
Integrative Complexity in Correspondence

Jasook Koo

Kyung Hee University, Suwon Campus, South Korea

Joon Han

Yonsei University, South Korea

Integrative complexity, the interaction of conceptual and cognitive rules, is used in processing information. High integrative complexity people evaluate situations and make decisions diversely; low integrative complexity people reason simplistically and dichotomously. We examined the social psychology of South/North Korean relations in their correspondence by an integrative complexity coding process. Time series analysis predicted mean levels of integrative complexity for each half-year period between 1984 and 1997. Analysis showed that South/North Korean relations exert significant influence on integrative complexity levels. We also found a mutual effect of integrative complexity levels in the two. Major coordinative events relate to a decline in integrative complexity in the following half-year period. During South Korean presidential elections, correspondence integrative complexity levels decline in both.

Integrative Complexity in Correspondence

The 15th of August, 2005, was the 60th anniversary of Korea's emancipation from Japanese colonial control. It is also the anniversary of Korea's division into South and North. The unexpected emancipation following Japan's surrender in 1945 gave Korean people high hope and the desire to build an independent nation state. However, the Korean people had to wait another three years under a joint trusteeship of the United States (US) and the Soviet Union. At the end of the trusteeship, North and South areas of Korea were established as separate governments representing opposing regimes of capitalism and communism. Growing antagonism between the two eventually brought about the Korean War, in which the United Forces of sixteen countries led by the US participated in support of South Korea. The Armistice Agreement between the United Forces and North Korea brought the war to an end.

After more than a half century after the armistice, the Korean peninsula remains the only area in the world in which a formerly unified country is divided along an ideological line. Living in the only country still bearing the mark of the Cold War, many Korean people dream of the day when the Armistice Line dividing South and North Korea will be abolished.

In the days of the Cold War, it was generally believed that a prolonged division was inescapable under the enduring tension among the superpowers surrounding the Korean peninsula. The only exception during that period was the visit of the North Korean representative to Seoul and the conference resulting in the joint communiqué of 4 July 1972. The breakdown of the Berlin Wall in 1989 marked the end of the Cold War in Europe. The same event fuelled a new hope for reunification among South Korean people. In the same year, the South Korean president Roh, Tae Woo agreed with the North Korean leader, Kim Il Sung, on a program for peaceful and gradual reunification based on Korean national community, which evolved into a more detailed plan for reunification in 1994. Sustained efforts to reduce military tension and to promote peace and cooperation between South and North Korea culminated in the visit by Kim, Dae Jung, then the South Korean president, to Pyeong-Yang, and the first summit conference between South and North Korea on 15 June, 2000.

Despite the people's hope and the efforts of the government officials, many obstacles lie on the road leading to a reunified Korea. Periods of reconciliation and cooperation could not continue long but were interrupted by periods of tension and conflict. Of special importance are the rising concerns and tension caused by North

Address for correspondence: Jasook Koo, Kyung Hee University, 1 Seochon-dong, Kihung-ku, Yongin, Kyunggi-do, South Korea 446-701. E-mail: jasook@khu.ac.kr

Korea's development of nuclear weapons. Although North Korea has been interested in producing nuclear weapons since the early 1960s, the real threat of North Korean nuclear weapons has been brought home to South Korea and the US more recently.

North Korea joined the nuclear Non-Proliferation Treaty (NPT) in 1985, but kept refusing to receive nuclear inspection by the International Atomic Energy Agency (IAEA). The US and the South Korean government detected North Korea's development of nuclear weapons in 1989, and since then they have tried to dissuade North Korea from further development of nuclear weapons. In 1991, South and North Korea agreed to sign a Denuclearization Declaration of the Korean peninsula. Shortly after the agreement, however, North Korea refused IAEA inspection on Yongbyon, the suspected site for nuclear weapon development and finally opted out of NPT. North Korea was brought back to the table for negotiation in 1994, and agreed to be inspected in exchange for an energy supply from the US and South Korea through the Korean Peninsula Energy Development Organization (KEDO). The 1994 deal between Pyongyang and Washington could not last long either, and the Bush administration began to confront North Korea with clear evidence that North Korea had resumed development of nuclear weapons. North Korea demanded recognition as an independent sovereignty and a guarantee of nonaggression from the US. South Korea and the US try to handle nuclear weaponry and other issues within a multilateral, six-party framework involving the US, South and North Korea, Japan, China, and Russia.

As one can see from the above description of the development of the situation, the path toward peaceful reunification of the Korean peninsula is not only ragged with many surprises but zigzagged with frequent retrogressions. The Korean people, to their dismay, have witnessed the peace talks between South and North Korea turn sour on many occasions. Only two years after the joint communiqué in 1972, North Korea assassinated the first lady of South Korea. North Korea's op-out from the NPT occurred two years after the 1991 joint Denuclearization Declaration. Kim, Dae Jung received the Nobel Peace Prize for his 'sunshine policy' toward North Korea and its contribution to solidifying peace in the Korean peninsula. Korean people believe that the historic summit in 2000 marks a key turning point in normalising the relationship between South and North Korea, but most Koreans cannot help but be a little sceptical about the eventual outcome at the same time. For social scientists studying the dynamics of the Korean peninsula, understanding the factors behind these cyclical and sometimes cataclysmic changes in the relationship between South and North Korea is a crucial task.

