of Near-East diplomats at the General Assembly of the UN. They also found that the integrative complexity decreases before militarized disputes. Allies change in their complexity of arguments as well. U.S. complexity correlated with Israeli complexity before and during the conflicts. Suedfeld et al. supposed that the fate of Israel influenced the hegemonic structure of the superpower. In contrast, no correlation was found in the integrative complexity between the Arab states and the former USSR. A plausible interpretation for this result is that the USSR has no concerns or interests in this region.

Raphael (1982) pointed to the fact that the global connection of events is important, because integrative complexity decreases in peaceful crises when the conflict parties are engaged in other militarized disputes (e.g. Second Berlin Crisis and war in Korea).

Integrative complexity depends on the administration, too. Tetlock (1985) showed that the Stalin and Chrushchew era and the presidency of Truman and Reagan had a simpler integrative complexity than the other administrations.

Groupthink

The Groupthink model (Janis, 1982) is the most prominent model for malfunctioning group decision-making. Groupthink refers to a deterioration of mental efficiency, reality testing and moral judgement that result from in-group pressures. Three conditions must be satisfied for defective group behavior: (1) a high homogeneity of group members, (2) a provocative situation (value threat to group), and (3) low self-esteem of group members. The cohesive group members desire unanimous agreement but other antecedents relate to basic structural faults in the group. The lack of impartial leadership, the immediate decision-making context, external threats, and temporarily decreased self-esteem strengthen the tendency towards biased discussion and consideration of objectives and alternative solutions. In order not to threaten the opinion of the weak group, the advice of experts outside of the group remains unheard in Groupthink situations.

Janis described symptoms of Groupthink which indicate ongoing ineffective group decision-making. For example, the group defines itself as a moral institution and feels invulnerable to external threats. Stereotypes of out-groups are articulated. Self-censorship and self-appointed

mind-guards determine the group discussion and put direct pressure on dissenters.

Janis (1982) finds support for his theory in the Bay of Pigs fiasco, the Cuba Crisis, the escalation of the Vietnam war, the Marshall plan and the invasion in North Korea. Tetlock (1979) re-analyzed the same five crises with content analysis of key decision-makers' public statements and found support for Janis' theory. Smith (1984) analyzed the US attempt to rescue hostages from Teheran in 1979 and found symptoms of Groupthink.

Some experimental studies revealed contrary or partially supportive results (Flowers, 1977; Moorhead & Montanari, 1982; Callaway & Esser, 1984; Gladstein & Reilly, 1985). A recent study from Tetlock, Peterson and McGuire, Chang and Feld (1992) with the Q-Sort technique also revealed mixed support for the Groupthink-model. Group cohesiveness and situational stressors are neither necessary nor sufficient causes of Groupthink. Structural and procedural faults of the organization emerged as the most important antecedent conditions.

Aldag and Fuller (1993) proposed an extension of Janis' Model, the general group problem-solving model (GGPS). This model differentiates between antecedents, emergent group characteristics, decision process characteristics and outcomes. Antecedents are split into three sets. The first set contains relevant decision characteristics such as the importance of the decision, time pressure, structure, procedural requirements and task characteristics. The second set of antecedents contains nine group structure factors: cohesiveness, members' homogeneity, insulation of the group, leader impartiality, leader power, history of a group, probability of future interaction, stage of group development, and type of group. The third set of antecedents includes factors addressing the decision-making context: organizational political norms, member political motives, prior discussion of the issue, prior goal attainment, goal definition, and degree of stress from an external threat.

Emergent group characteristics are split into group perceptions and group processes. The set of group perceptions includes group vulnerability, the inherent morality of the group, member unanimity, and views of opposing groups. The set of group processes contains the group's response to negative feedback, treatment of dissenters, self-censorship, and the use of mind-guards.

The decision-process characteristics are divided into three stages by Aldag and Fuller. Problem identification factors are pre-decisional information search, survey of objectives, and explicit problem definition. The set of alternative generation factors contains the quantity (number) and the quality of alternatives. The third set contains nine factors addressing evaluation and choice in the decision process: information-processing quality, the source of the initial selection of a preferred alternative, emergence of a pre-

ferred alternative, group decision rule, timing of convergence, re-examination of preferred and rejected alternatives, source of the final solution, development of contingency plans, and gathering of control-related information.

Decision outcomes include acceptance of the decision, adherence to the decision, implementation success, and decision quality. The political outcomes include future motivation of the leader and group and future use of the group. The affective outcomes include satisfaction with the leader, the group process, and the decision.

