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Jenn-hwan Wang

National Chengchi University

Acting Editor-in-Chief

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National Chengchi University



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NATIONAL CHENGCHI UNIVERSITY, TAIPEI, TAIWAN (ROC)

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China's Assertive Relational Strategies: Engagement, Boycotting, Reciprocation, and Pressing

HUNG-JEN WANG

In the past decade, observers in Western countries have been increasingly challenged to describe China's rising power in one of two ways: as contributing to established world systems, or as a growing threat fulfilling certain predictions made at the end of the Cold War. For some, perceptions of increasingly assertive regional behaviors confirm that China's self-proclaimed policy of pacifism is being used to cloak selfish national interest and power goals. The current international relations (IR) literature tends to treat China's assertiveness as evidence that it is indeed a threat, with few attempts to conceptualize assertiveness as a relational strategy. In this paper, the author uses eight current and historical cases involving four relational strategies — engagement, boycotting, reciprocation, and pressing — to examine conventional assessments of assertiveness that focus solely on perceptions of and responses to threatening statements and behaviors made in defense of Chinese national interests. In the end, this paper tries to contribute to the general IR literature that has tended to misinterpret China's assertiveness, which is actually an identity issue regarding bilateral relationality instead of power or interest calculations.

KEYWORDS: Chinese foreign policy; assertiveness; unilateral; relational; rising power.

* * *



Assertiveness is a complex idea involving multiple assessments, indicators, and perceptual dimensions, as well as actions variously described as negative, positive, confrontational, productive, destabilizing or creative, among other descriptors. However, the concept of Chinese assertiveness has been closely

HUNG-JEN WANG (王宏仁) is an Associate Professor at the Department of Political Science at National Cheng Kung University, Taiwan. His research interests are international relations security, Chinese foreign policy, and China's role in global governance. He can be reached at <hjiang@mail.ncku.edu.tw>.

linked to that country's expansion of power or to interests pursued at the expense of other parties, and has therefore been perceived as threatening. The current IR literature contains discussions of assertiveness that some consider unfairly unidimensional — that is, they present a limited and solely negative view of assertiveness, thereby encouraging false reactions and misguided policy decisions in response to Chinese attempts to use a broad range of tools in the management of its international affairs.

There are many examples of researchers following this interpretation of China's growing assertiveness on the international stage, including Chang Liao (2016), D. Chen, Pu, and Johnston (2014), Johnston (2013), Swaine (2010), and J. Zhang (2014). Swaine's (2010) analysis of the extent to which the U.S. government is assessing Chinese assertiveness is a good example of how the concept means different things to different people. While there is no clear consensus on a formal international relations (IR) definition of assertiveness, during the past decade, the American news media and academics have generally emphasized its negative aspects when discussing Beijing's actions in the Asia-Pacific region or its performance on the international stage. Fewer attempts at making objective assessments of China's rising power have been made in comparison to subjective assessments of whether China should be considered revisionist (i.e., whether it purposefully intends to change the status quo) and its interest (or lack thereof) in enacting significant domestic reforms — that is, becoming more democratic and less authoritarian (Johnston, 2013). These topical emphases can be traced to the period immediately following the end of the Cold War, which was dominated by a neo-realist power structure perspective (Friedberg, 1993–1994) and concerns over the reemergence of anti-liberal forces (Deudney & Ikenberry, 2009). However, as part of Deng Xiaoping's reforms, there was a post-Cold War effort aimed at integrating China into established international structures, mostly economic. For a short period, the Western world expressed confidence that China's rising power could be accommodated by and make beneficial contributions to the existing liberalist system (Ikenberry, 2008).

There are many reasons why this confidence no longer exists, with two being particularly salient. The first is the 2008 U.S. subprime mortgage crisis, during which China not only showed its ability to survive, but also to help other Asian countries' weather in the case of emergency. As the crisis subsided, there was considerable international debate regarding the extent of America's decline in power (Nye, 2010). China surpassed Japan as the world's second-largest economy in 2010 and went on to launch the bold Belt and Road Initiative in 2014. Thus, in some circles, the debate has shifted to considering *when* China must be acknowledged as sharing global leadership with the U.S., as well as its potential to become the world's second or even sole superpower (Fish, 2017; *Is China Challenging*, 2017).