One essential factor affecting the dynamics of South–North Korean interaction is the psychological, or more specifically, the cognitive process behind the foreign policy makers' opinion formation on various issues. From a behavioural perspective, the nature of South–North Korean relations can be characterised as a 'protracted conflict' (Azar, 1990) based on mutual distrust and negative stereotypes. Even when progress is made toward reduced tension and heightened cooperation, mutual distrust based on past bad experiences can be triggered by a trivial event and the situation can retrogress. Such a vicious cycle in the cognitive or psychological dynamic between foreign policy makers brings a sudden halt to the improvement in South–North Korean relations. Therefore, it is of utmost importance to investigate not only the psychological dimension, but also the interaction aspect of cognition or understanding. The investigation of the integrative complexity of the policymakers should help us to understand the psychological background behind the strategic decisions and interactions in South–North Korean relations.

We expanded previous research (Koo, Kim, & Han, 2003) investigating the psychological dimensions underlying South–North Korean interaction, by studying the integrative complexity of the policymakers. This should help the US to understand the psychological background of the strategic decisions and interactions in South–North Korean relations.

Theory of Integrative Complexity and Conflict Resolution

Integrative complexity implies the interactive involvement of conceptual and cognitive rules that people use in processing information (Harvey, Hunt, & Schroder, 1961), and depends on the level of differentiation and integration in cognitive processes (Schroder, Driver, & Streufert, 1967). Differentiation is reflected by whether an actor considers various aspects, characteristics, or dimensions in thinking about an issue or an event, and whether the actor takes various approaches in evaluating and interpreting different dimensions. Integration implies developing complex linkages among such differentiated characteristics or dimensions.

The mode of information processing changes according to the situation (Wallace, Suedfeld, & Thatchuk, 1996). Studies analyzing diplomatic memorandum exchanges and decision-making under crisis situations revealed a significant relationship between the level of integrative complexity and the method of crisis resolution (Levi & Tetlock, 1980; Raphael, 1982; Suedfeld & Tetlock, 1977; Suedfeld, Tetlock, & Ramirez, 1977; Walker & Watson, 1994). The integrative complexity of decision makers was lower in the case of declaration of war than in the peaceful resolution of crisis.

In an attempt to forecast international crises, Raphael (1982) applied the integrative complexity

coding system to the communications and diplomatic notes authored by principal decision makers of the US and the former USSR from 1946 to 1962 concerning the Berlin crises. As predicted, integrative complexity significantly decreased prior to the two major crises and then significantly increased following the onset of the crises, which ended in a peaceful resolution.

Tetlock's (1985) study of foreign policy rhetoric provided insight for this study. Tetlock coded the integrative complexity of US and Soviet foreign policy statements made from 1945 to 1983, and analysed the relationship between the integrative complexity and the mode of conflict resolution. His results showed that while peaceful conflict resolution and coordinative policy initiative correlated with high integrative complexity, competitive policy initiative correlated with low integrative complexity. He attributed such regularity in the pattern to the following factors.

First, integrative complexity reflects how actors perceive and interpret events. If policy-makers perceive foreign relations with low integrative complexity, they are less likely to take alternative points of view and more likely to make black-or-white judgments, leading to competitive initiative. On the other hand, when policy-makers maintain a high level of integrative complexity, they are more likely to consider the interests of both sides and take into account all possible alternatives, leading to less extremist and more peaceful conflict resolutions.

Second, from the political impression management perspective, policy statements of various levels of integrative complexity may be strategically designed to manipulate the views of important domestic and international audiences (Tetlock, 1985). Lowering the level of integrative complexity signals a firm will not to back away from core commitments and to 'fight till the end'. Raising integrative complexity is a way to communicate interest in negotiation and coordinative initiatives.

The impression management interpretation of complexity change is somewhat controversial and inconclusive. A study of the integrative complexity level of political leaders during a successful revolution reported a significant rise in complexity after the revolution (Suedfeld & Rank, 1976). Similarly, Tetlock (1981) compared presidential candidate addresses given before and after an election and showed that the candidates presented the issues in a simplistic manner during the campaign, but took drastically more pluralist and integrative approaches right after taking office. While these results are compatible with the impression management explanation, other explanations are also viable. Suedfeld and Rank (1976) argued that such changes reflected the actual changes in how the leaders thought about and made decisions. Meanwhile, Tetlock (1985) suggested that the integrative complexity of a person's verbal behaviour reflects both a perceptual-cognitive aspect

(how one actually sees the world) and impression management aspect (tactics that the person deems advantageous in particular situations).