Aldag and Fuller state that several factors may also play moderating roles in other parts of the model. "It becomes clear in reflecting on these propositions that the neat causal sequence from antecedent conditions to outcomes illustrated in the model represents a necessary oversimplification" (Aldag & Fuller, 2001, p. 9). They define 15 propositions that could be tested using their model. A few propositions are relevant for political decision making. Aldag and Fuller propose that increases in leader power will result in enhanced likelihood of self-censorship and in an increased probability that the leader will be the source of the final solution. Member political motives will moderate the relationships between decision process characteristics and outcomes. For instance, if the group leader has political motives for use of the group, failure to consult with experts or to develop contingency plans will be associated with an increased probability of future use of the group and with high future leader motivation.

Hypotheses

The main hypothesis of our study was that the suggested psychological theories (integrative complexity, erroneous decision-making and social identity) differ before international and national conflicts. In detail, we formulated the following specific hypotheses: (1) The integrative complexity should be lowered during international conflicts. (2) Referring to the GGPS-Model we hypothesized that the solutions of the group-leaders should be more preferred during international conflicts than during national conflicts. (3) The own group should be seen as more vulnerable during the national conflict, because of the immediate effects of the hostile action. (4) The pressure on dissenters should be greater and (5) more self-appointed mind-guards, who monitor the moral conformity of the group members, should appear in the media during national conflicts. (6) According to the theory of social identity, we assumed that the salience of group membership is greater during national conflicts than during international conflicts. (7) The evaluation of the own group should be better during national and the evaluation of the in-group leader should be more positive during international con-

flicts. (8) The evaluation of the other group (out-group) and the out-group leader should be seen as more negative during national conflicts. (9) During national conflicts, the groups should be perceived as impermeable, whereas in international conflicts individuals should be able to change groups.

METHODS

To measure integrative complexity we used the integrative complexity scale (Tetlock, 1985). This scale measures the integrative complexity of texts on a 7-point scale. Texts which have a rating of 1 have a very simple structure. Differentiation and integration of facts is low. Value-3-texts differentiate among various standpoints, but the different views are not combined and the links are not detected. Very high differentiation and a moderate integration of opinions is found in 5-point-texts. Competitive views are carefully considered and a simple decision rule is explicit. 7-point-texts have high integrative complexity. The facts are combined by a complex decision rule.

To evaluate the decision-making process, we constructed eleven dichotomous items based on the generalized group problem-solving model (Aldag & Fuller, 1993).

We developed 10 items from social identity theory (Wagner, 1994; Brown, 2000). The three scales are presented in the Appendix.

The time-span of our analysis (1946-1990) was divided into half-year terms. Each term was evaluated as to whether an international conflict or the Northern Ireland Conflict was at issue or not. This evaluation was based on three historical chronologies (dtv-Atlas zur Weltgeschichte, 1997; Gärtner, 1983; Webster's Unabridged Dictionary of the English Language, 1993). One war took place during the Northern Ireland Conflict, (Falkland war, 1982). The terms of the Falkland war were rated as international conflicts, although the Northern Ireland conflict was not resolved then.

From this time span, 117 leading political articles from the British magazine *Economist* which dealt with the conflicts were analyzed by five trained subjects (English native speakers or expatriates, who lived in England several years) using the three scales. The length of the articles was about one page of the magazine. The analysis of written documents or speeches is a widely applied procedure to assess political processes and has high reliability and validity (e.g. Suedfeld & Tetlock, 1977; Moorhead & Montanari, 1982; Wagner, 1994).

The procedure for analyzing the articles was as follows: The five raters were instructed on how to rate an article

with respect to the scales in a separate training session. Each article was rated by one subject. The subjects read the articles carefully and rated the psychological variables using the questionnaire. Thus, integrative complexity was evaluated first. Then each of the items of the GGPS-Model was rated. It must be mentioned with respect to the GGPS-items that one must be aware that the category "No" is somewhat ambiguous for the respective content of the scale, as either the issue is not discussed at all or the issue had been evaluated negatively. In the third step the social identity scale was used to analyze the articles.

RESULTS

In the first step the integrative complexity of the documents was analyzed. The integrative complexity scale revealed no significant differences between international conflicts ($M=4.84$, $SD = 1.79$) and during the Northern Ireland conflict ($M=4.62$, $SD = 0.98$; $t(85.82)=0.75$, $p=.45$). The differentiation of the arguments and the integration of the various points of view was moderate. Thus, Hypothesis 1 could not be confirmed.