Another important factor is the changing of opinions in both countries. In the U.S., there is increasing pessimism at many levels of government and in mainstream society about Sino–U.S. relations. Thus, we hear doubt expressed by researchers such as Harding (2015), who offers a comprehensive analysis of American disappointment with China and a range of proposals for revising U.S. policy. Shambaugh (2016) has written about the atmosphere of pessimism toward and disillusion with China among Washington-based think tanks, and some observers see Chinese President Xi Jinping's consolidation of power during the 19th Party Congress as an indication of both authoritative developments in Beijing and a foreboding of increasingly assertive international behaviors (The Resistible Rise, 2017).

Against this backdrop, this paper will address China's current and past assertiveness practices, demonstrating that attempts to link China's rising power and its status as a non-democratic regime with a solely negative interpretation of assertiveness in analyses of Chinese foreign policy are neither theoretically nor historically useful, and that some of China's individual actions are better understood according to a broader definition of assertiveness.¹ In other words, it is better to separate China's outward appearance of aggressive self-assurance from interpretations involving relative power changes or the loss of national interests, and to treat them instead as a diplomatic habit of expressing clear positions on disputed issues within the context of bilateral relations. In this way, Chinese foreign policy assertiveness is better viewed as a relationship management tool with at least four forms (engagement, boycotting, reciprocation, and pressing²) that China can use based on its assessments of the degree to which other parties are willing to enter favorable bilateral relationships — that is, to act as partners in support of a Chinese *greater self* based on bilateral relationality.³

¹This definition should not be viewed as an argument that the idea of assertiveness should refer to all negative, positive, or creative situations without a focus. However, when studying Chinese foreign policy behaviors, assertiveness clearly involves more than relative power or interest calculations. Epistemology also matters: conventional Western descriptions of China's rising status that are limited to power or national interest considerations (including an emphasis on regime type) dictate that Chinese foreign behaviors should be analyzed in terms of both assertiveness and perceived threats.

²The “four types of policy” terminology is borrowed from an earlier paper that presents a similar view, plus a discussion of China's intentions to maintain self-imposed bilateral relationships or “greater self” frameworks on its negotiating partners by employing the four types. See Shih and Wang (2017).

³One reviewer expressed concern about a definition for the “greater self,” and asked whether Japan's “Great East Asia Co-Prosperty Community” could serve as an example. My response is that, when applied to Chinese foreign policy behaviors, the greater self-concept has strong cultural roots reflecting a Chinese way of viewing the world and guidelines for appropriate interactions between China and specific others. This is not to say that the idea is limited to China — other collectivist societies are likely to express similar types of relationality that deemphasize individual interests. However, Japan's pre-World War II Co-Prosperty Community is not considered an example of the greater self because it lacked the centrally important idea and/or spirit of self-restraint, emphasizing materialism and self-centeredness, both of which diverge significantly from the bilateral Chinese practice of the greater self as discussed in the eight cases in this paper.

In this paper, the “greater self” is defined as a type of Chinese diplomatic logic in which two parties are expected to submit to a shared bilateral relationality in which each actor accepts a “lesser self” role and responsibility for reproducing previously established relationships and networks. The concept stems from a Chinese ontology about the nature of the world (see also F. L. K. Hsu (1985)). According to Qin (2016), one Chinese assumption about the world is that “actors are and can only be ‘actors-in-relations.’ It means that identities and roles of social actors are shaped by their social relations. No absolute, independent identity of the self exists: it is constructed and reconstructed in relations with others and with the relational totality as a whole” (p. 36). This paper treats the greater self as an imagined universe of interrelatedness in bilateral contexts. This universe represents a Chinese social world with roles imposed on others, roles that have potential for balance and equality (e.g., friendships), but with the terms of relationality negotiated on a case-by-case basis. In other words, the greater self is a Chinese diplomatic idea to be realized through interactions with specific others. China’s expectation is that specific others will consider greater self-interests as being more important than self-interests, and act accordingly.