Finally, a reciprocal influence of the integrative complexity levels exists between opposing parties, as demonstrated by the relations between the Soviet Union and the US (Tetlock, 1985). In other words, decisions made by US and Soviet policy makers were tied in such a way that their cognitive bases for decisions were interdependent. Axelrod (1984) showed that, under situations of continuing interaction, one party's accommodating behaviour tends to induce a similar reaction from the other, leading to cooperation. We can test whether such interdependency applies to policy makers in South and North Korea.

Integrative Complexity and the South–North Korean Relationship

We combined the general theory of integrative complexity and the specific situation of South–North Korean relations to formulate the following hypotheses for this study.

First, we expected changes in the level of integrative complexity to be associated with changes in the nature of the South–North Korean relationship. We hypothesized that low integrative complexity was associated with a competitive relationship, and high integrative complexity was associated with a coordinative relationship. We tested this hypothesis by comparing the integrative complexity for various periods of the South–North Korean relationship. We divided our observation period into three major subperiods according to the changing nature of South–North Korean relations (Cha, 1997). These periods correspond to the terms of three successive presidencies. During the first period, from 1984 to 1987, the talks between South and North Korea resumed after the North Korean bombing of the South Korean delegation in *Aungmye, Myanmar*. During the second period, from 1988 to 1992, substantive exchanges and coordination occurred. Finally during the last period, from 1993 to 1997, the nuclear bomb issue broke out and South–North Korean relations froze again. We expected the level of integrative complexity to rise between the first and second periods, and to decline between the second and third periods for both South and North Korea.

Second, we also tested the same hypothesis using a different approach. We examined whether low integrative complexity correlated with competitive (or aggressive) actions or policy decisions, while high integrative complexity correlated with cooperative (or coordinative) action or policy decisions. Previous studies based on a simulation method report that participants with low integrative complexity tend to rest on competitive strategy and are prone to use violence as a response to frustration (Driver, 1965; Schroderm Driver, & Streufert, 1967; Streufert & Streufert, 1978). Another study shows that crises that end in war were characterised by drops in the

integrative complexity of the leaders of the nations, which was not the case for those that eventually resolved peacefully (Suedfeld & Tetlock, 1977).

Third, changes in the level of integrative complexity should follow changes in political leadership. As no leadership change actually happened in North Korea for most of the study period, this hypothesis applied only to South Korea. South Korea had three presidents between 1984 and 1997. As their terms of presidency overlapped with the periodic divisions of this study, we could not estimate leadership effects separately from the period effects. Although a separate test was not possible, it was possible to compare the three presidents in terms of their attitudes and policies toward North Korea.

While the South–North Korean relations worsened and the military crisis deepened under the presidency of Chun, Doo-whan (1980–1987), who had internalised anti-communist ideology and prioritised national security against human rights issues, President Roh, Tae-woo (1988–1992) pursued an active diplomatic policy toward the former communist bloc, including China and the Soviets. The international atmosphere of reconciliation and opening-up during the late 1980's enabled the expansion of foreign relations beyond previous ideological constraints. President Kim, Young-sam's democratic government (1993–1997) had the opportunity to initiate steps toward resolving reunification problems under such a favourable international situation. However, lacking support from North Korea, attempts to improve South–North Korean relations ended in failure (Han, 1994).

Fourth, changes in the integrative complexity levels of South and North Korea should affect each other's complexity level; the effect of North Korea's change in integrative complexity on South Korea should be larger than the effect of South Korea's change in integrative complexity level on North Korea and the magnitude should be larger for the effect of North Korea's complexity level on South Korea's complexity level. South Korea's reunification policy had been criticised for being ineffective in dealing with North Korea; it was seen as not doing more than passively reacting to the North's initiatives (Choi, 1996). If such criticism is valid, the *cross-effect* of North Korea's complexity level on the South should be greater.

Fifth, the integrative complexity level of South Korea should decline during its presidential election campaign periods. An analysis of the editorial columns in four major Korean newspapers during presidential elections showed the integrative complexity level to decline significantly prior to the election, and to rise thereafter (Koo & Kim, 1999). As much information available during the campaign period is fraught with side-taking and black-or-white arguments, instead of broadening one's perspective on the various issues, they will have the

effect of making distinctions between 'good and bad' issues and narrowing one's perspective.

Power, Affiliation, and Achievement Motives and Integrative Complexity

Though our main interests focused on the integrative complexity of South–North Korean communication, we additionally coded them for power, affiliation and achievement motives.

Concerning power motive, McClelland (1971) found that societies with high power motives combined with low affiliation motives were more likely to give rise to authoritarianism. People with high power motive scores were more likely to be retaliatory in an international game setting and were exploitative in a prisoner's dilemma game setting (Terhune, 1968). Also, people with high power motive scores were less willing to compromise in a two-person influence setting (Hunt, 1972). Thus, a power motive can get in the way of smooth conflict resolution (Veroff, 1992). These results lead to the prediction that the power motive would be negatively correlated with integrative complexity.