The results for the GGPS-items are presented in Table 1. With respect to our specific hypotheses it can be said that Hypotheses 2, 4 and 5 could be confirmed, whereas Hypothesis 3 could not be confirmed. Thus, during international conflicts the solutions of the leaders were preferred to a higher degree than during national conflicts (as expected in Hypothesis 2). This result suggests that only a consensual solution of the various groups can terminate this conflict. There was also greater pressure on dissenters (cf. Hypothesis 4) and there were more self-appointed mind-guards in the group during national than during international conflicts (Hypotheses 4 and 5). These mind-guards put pressure on dissenting individuals and morally evaluate the conflict. These findings are consistent with the Groupthink theory and they are strong indicators that the conflict resolution is far beyond optimal. However, Hypothesis 3, which suggested that the own group is seen as more vulnerable during national conflicts, could not be confirmed. The sense of invulnerability of the own group is distributed nearly equally during national and international conflicts. Aside from these results, there were significant differences revealed in the analysis with respect to homogeneity and conflict comparison which were not postulated in the hypotheses. Thus, the group members are seen as more similar during a national conflict than during an international conflict. And the conflict at stake was compared to a greater degree with historical crisis during the Northern Ireland conflict (national conflict).

With respect to social identity theory, it was expected that the salience of group membership is higher during national conflicts than during international conflicts (Hypothesis 6) and that the evaluation of both the in-group and the leader of the in-group is more positive during national conflicts (Hypothesis 7). In contrast we expected that the evaluation of the out-group and the out-group leader should be more negative during national conflicts (Hypothesis 8) and that it is more difficult to change groups during national conflicts, which means the impermeability of the group should be higher during national conflicts (Hypothesis 9). Hypothesis 6 and 9 were fully confirmed, whereas Hypotheses 7 and 8 could only be partially confirmed (see Table 2). Thus, the evaluation of in-group and out-group did not differ significantly during the conflict. However, the expected differences with respect to the evaluation of in-group and out-group leaders did occur. Though not explicitly stated in the hypotheses, the analysis also revealed significant differences with respect to the evaluation of the out-group leader, the demand for aggressive behavior towards the other group, the existence of good/bad stereotypes, and the perceived presence of opposition in the in- and out-group, which are in line with the theory of social identity (Table 2).

In the second step of the analysis, a discriminant analysis with all 22 items was conducted (see Table 3.). The evaluation of the out-group and the out-group leader, the self-appointed mind-guards and group permeability had the highest standardized discriminant coefficients. In sum, 88.3% (89.7% of the international conflicts and 86.7% of the national conflicts) were correctly classified by the discriminant analysis (see Table 4). A cross-validation of the data also provided a significant result. 76.7% of the articles were correctly classified.

In the third step of the analysis, a neural net was designed for conflict prediction. Today, neural nets are mostly understood as powerful statistical tools (Warner & Misra, 1996; Bishop, 1995). The smallest unit of a neural net is the neuron. It is highly interconnected with other units. The connections are weighted and interpreted as the strength of the connections. The input into a unit is the weighted sum of the outputs from units connected to it. In mathematical terms this is expressed as:

$$\text{netinput} = \sum_j w_{ij} * \text{output}_j + \mu_i,$$

where w_{ij} are the weights connecting neuron j to neuron i , output_j is the output from unit j , and μ_i is a threshold for neuron i . The threshold term is the baseline input to a neu-