As the eight cases discussed in this paper will illustrate, China has consistently shown a willingness to trade its power or self-interest in exchange for maintaining bilateral relationality in support of long-term goals such as survival in the anarchical world and the avoidance of overt confrontations. This approach can be analyzed as a means for China to survive within the specific contexts of all-under-heaven (*tianxia*), Mao Zedong’s Third World leadership, or Westphalian anarchy. This paper will use eight historical and current cases involving the four relational strategies listed earlier to reexamine conventional assessments of assertiveness that focus solely on perceptions of and responses to perceived threatening statements or behaviors made in defense of national interests. I will discuss two cases for each policy tool, with one each for symmetrical and asymmetrical power scenarios. The standards used to differentiate China’s four relational strategies — engagement, boycotting, reciprocation, and pressing — are based on the following rules: (1) engagement: when the Chinese side acts not to force a win/loss result in the bilateral/presumed greater self-context; (2) boycotting: when the Chinese side allows room for restoring a breaking bilateral relationship; (3) reciprocation: when the Chinese side leads to unilateral gift-giving/concession behavior; (4) pressing: when the Chinese side tries to gain a better position in the presumed bilateral context. The eight cases illustrate how China uses unilateral strategies — all of which can be interpreted as examples of assertiveness — in exchange for long-term stability in bilateral relations, and explain why Chinese foreign policy decisions should not be analyzed as being solely dependent on supposed power disparities.

Engagement

With the Soviet Union

Mao Zedong announced China's lean toward the Soviet Union immediately following the establishment of the People's Republic of China (P.R.C.) in 1949. From a realist power perspective, China had no other option than to rely on a "socialist big brother" because of its weak military power status following an international war with Japan and civil war between Communist and Nationalist forces. The power asymmetry between the P.R.C. and U.S.S.R. in 1949 contributed to their short honeymoon, since China wanted to establish its self-reliance and independence as quickly as possible (J. Y. Hsu & Soong, 2014). The relationship crumbled when Nikita Khrushchev denounced Joseph Stalin and when Leonid Brezhnev promoted his doctrine of proletarian internationalism. Until 1982, when Brezhnev called for the end of hostilities between the two countries, there was very little trust between them.

A sense of trust and relationality increased following the end of the Cold War, as China caught up with and surpassed its former big brother as an economic power. Currently, the much smaller power gap between the two countries is evidenced by a world in which Russia and China occupy key positions along with Europe, the U.S., and perhaps Japan (J. Y. Hsu & Soong, 2014). During this power transition period, regional tensions in the form of border disputes have not increased, as (neo)realists might have predicted (Ross, 1999). From the Chinese perspective, the current peace emerged from various bilateral efforts such as the 1992 joint statement describing the two countries as "friendly" and willing to respect differences in social systems and ideologies (Ying, 2016). They formed a strategic partnership in the mid 1990s that both sides have contributed to in terms of bilateral trade and other economic activity. Moscow and Beijing have strengthened their security ties through nuclear power deals and joint counterterrorism agreements within the framework of the Shanghai Cooperation Organization. They also schedule regular annual meetings between heads of state, prime ministers, or foreign ministers.

All of these actions and agreements have contributed to a long-term engagement process and the establishment of a framework for resolving border disputes and other conflicts. Thus, the government-controlled Xinhua news agency reported in June 2005 that "China and Russia reached a final agreement on Thursday [June 2] about their eastern border, putting an end to 40 years of negotiations ... [Chinese and Russian Foreign Ministers] exchanged ratification documents by their parliaments agreeing to share around fifty-fifty of the last disputed land, a group of islands totaling 375 square kilometers" (China, Russia Solve, 2005). This agreement was viewed as significantly