Affiliation motive is defined as a concern over establishing, maintaining, or restoring a positive affective relationship with another person or group of persons (Heyns, Veroff, & Atkinson, 1958). People with a high affiliation motive spend more time interacting with others and do so in a generally accommodating and cooperative manner (Koestner & McClelland, 1992). These characteristics seem to be associated with a peaceful and smooth conflict resolution, suggesting a positive relationship between affiliation motive and integrative complexity.

Achievement motive is defined as a concern with doing things better and surpassing standards of excellence (McClelland, 1985). People with high achievement motive scores prefer tasks of intermediate difficulty (Atkinson & Litwin, 1960), are relatively more persistent (Feather, 1961) and more future-oriented (McClelland, 1961). It is difficult to formulate how achievement motives would be related to integrative complexity.

Method

In previous research, we analysed the written and verbal communications exchanged between the high government officials of South and North Korea. South and North Korea are in the state of truce at present and communication is not possible through official diplomatic channels. The direct South–North hotline was established as the result of a 1972 Red Cross Conference and has functioned as a valuable channel for communication, through which many verbal and written statements have been exchanged. High-ranking decision-makers of the South and North, the Korean Red Cross and Prime Ministers of South and North Korea were among those who issued these communications. For the present analysis, we added recent data that became public after the previous research had been completed.

The study period was from 1984 to 1997, with the exclusion of the year 1992, when the correspondence was not disclosed to public. From the collected material, a research assistant blind to the hypotheses of the current study randomly selected 30 paragraphs for each half-year period between 1984 and 1997 (except for 1992), totalling 469 paragraphs for North Korea and 402 for South Korea.

Each paragraph selected was scored on a 1 to 7 scale, which defined integrative complexity in terms of both conceptual differentiation and integration. A score of 1 was given for the absence of either differentiation or integration, where a simple, one-dimensional rule was used to interpret events or make choices. A score of three indicated moderate to high differentiation without any integration. Scores of 5 to 7 signified presence of varying degrees of integration based on clear differentiations. A score of 5 reflected a moderate level of integration, where the existence of conceptual connections was acknowledged between differentiated dimensions of a given issue. A score of 7 was given for a high level of integration, where the individual offered a general principle that provided a conceptual framework for understanding specific interactions among differentiated dimensions, or if the individual used complex rules to compare and contrast alternative perspectives on the issue. Scores of 2, 4, and 6 represent transitional levels in conceptual structure.

Integrative complexity scores were averaged for every half-year to provide the dependent variable. We applied time series regression models to the collected data. The independent variables used to predict temporal fluctuations in the integrative complexity of South–North Korean correspondences were: (a) temporal divisions into three periods based on the nature of South–North Korean relations (1984–1987, period of South–North Korean talks resumption; 1988–1992, period of exchange and cooperation; 1993–1997,

period of tension building); (b) years when there were major agreements between South and North Korea; (c) years when there were major attacks or threats by South Korea; (d) years when there were major attacks or threats by North Korea; (e) integrative complexity of the other party; and (f) years of South Korean presidential election (1992, 1997).

Results

Table 1 presents the estimates from the restricted time series models predicting integrative complexity level in South and North Korea. The effects of independent variables showed similar patterns for both South and North Korea. We examined the effects of independent variables included in the restricted models, starting with the effects of the time period. The reference period was the first period of South–North Korean talks’ resumption between 1984 and 1987. The estimates were found to be positive for both the second and third periods. In other words, integrative complexity levels in South and North Korea were higher for the periods after 1987. However, among the period effects, only the effect of the second period was statistically significant.

The effects of the South Korean presidential elections were noteworthy for both South and North Korea. The results showed that integrative complexity levels declined significantly during the half-year period involving the elections for both South and North Korea. This result was consistent with our expectation in the fourth hypothesis.

While major agreements reached during the previous half-year period had a significant effect on integrative complexity, major attacks by either side did not have any significant effect. Agreements and coordination between South and North Korea had effects of lowering integrative complexity in the following half-year period for both South and North. These negative effects were contrary to our expectation in the latter part of the first

Table 1
Estimates of Time Series Models of Integrative Complexity of South and North Korea

	South Korea		North Korea	
	Estimates	<i>t</i>	Estimates	<i>t</i>
Period of exchange and cooperation (1988–1992) ¹	.86	2.38*	.70	3.96**
Period of tension building (1993–1997) ¹	.24	.91	.14	.96
Major agreements	-1.08	-2.58*	-.66	-3.13**
Major attacks or threats by North Korea	.36	.96	.01	.03
Major attacks or threats by South Korea	.48	1.23	.30	1.32
Integrative complexity level of the other side	-1.06	.96	-.33	-2.39*
South Korean presidential election	-2.04	-2.19*	-1.59	-4.55***
Autocorrelation coefficient ²	-.692	-.825		
R ²		.531		.840

Note: **p* < .05; ***p* < .01; ****p* < .001.