Table 1
Differences according to the theory of Groupthink

Item	International Conflict		During Northern Ireland Conflict		χ^2	p
	No	Yes	No	Yes		
Pressure	25 (41.7%)	35 (58.3%)	23 (40.4%)	34 (59.6%)	0.02 (df=1)	.88
Temporal limitation	51 (85.0%)	9 (15.0%)	52 (91.2%)	5 (8.8%)	1.08 (df=1)	.30
Lack of authority	46 (76.7%)	14 (23.3%)	49 (86.0%)	8 (14.0%)	1.65 (df=1)	.20
Homogeneity	38 (65.5%)	20 (34.5%)	26 (45.6%)	31 (54.4%)	4.61 (df=1)	.03*
Conflict comparison	48 (80.0%)	12 (20.0%)	35 (61.4%)	22 (38.6%)	4.90 (df=1)	.03*
Preference for group solutions over leader solutions	45 (76.3%)	14 (23.7%)	25 (43.9%)	32 (56.1%)	12.73 (df=1)	.00**
Invulnerability	52 (86.7%)	8 (13.3%)	48 (84.2%)	9 (15.8%)	0.14 (df=1)	.71
Moral instance	23 (38.3%)	37 (61.7%)	18 (31.6%)	39 (68.4%)	0.59 (df=1)	.44
Black/white-thinking	46 (78.0%)	13 (22.0%)	38 (66.7%)	19 (33.3%)	1.85 (df=1)	.17
Pressure on dissenters	43 (72.9%)	16 (27.1%)	27 (47.4%)	30 (52.6%)	7.87 (df=1)	.00**
Self-appointed mind-guards	34 (57.6%)	25 (42.4%)	11 (19.3%)	46 (80.7%)	17.94 (df=1)	.00**

* $p < .05$; ** $p < .01$

Table 2
The results with respect to the social identity items

Item	International Conflict		During Northern Ireland Conflict		t-value	p-value
	n	M (SD)	n	M (SD)		
Salience	60	0.85 (1.68)	57	1.53 (0.91)	t(91.56)=-2.72	p=.01**
Evaluation of in-group	60	0.72 (1.18)	57	1.03 (0.86)	t(108.17)=-1.67	p=.10
Evaluation of in-group leader	60	0.41 (1.10)	57	0.86 (0.93)	t(115)=-2.35	p=.02*
Evaluation of out-group	60	-0.72 (1.11)	57	-0.89 (1.03)	t(115)=0.9	p=.37
Evaluation of out-group leader	60	-0.33 (0.91)	57	-0.79 (1.06)	t(115)=2.49	p=.01**
Aggressive action	60	-0.75 (1.63)	57	-0.14 (1.08)	t(102.69)=-2.40	p=.02*
Group impermeability	60	-0.63 (1.22)	57	-0.08 (0.71)	t(96.03)=-2.96	p=.00**

Item	International Conflict		During Northern Ireland Conflict		χ ²	p-value
	No	Yes	No	Yes		
Opposition in in-group	43 (71.7%)	17 (28.3%)	18 (31.6%)	39 (68.4%)	18.82 (df=1)	p=.00**
Opposition in out-group	39 (66.1%)	20 (33.9%)	23 (40.4%)	34 (59.6%)	7.73 (df=1)	p=.00**
Good/bad-evaluation	42 (70.0%)	18 (30.0%)	29 (50.9%)	28 (49.1%)	4.48 (df=1)	p=.03*

* < p.05; ** p < .01

Table 3
Standardized canonical discriminant coefficients of all psychological variables

Variable	Discriminant coefficients
Integrative complexity	-.020
Pressure	.159
Temporal limitation	-.162
Lack of authority	-.465
Homogeneity	.195
Conflict comparison	.225
Unsatisfactory solutions of group leader	.270
Invulnerability	.058
Moral instance	-.259
Black/white-thinking	.212
Pressure on dissenters	-.027
Self-appointed mind-guards	.588
Opposition in in-group	.386
Opposition in out-group	.193
Good/Bad-Evaluation	.392
Salience	-.455
Evaluation of in-group	.267
Evaluation of in-group leader	-.064
Evaluation of out-group	.672
Evaluation of out-group leader	-.609
Aggressive action	.124
Group permeability	.536

Table 4

The prediction derived from the discriminant analysis according to which conflict-type the cases belong

		Predicted		
		International conflict	NI-conflict	Total
Original	International conflict	52 (89.70%)	6 (10.3%)	58
	NI-conflict	6 (13.3%)	39 (86.7%)	45
Cross-validation	International conflict	43 (74.1%)	15 (25.9%)	58
	NI-conflict	9 (20.0%)	36 (80.0%)	45

ron in the absence of any other inputs. Each neuron applies an activation function to the net input. These activation functions are sigmoid functions such as

$$g(\text{netinput}) = 1/(1+e^{-\text{netinput}})$$

or threshold functions. The results of this computation are the outputs of the neurons, which are fed into the next netinput-terms.