reducing the potential for the armed border clashes that began in the 1960s, especially over border demarcations along the Amur and Ussuri rivers. From the Chinese perspective, although they consider these border issues important, the areas in question do not contain natural or strategic resources of high interest. However, these disputes are of interest to IR scholars because solutions to territorial border disagreements are often contingent upon progress in bilateral relations, which frequently involve promises to abide by certain principles. Hints of flexibility can be found in Chinese assertiveness over territorial issues. For example, during May 1969 negotiations following a border clash that had occurred two months earlier, China demanded that the Soviet Union acknowledge that 19th-century border agreements were “unequal treaties” (Burr, 2001). The Soviets refused. Three months later, during a meeting between Chinese Premier Zhou Enlai and the Prime Minister of Pakistan Yahya Khan on other regional issues, Zhou indicated a willingness to make border claim concessions to Moscow (Burr, 2001, Document 8). Later that year, Zhou held a surprise meeting with Soviet Prime Minister Alexei Kosygin at the Beijing airport, and according to a report prepared by the U.S. Central Intelligence Agency, “Beijing backed away from its demand that Moscow recognize the old border agreements as ‘unequal treaties’” (Burr, 2001, Document 26). Some analysts have speculated that the Chinese wanted to head off a serious crisis (Burr, 2001, Document 26), while others viewed the change in attitude as proof that Beijing still recognized a special relationship between two socialist countries, and was therefore reluctant to force an immediate win–loss outcome. One result of not pursuing an immediate solution to the disputed territory was that almost 40 years of political engagement were required to sustain the bilateral relationship between China and Russia.

With North Korea

From a standard perspective of power politics, Sino–North Korean relations are those of a great and small power, with an expectation that China can and is willing to wield influence over its neighbor. According to certain objective measures, North Korea has always been inferior to China, shown deference to it, and has been dependent on Chinese trade. The hierarchical order between the two countries can be traced back to at least the 14th century, when Korea entered a tributary relationship with the Ming court, which Korea considered “a reliable protector and crucial source of high culture” (Chung & Choi, 2013, p. 245) — a relationship that could be viewed as an example of soft power. This relationship no longer exists, and analysts must address the two countries as more symmetrical powers now that North Korea has developed nuclear weapons and is

testing long-range delivery systems. This allows for an unusual and unpredictable alliance in which Pyongyang can follow a “hedging strategy” (Chung & Choi, 2013), despite its reliance on China as its largest trading partner and its negligible influence in the Chinese economy (Nanto & Manyin, 2010).

While this asymmetrical power association is marked by North Korean dependence on and concern with Chinese power, “Beijing continues to express a desire to maintain a close relationship with Pyongyang in terms of trade, investment, and other economic concerns” (Chu, 2015, p. 273). When discussing his country’s position regarding internationally imposed economic sanctions on North Korea before 2015, Chinese scholar Shulong Chu observes that “economic interests are not the major concern of the Chinese government; the major concern is the overall relationship with North Korea. A comprehensive sanction against North Korea is likely to be the end of diplomatic relations with the North, at which time North Korea may break its relations with China, and thus become a hostile neighbor of China” (p. 275). The perceived need to maintain the existing overall relationship with North Korea should not be treated as a simple consequence of strategic or geopolitical concerns. From Beijing’s perspective,⁴ China acknowledges a connection with Korea that dates back at least 1,600 years, and intends to maintain that relationship for a thousand more. This long-term expectation can also be applied to South Korea, with China repeatedly stating its intention to maintain balanced bilateral relationships with both Pyongyang and Seoul. The disputed issue here is China’s position on the future political arrangement of the Korean Peninsula.