¹Reference period is the first period of South–North Korean talks resumption (1984–1987)

²Rho is autocorrelation coefficient

Table 2

Pearson Correlation Coefficients Between Integrative Complexity and Various Motives, and Descriptive Statistics

	Integrative complexity	Power motive	Affiliation motive	Achievement motive
Power motive	-.36*			
Affiliation motive	.53**	-.36*		
Achievement motive	0.07	-.27	-.19	
Mean	2.92	5.38	6.71	-.57
Standard deviation	.72	4.04	3.86	.75

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

hypothesis. Unlike agreements and coordination, since major tension building incidents differed for South and North Korea, we tested the mutual influence of these incidents on each other's integrative complexity. The result of this test was that the mutual influence of major tension-building incidents were also found to be statistically nonsignificant.

Finally, we examined how the integrative complexity levels of South and North Korea affect each other. The results show that the mutual influences of integrative complexity are negative and significant for both South and North Korea. In other words, integrative complexity of South and North Korea moved in opposite directions. In terms of the magnitude of the effect, the effect of North Korea's integrative complexity on South Korea's integrative complexity was almost three times larger than the effect of South Korea's integrative complexity on North Korea's integrative complexity, a result that supported our fourth hypothesis that changes in integrative complexity levels of South and North Korea should affect each other's complexity level and the size of this mutual influence should be larger for the South.

Table 2 presents Pearson correlation coefficients between the level of integrative complexity and the measures of power, affiliation, and achievement motives. While level of integrative complexity was negatively correlated with the measure of power motive ($r = -.36$, $p < .05$), it was positively correlated with the measure of affiliation motive ($r = .53$, $p < .01$). The correlation between the integrative complexity and achievement motive was positive but statistically nonsignificant. Among various measures of motives, power and affiliation motives were negatively correlated ($r = .36$, $p < .05$). Both power and affiliation motives were negatively correlated with achievement motive, but their correlation coefficients were statistically nonsignificant.

Discussion

The results of the analyses show that the integrative complexity levels of South and North Korea may be predicted by the nature of South–North Korean relationships, major agreements between South and North, the level of integrative complexity of the opposite side, and South Korea's presidential elections. South and

North Korea share the same factors that affect the level of integrative complexity. This suggests that the perceptions and the reactions of the major policy-makers of the two nations toward pertinent issues are closely intertwined and influenced by same factors. Therefore, a conclusion can be drawn that the internal affairs of South Korea immediately affect North Korea, factoring into South–North Korean relations, and that North Korea's crisis is transmitted to South Korea (Yoo, 1996).

South–North Korean Relations and Integrative Complexity

The results from the time series analysis supported our hypothesis that integrative complexity levels would decline during competitive/aggressive periods, and would rise during peaceful/coordinative periods. South and North Korea shared the same pattern, where integrative complexity increased with the transition from the period of talks resumption (1984–1987) to the period of substantive exchange and cooperation (1988–1992), and then decreased with the rise of nuclear weapon issues and the beginning of the tension building period (post-1992). We can explain the effects of the South–North Korean relations on integrative complexity in several ways.

First, the period of 1988–1992, when the integrative complexity level of the key policy-makers rose significantly, was characterised by the most active exchange and atmosphere of reconciliation between the two countries. According to the information processing model, the integrative complexity expressed in South–North Korean correspondence is indicative of how policy-makers actually perceive the relationship between the countries. The shifts in styles of thinking have a very important implication for policy decision-making. The complexity of policy-makers' thinking shapes their assessments of how to deal with interest conflicts between nations (Tetlock, 1985). Policy-makers with high integrative complexity are not only able to perceive and consider the issues of conflict from the other's point of view, but also are likely to seek solutions that are mutually beneficial. Such cognitive styles should be significantly related to South–North Korea relations during such a period.

According to the political impression management interpretation, the integrative complexity of South–North

Korean communications reflects strategic rhetoric designed to manipulate target audiences in desired ways (Tetlock, 1985). Here, the target audience is limited to the key policy makers of the opposite country with access to the correspondence. Hence, integratively complex rhetoric here is a manifestation of a coordinative bargaining strategy, implying that the need of the other side will be taken into account and that a mutually satisfying agreement will be sought.

Second, the assignment of time periods according to the types of North-Korean relations coincides with the introduction of a new president. The period of 1988–1992, when the integrative complexity of the key policy-makers was relatively higher, coincides with the term of President Roh, Tae-woo. President Roh has been considered by South Koreans as being more flexible and less intransigent than both his predecessor, President Chun, and his successor, President Kim (Hahm, 1999). Such a leadership effect may have played a role in increasing the integrative complexity of the major policy-makers. Since the increase in integrative complexity has important implications for international relations as well, the initiation of various northern policies toward the former communist bloc and the atmosphere of international reconciliation and cooperation characterised this period are noteworthy.