Learning in neural nets is mostly realized through adaptation of the weights. Several procedures and algorithms have been suggested. The most popular and effective routine is the back-propagation algorithm. After one input pattern is presented to a net and the activation levels of all neurons are computed, the activation levels of the output neu-

rons are compared with the desired output activation levels. The minimization of the sum of squared errors is defined by

$$E = 1/2 \sum_p^n \sum_k^O (y_{pk} - y'_{pk})^2,$$

where the subscript *p* refers to the patterns with a total of *n* patterns, the subscript *k* to the output neurons with a total of *O* output neurons, *y* is the observed response and *y'* is the desired response. This is the sum of the squared difference between the predicted response and the observed response averaged over all outputs and patterns. In the next step the weights are adapted. Because the neural net has more than one layer, the weights of the top layer are adapted first and the weights of the input neurons last (back-propagation).

In the designed neural net the 22 input-neurons represent the items of the questionnaire. Each pattern which is presented to the net corresponds to an article which has been analyzed previously. The 2 output neurons indicate

whether a national or international conflict was present or not.

Figure 1 is a visual representation of the structure of the neural net. As is shown, one layer lies between the input and output layers. This additional hidden layer is needed for identification of non-linear dependencies (Bishop, 1995). In statistical terminology, this neural net corresponds to a discriminant analysis. Validity will be proven by examples which were not presented to the net during the learning phase. When the neural net categorizes input in the correct manner, the given net and the adapted weights are valid.

For simulating the neural net we used the Stuttgarter Neural Net Simulator (SNNS 4.2) under Linux.

97 articles were used for training the neural net. After applying the back-propagation algorithm with 1.000 learning cycles, 20 articles (10 articles before the Northern Ireland conflict and 10 during the Northern Ireland conflict) which were not presented to the net before they were used to validate the neural net. Table 5 shows the results of this validation. 90% of the articles were correctly classified by the neural net. Only 10% of the articles were misclassified.

Table 5

The result of the neural net validation

		Observed	
		International Conflict	Northern Ireland Conflict
Predicted	International conflict	9 (90%)	1 (10%)
	Northern Ireland Conflict	1 (10%)	9 (90%)

DISCUSSION

The results of the analysis showed the great psychological impact of the Northern Ireland Conflict which is even noticeable to a high degree in leading articles of the magazine Economist. Supporting the results of Rabbie and

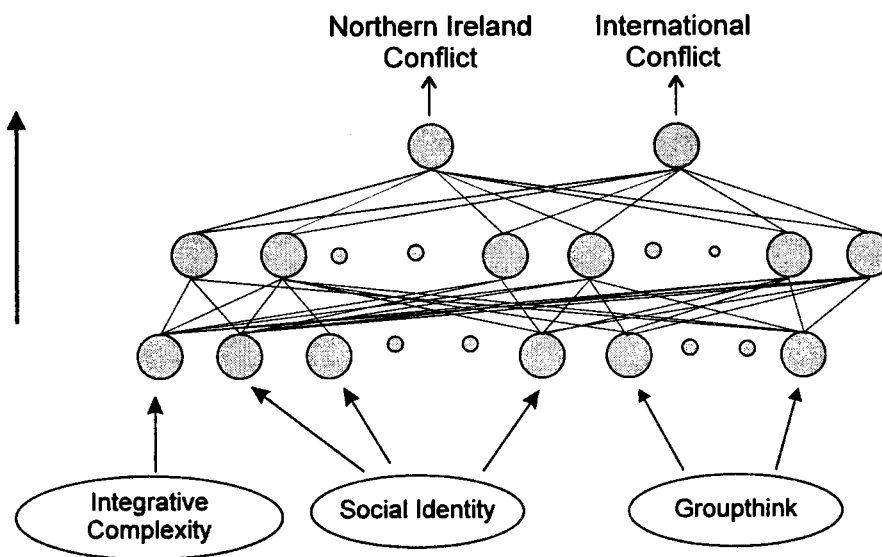


Figure 1. The design of the neural net.

Bekker (1976), the in-group leaders profit from the escalation of a conflict, although the gain is higher when the conflict is a national conflict than when it is an international conflict. From our results it is suggested that the leaders can lead their groups in two ways. The first way chooses the destruction of opposition forces of the in-group (international conflict), but only moderately strengthens the evaluation of the in-group leader. This conflict type could be the leader's choice if s/he is interested in harmonizing the in-group and does not tolerate internal inconsistency. When the leader is only interested in an extreme positive evaluation it would be more favorable to lead the own group into a national conflict.