According to Kahrs (2004), when China gave official recognition to South Korea in 1992, that decision was accompanied by increased military cooperation and economic aid to North Korea. Then, during the 2010–2011 Six-Party Talks, when Chinese representatives held meetings with their North Korean counterparts, a large majority of discussions were followed by meetings with South Korean representatives (Shao, 2012). These and other efforts to satisfy the needs of both North and South Korea (or South Korea plus the U.S.) have fed the uncertainty of Western China watchers regarding China’s true intentions in its relations with North Korea. Some argue that China and North Korea have never been trusting allies (Chung & Choi, 2013), others

⁴Due to space limitations and this paper’s focus on understanding China’s unilateral actions for the pursuit of a self-imagined or self-expected bilateral relationality, the cases described in this text reflect China’s perspectives, with few efforts to address those of other actors. For example, as pointed out by an anonymous reviewer, Pyongyang is thought to view China as betraying North Korea because of its lack of help in signing peace accords with the U.S. and Japan prior to establishing diplomatic relations with Seoul. I agree with this observation, but detailed descriptions of how different parties respond to China’s unilateral actions within existing bilateral relationships are outside the scope of this paper.

view China as an intermediary (DeTrani, 2005), and still others believe that while China often expresses flexibility and patience with its socialist neighbor, it is also increasingly willing to criticize Pyongyang for actions that it deems unacceptable (Nanto & Manyin, 2010). However, it still appears that the top priority for China is maintaining good relations with the North without sacrificing too much in its connection to South Korea. Expressed in terms of balance of relationship (BoR) theory, China's goals are to promote engagement with North Korea via dialogue and "reconciliatory diplomacy."⁵ It is not in China's interest to lobby Kim Jong-un for significant change in response to American requests for help in shutting down North Korea's nuclear weapons program.

Kahrs (2004) is one of the several observers noting that "it would be impossible for China to remain neutral in a conflict between the DPRK [North Korea] and the U.S. — a diplomatic and strategic decision that the Chinese want to avoid. Although a nuclear-armed DPRK is against Chinese interests, China would be extremely reluctant to support an American attack on the DPRK to rid it of weapons of mass destruction" (p. 78). Thus, Kahrs describes China's preferred North Korean policy as "gradual reform; not so major as to destabilize the ruling regime, but enough to improve the DPRK economy and bring the country in line with international norms" (p. 68). This approach contrasts sharply with American hopes for assistance from China in enacting a North Korean regime change or some other short-term problem-solving strategy for dealing with Pyongyang.⁶ As Chu (2015) notes, "Most Chinese do not share the feeling and perception with South Koreans, Japanese, and Americans that the increasing nuclear and missile weapons of North Korea cause an immediate and serious threat to the national and regional security of China, because they understand that North Korean weapons are targeted at the South and the U.S., not at China" (p. 274). In other words, China is considering the situation in terms of Sino-North Korean bilateral relationality rather than the separate interests of two individual actors.

Boycotting

Japan

China perceives itself and Japan as parties in a 2,000-year-old relationship. At its beginning, the power distribution was between a strong China and a weak Japan, but

⁵According to Chih-Yu Shih, who conceived "BoR" (balance of relationship) theory, "Nations balance the loss of a relationship either by investing more in [an] amendable relationship or by removing the eclipsed one that has been judged to be beyond mending" (Shih, 2016, p. 7).

⁶Henry Kissinger (2011) has also written on different ways of approaching North Korean relations with China and the U.S.

Chinese intellectuals prefer to paint a picture of the two entities peacefully coexisting and exhibiting respect for each other's sovereignty through cultural and other non-official exchanges. This power relationship flipped following China's defeat in the Sino-Japanese War (1894–1895) and deteriorated further when Japan invaded China. The 1937 Nanjing Massacre is deeply entrenched in the minds of Chinese, and enmity toward Japan continues to play a significant role in Chinese perceptions, despite the reestablishment of official diplomatic ties in 1972. Data from public surveys conducted in 1989–2001 indicate that between one third and one half of all respondents in the two countries feel little or no trust in the other side (Qiu, 2006; Rozman, 2002).