Competitive Versus Coordinative Policy Initiatives and Integrative Complexity

That no statistically significant change in the level of integrative complexity was present before or after North Korea threatened or attacked the South is a noteworthy result. One possible interpretation is that the events that we considered as threats or attacks were actually not so serious. In 1968, a group of terrorists from the North attempted to assassinate President Park, Jung-hee at *Chungwadae* (blue house, South Korean presidential building), and in 1974, the First Lady of South Korea was killed in another assassination attempt of the same President. In 1983, a number of high-ranking officials were killed in a bombing by North Korean terrorists, who intended to assassinate President Chun, Doo-whan visiting *Myanmar* at the time. While these critical incidents did heighten the tension between South and North Korea, they all occurred prior to the periods we dealt with. Nonetheless, a North Korean spy bombed a KAL plane at the end of 1987, and the level of integrative complexity showed a definite drop during that period. Another serious threat during the period included in this study was the North's abandoning of the Non-Proliferation Treaty in early 1994. A noticeable drop in South Korea's integrative complexity occurred during this period. However, all other incidents, or events, initiated by North Korea may not have been perceived to be actually threatening to South–North relations, which may account for the nonsignificant results. On the other

hand, there was practically no instance where the South was threatening to North Korea.

Major agreements had an effect of lowering integrative complexity levels in the proceeding half-year periods. Although this was not what we expected, it can be understood. Wallace, Suedfeld and Thachuk (1993) found that the leaders of the Middle East showed low levels of integrative complexity in the diplomatic negotiations during the Gulf War, and argued that such a result may have been caused by the lack of willingness of the negotiating parties to take the peace efforts of the other sides seriously. Wallace et al. (1993) also argued that the leaders of the Middle East countries may have come to the bargaining table with the belief that a mutually satisfying bargaining was impossible to reach in the first place because of the uncooperativeness of the opposite side. Such interpretation could also be applied to our results.

South and North Korea had numerous experiences where talks for peace and reconciliation ended in disappointing failure. Only a little while after the Red Cross Conference of 1972, North Korea began digging secret underground tunnels for the purpose of invading South Korea. This was followed by the attempted assassination of the South Korean president, when the First Lady was killed instead. Also, North Korea often accused South Korea of having hidden intentions under the guise of so-called 'peaceful efforts'. Under such conditions, South and North Korea lacked mutual trust, so that true reconciliation and cooperation were difficult to attain. Hence, even if the talks were actually resumed and minimal cooperative exchange had been initiated, it is quite possible that South and North Korea each focused on taking advantage of such situations, rather than pursuing improvements in relations and peaceful coexistence. Such a focus on self-interests, rather than joint goals, may have had an effect of lowering the level of integrative complexity.

Mutual Influence of Integrative Complexity

Mutual influence between South and North Korea on each other's perspectives or actions was inevitable, as our hypothesis that integrative complexity levels of South and North would affect each other was supported. The hypothesised asymmetry in the magnitudes of cross-effects was empirically supported as well. An unexpected finding was that cross-effects of integrative complexity were both negative. In other words, integrative complexity of South and North Korea move in opposite directions. However, a similar result was obtained by Wallace, Suedfeld and Thachuk (1993). During the Persian Gulf crisis, pro-Iraqi sources increased in integrative complexity when that of anti-Iraqi nations decreased, and vice versa. These results suggest that, in critical conflict situations, there is a dramatic difference in the ways that each side perceives the issues. According to the impression management

interpretation, such differences in perception invariably lead to distinctly dissimilar bargaining strategies used by the opposite sides. Conclusively, improvements in relations between the two countries may be more difficult to achieve when their integrative complexity levels move in opposite directions.

South Korean Presidential Elections and Integrative Complexity

The empirical findings provide evidence for our argument that South Korean presidential elections lower integrative complexity in South Korea. Unlike Tetlock's (1981) analysis of presidential campaign speeches, our study analyzed communications between the major policy-makers of South and North Korea. Hence, drawing a definite conclusion from the result that the integrative complexity decreased during the period of South Korean presidential elections is not feasible. Nonetheless, another study found integrative complexity levels reflected in newspaper commentaries to decrease during the presidential election period in South Korea (Koo & Kim, 1999; Kim, Koo, & Han, 1999). During the campaign period, much of the available information is loaded with criticism and propaganda. Since the election itself is a process of differentiating between the candidates in terms of 'the good and the bad' and approval/disapproval, the election process may have an effect of simplifying the information handling process, not only of the general population, but also of high-ranking government officials.

However, such an explanation fails to account for the decrease in integrative complexity in North Korea during the same period. The effect of presidential elections resulted mainly from the decrease in the level of integrative complexity during the second-half period of 1987, rather than that of 1992. But since the second-half period of 1987 was marked also by the bombing of a KAL plane by North Korea, the decrease in the integrative complexity level during that period may have been a mere artefact, especially for North Korea.