With regard to the theory of Groupthink, our results support the thesis that Groupthink is likely to occur in national conflicts. Although integrative complexity showed no significant difference in information processing and black/white-thinking did not differ in national and international conflicts, the evaluation of the groups and leaders suggest that the emotional involvement of the participants is greater in national conflicts. This could lead to rationalization: some assumptions of the argumentation are based on emotional grounds and further arguments are cognitively deduced from these false premises.

Our results also provide some suggestions for conflict resolution. We found that during the Northern Ireland Conflict, the salience of group membership was high and group solutions are preferred to a greater extent. These results suggest that a solution based on the decision making of the various groups is needed. Group processes should provide the ground for democratic transitions. Therefore, the definition of some super-ordinate goals for the groups, which both groups should try to reach, is necessary. According to Mummendey and Wenzel (1999) these super-ordinate goals (1) must be weakly defined, (2) have a restricted scope, (3) accept a broad variance, and (4) should be rather complex. The establishment of democratic institutions is one good starting point for settling the conflict and creating a communication platform. Every group member must participate in this democratic process through referenda and elections.

The first step in the right direction seemed to be made by the Downing Street Declaration (DSD) in 1993. Britain declared that "it is for the people of the island of Ireland alone, by agreement between the two parts respectively, to exercise their right of self-determination on the basis of consent" (DSD; cited in Williams & Jesse, 2001, p. 587). After some setbacks in 1996, Labour's landslide victory in 1997 enabled a further approach to a peaceful conflict resolution by the Good Friday Agreement in April 1998. "It is the firm will of the Irish nation in harmony and friendship, to unite all people who share the territory of the island of Ireland, ... recognizing that a united Ireland shall be

brought about only by peaceful means with the consent of a majority of the people, democratically expressed, in both jurisdictions in the Island" (Agreement Between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of Ireland, 10 April 1998).

The British-Irish Peace Agreement established four democratic institutions for Northern Ireland. *The Northern Ireland Assembly* should "exercise full legislative and executive authority in respect of those matters currently within the responsibility of the six Northern Ireland Government Departments, with the possibility of taking on responsibility for other matters" (Strand 1, Paragraph 2). *The North/South Ministerial Council* should develop consultation, co-operation and action within the island of Ireland. Only ministers of the two governments are allowed to participate in this institution. *The British-Irish Council* should exchange information, discuss, consult and endeavor to reach agreement on co-operation in matters of mutual interest within the competence of the relevant administrations (Strand 3, Paragraph 5). The fourth institution established is the *British-Irish Intergovernmental Conference*. At this summit the British prime minister and the Irish taoiseach will promote bilateral co-operation at all levels in all matters of mutual interest within the competence of both governments (Strand 3, Part 2, Paragraph 2). These four institutions provide a wide range of participation and all conflict parties are represented in one of these institutions. As Williams and Jesse (2001) stated, these different democratic institutions promote overlapping identities and therefore reduce conflict.

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APPENDIX

The Questionnaire. Integrative Complexity-Scale

Integrative Complexity	Differentiation	Integration	Description
1	low	low	Events are only evaluated as good/bad.
2			
3	middle	low	Perceiving alternative arguments, No conclusion and integration.
4			
5	middle	middle	Perceiving alternative arguments, Integration through simple rules.
6			
7	high	high	Perceiving complex arguments and making complex conclusions.

Groupthink-Items

Item	Yes	No
Is the own group threatened by another group (nation)?		
Is there a temporary limitation to finding a solution?		
Does the leader of the own-group have a lack of authority?		
Are the group members similar to each other?		
Is there any comparison of the crisis at stake with historical crisis?		
Is there any suggestion that the group will find a better solution than the leader?		
Is the own group perceived as invulnerable?		
Is the own group the moral instance in the crisis?		
Is the other group's behavior perceived as stereotypical?		
Is there pressure on dissenters?		
Are there self-appointed mind-guards in the own group?		

The Social Identity Items

Item	Scale
How salient is the group membership?	7-point scale
Is there any opposition in the in-group?	Dichotomous
Is there any opposition in the out-group?	Dichotomous
How positive/negative is the evaluation of the own group?	7-point scale
How positive/negative is the evaluation of the own leader?	7-point scale
How positive/negative is the evaluation of the other group?	7-point scale
How positive/negative is the evaluation of the other group's leader?	7-point scale
Is the own group evaluated as good and the other group as bad?	Dichotomous
Is there any demand to behave aggressively towards the other group?	7-point scale
How easily can one member of one group change to the other?	7-point scale