Power, Affiliation, and Achievement Motives and Integrative Complexity

The power and affiliation motives showed a negative relationship. Such a result coincided with that obtained by a US national survey in 1976 (Veroff, 1992). The survey also showed inconsistent results concerning the relationship between achievement and affiliation motives, and the relationship between power and achievement was not significant. Along with the result obtained by the US national survey, our result showed that only the power and achievement motives had a clear relationship, which was negative.

In terms of the relationship between integrative complexity and the motives, integrative complexity was negatively correlated with the power motive and positively correlated with the affiliation motive. Considering the previous studies that showed the

group or the individual with high power motive to be more authoritarian and intransigent, the result that the high power motive tends to be negatively correlated with integrative complexity can be understood easily. In fact, studies on integrative complexity have consistently found an association between a low level of integrative complexity and authoritarian and intransigent tendencies. Also, studies that have demonstrated the affiliation motive to be closely related to cooperative and accommodating behaviour provide an explanation for the positive relationship between the affiliation motive and integrative complexity.

While integrative complexity and various motives have been much studied separately, only a few studies have attempted to link these two dimensions. Tetlock (1985) has, however, emphasised the need for studies on the content analysis of various dimensions in relation to integrative complexity. By examining various dimensions of communications between the nations in conflict situations, we may gain a multi-dimensional understanding or perspective on communicative strategies.

Conclusion

The study of antecedents and consequences of changes in the cognition and perception of foreign policy makers reveals that styles of thinking by the major foreign policy makers of South and North Korea are closely intertwined and influenced by similar factors. We can summarise the major implications of this study as follows.

First, integrative complexity levels declined during a competitive/aggressive period and rose during a peaceful/coordinative period. More specifically, integrative complexity increased with the transition from a period of resumption of talks to a period of substantive exchange and cooperation, decreased afterwards with the rise of nuclear weapon issues and the onset of a tension-building period, and then rose again with the beginning of the 'sunshine policy'. South and North Korean foreign policy makers share the same pattern of changes in the level of integrative complexity. We can interpret the result as showing that integrative complexity reflects the changing nature of the relationship between South and North Korea.

Second, integrative complexity of South and North Korean foreign policy makers interact and show mutual influence. The direction of mutual influence in integrative complexity was negative, indicating that the styles of perception and thinking of the South and North Korean foreign policy makers move in opposite directions. If there were a positive mutual influence between the integrative complexity of South and North Korea, we would see reinforcement of tension and conflict. Rather what we found was an alternation of cooperative and contentious relations between South and North Korea. Therefore, we can say that a levelling mechanism rather

than an amplifying mechanism is at work in the relationship between the cognition and perception of South and North Korean foreign policy makers. Such mechanisms certainly help to keep the interaction between South and North Korea from going out of control, but at the same time it is difficult to sustain and expand the cooperative mood even if it is obtained.

The shifts in styles of perception and thinking have a very profound implication for foreign policy making. The complexity of policy makers' perception and thinking shapes their assessments of how to deal with interest conflicts between nations. Foreign policy makers with high integrative complexity are not only able to perceive and consider the issues of conflict from the other's point of view but also are more likely to seek solutions that are mutually beneficial. Such a cognitive style should significantly enhance a more open and friendly attitude in both interaction and policy making.

Here we have dealt with the integrative complexity of foreign policy makers in the dyadic relationship between South and North Korea. To be more realistic, that setting has to be generalised into multilateral relationships. Ever since the Armistice Agreement between the United Forces, of which the US was a key actor, and North Korea, the US has played a central role in the relationship between South and North Korea. A triad adds much more complexity to dynamics than a dyad. For example, recently Korean foreign policy makers tend to show a more trusting and permissive attitude toward North Korea, while US foreign policy makers adopt a more careful and sceptical approach. When we think about the current arrangement of six-party talks to deal with the North Korean nuclear issue, it poses a new challenge to understanding changing international relations through the psychological dynamics of foreign policy makers. In a multilateral setting, a new dimension of group dynamics is added to the interplay of situation and integrative complexity. By looking at the three-way interaction among group, situation, and integrative complexity, we could better understand and explain the dynamics of north-east Asian international relations.

References

- Atkinson, J.W., & Litwin, G.H. (1960). Achievement motive and test anxiety conceived as motive to approach success and motive to avoid failure. *Journal of Abnormal and Social Psychology, 60*, 52–63.
- Axelrod, R. (1984). *The evolution of cooperation*. New York: Basic Books.
- Azar, E. (1990). *The management of protracted social conflict*. Hampshire: Dartmouth.
- Cha, V. (1997). Korean unification: The zero-sum past and the precarious future. *Asian Perspective, 21*, 63–92.
- Choi, K. (1996). Inter-Korean confidence-building. *Asian Perspective, 20*, 21–43.
- Driver, M.J. (1965). *A structural analysis of aggression, stress, and personality in an Inter-nation simulation* (Institute Paper No. 97). Lafayette, IN: Purdue University, Institute for Research in the Behavioral, Economic, and Management Sciences.
- Feather, N.T. (1961). The relationship of persistence at a task to expectation of success and achievement related motives. *Journal of Abnormal and Social Psychology, 63*, 552–561.
- Hahm, S.D. (1999). *A study of Korean presidents*. Seoul: Nanam Publishing Co. (in Korean)
- Han, S-K. (1994). *South Korea's reunification policy: Content analysis and development policy*. Unpublished master's thesis, Yonsei University, Korea. (in Korean)
- Harvey, O.J., Hunt, D.E., & Schroder, H.M. (1961). *Conceptual systems and personality organization*. New York: Wiley.
- Heynes, R.Q., Veroff, J., & F.W. Atkinson. (1958). A scoring manual for the affiliation motive. In J.W. Atkinson (Ed.), *Motives in fantasy, action and society* (pp. 205–218). Princeton, NJ: Van Nostrand.
- Hunt, S.M. (1972). *A comparison and validation of two thematic apperceptive measures of the need for power*. Unpublished doctoral dissertation, University of Michigan, Ann Arbor.
- Koestner, R., & McClelland, D.C. (1992). The affiliation motive. In C.P. Smith (Ed.), *Motivation and personality: Handbook of thematic content analysis* (pp. 205–223). Cambridge, United Kingdom: Cambridge University Press.
- Kim, J., Koo, J., & Han, J. (1999). Predictors of integrative complexity expressed in North-South newspaper articles. *Communication and Society, 25*, 139–73. (in Korean)
- Koo, J., & Kim, J. (1999). Integrative complexity of daily newspaper periodicals and party newspapers: The effects of economic crisis and political shift on integrative complexity. *Korean Journal of Psychology: Social Psychology and Personality, 13*, 35–52. (in Korean)
- Koo, J., Han, J., & Kim, J. (2003). Integrative complexity of North-South Korean correspondences: A time series analysis, 1984–1994. *Journal of Conflict Resolution, 46*, 286–304.
- Levy, A., & Tetlock, P. E. (1980). A cognitive analysis of Japan's 1941 decision for war. *Journal of Conflict Resolution, 24*, 195–211.
- McClelland, D.C. (1961). *The achieving society*. Princeton, NJ: Van Nostrand.
- McClelland, D.C. (1971). *Motivational trends in society*. Morristown, NJ: General Learning Press.
- McClelland, D.C. (1985). *Human motivation*. Glenview, IL: Scott, Foresman
- Raphael, T. (1982). Integrative complexity theory and forecasting international crises, 1946–1962. *Journal of Conflict Resolution, 26*, 436–50.
- Schroder, H.M., Driver, M.J., & Streufert, S. (1967). *Human information processing*. New York: Holt, Rinehart & Winston.
- Streufert, S., & Streufert, S. (1978). *Behavior in the complete environment*. Washington, DC: Winston.
- Suedfeld, P., & Rank, A.D. (1976). Revolutionary leaders: Long-term success as a function of changes in conceptual

- complexity. *Journal of Applied Social Psychology*, 34, 169–178.
- Suedfeld, P., & Tetlock, P.E. (1977). Integrative complexity of communication in international crises. *Journal of Conflict Resolution*, 21, 169–184.
- Suedfeld, P., Tetlock, P.E., & Ramirez, C. (1977). War, peace and integrative complexity. *Journal of Conflict Resolution*, 21, 427–442.
- Terhune, K.W. (1968). Motives, situation and interpersonal conflict within prisoners' dilemma. *Journal of Personality and Social Psychology*, 8, 22–24.
- Tetlock, P.E. (1981). Pre- to post-election shifts in presidential rhetoric: Impression management or cognitive adjustment? *Journal of Personality and Social Psychology*, 41, 207–212.
- Tetlock, P.E. (1985). Integrative complexity of American and Soviet foreign policy rhetoric: A time-series analysis. *Journal of Personality and Social Psychology*, 49, 1565–1585.
- Veroff, F. 1992. Power motivation. In C. P. Smith (Ed.), *Motivation and personality: Handbook of thematic content analysis* (pp. 278–300). Cambridge: Cambridge University Press.
- Walker, S.G., & Watson, G.L. (1994). Integrative complexity and British decisions during the Munich and Polish crises. *Journal of Conflict Resolution*, 38, 3–23.
- Wallace, M., Suedfeld, P., & Thachuk, K.A. (1993). Political rhetoric of leaders under stress in the Gulf crisis. *Journal of Conflict Resolution*, 37, 94–107.
- Wallace, M., Suedfeld, P., & Thachuk, K.A. (1996). Failed leader or successful peacemaker? Crisis, behavior and cognitive processes of Mikhail Sergeyevitch Gorbachev. *Political Psychology*, 17, 453–471.
- Yoo, S. (1996). North Korea in 1996. *Monthly reunified economy*, 13, 2–3. (in Korean).