Despite the existing public hostility, both Beijing and Tokyo clearly wish to see improvement in their official relations. Japan played an important supporting role in China's modernization program starting in the early 1980s, and naturally expects to receive some benefits in return for providing aid. However, China often argues that it deserves special treatment from Japan due to a "debt of history" (Ong, 1997, p. 55). Both governments have gone to great lengths to maintain an amicable relationship (Qiu, 2006). The two countries celebrated the 30th anniversary of normalized relations in September 2002, and in August 2003 marked the 25th anniversary of their Treaty of Peace and Friendship. However, actions taken by Japanese political figures to preserve a positive wartime image for their country and its soldiers are perceived by Beijing as a lack of willingness to do what is necessary to maintain positive relations. Further, China describes its claim to ownership of the Diaoyu (Senkaku) Islands at the southern tip of Japan as an "unchangeable fact" (*Diaoyu Dao Shi Zhongguo*, 2012) that was mistakenly altered when the U.S. transferred them to Japan as part of the 1971 Okinawa Treaty. China bases its ownership claims on language in the 1943 Cairo Declaration and 1945 Potsdam Proclamation (Z. Yan, 1996).

Its strong position regarding the Diaoyu Islands notwithstanding, the Chinese government has made room for restoring a bilateral greater self-relationship by carefully dealing with Japan on a subtle boycott basis. For example, before 2010, the Chinese government indicated a willingness to set aside the question of Japan's imperial legacy (i.e., the Second World War invasion of China) and current territorial disputes as long as Japan acknowledged "the facts of" those issues, even though in practical terms, Japan has occupied the islands for many decades.⁷ Even at the beginning of a perceived collapse of cooperation over the Diaoyu Islands, quiet efforts to manage the dispute were prioritized prior to Beijing's 2012 decision to start

⁷According to Manicom (2014), each time a crisis involving China and Japan has occurred, the two countries have been able to limit the political fallout due to a tacit agreement to not allow domestic nationalist actors to block bilateral relations.

monitoring Japanese naval activity in the area (M. S. Zhang, 2015). The Chinese government's intentions are now viewed as less of a bilateral confrontation than as a window of opportunity to begin a long-term process of retaking and occupying the disputed islands, with the initial step being to stop what it perceives as further violations of Chinese territorial claims.

Vietnam

Regarding territorial disputes between China and Vietnam, China has been more successful with the Gulf of Tonkin issue than with the Paracel or Spratly archipelagos. In 2000, China solved its disputes with Vietnam over Tonkin Gulf fishing issues and maritime boundaries (*ZhongYue Beibuwan Huajie*, 2004), but the two sides have yet to resolve their South China Sea differences, despite several agreements and many official meetings triggered by specific incidents and conflicts. China currently has de facto control over the Paracel archipelago, while Vietnam has a greater advantage in the Spratlys, where it controls over 29 islands/reefs compared to seven for China.

According to a statement issued by the Chinese Ministry of Foreign Affairs in 2004 (*ZhongYue Beibuwan Huajie*, 2004), the main motivation for considering limitations for Gulf of Tonkin maritime zones is not sovereignty, but rather how to maintain stability in the relationship between the two countries, one that has long historical roots. While the statement makes no mention of North Vietnam and Ho Chi Minh, it does address the period preceding the reunification of North and South Vietnam and the resumption of diplomatic relations between China and the reunified country. According to the 2004 document, China and Vietnam acknowledged a need to deal with Tonkin Gulf issues immediately following the full normalization of diplomatic relations in 1991. According to the Chinese Foreign Affairs Ministry, between 1992 and 2000, the two countries increased the number of government and expert-level talks in order to reach a mutually acceptable delimitation agreement. Whenever Vietnam is a focus of Chinese diplomatic considerations, China repeatedly emphasizes their "historical relationship" in terms of Ho Chi Minh's personal connections with Mao Zedong and Zhou Enlai in addition to long-term links between the two countries' communist parties (R. B. Zhang, 2016). According to the Chinese version of this history, Mao decided to give up control of Bach Long Vi Island in 1957 and give it as a "gift" to Ho in celebration of the revolutionary friendship between the two countries and their common goal of fighting western imperialism (Truth in History, 2016).

Regarding disagreements in the South China Sea, China has emphasized its expectations for Vietnam to act in an assigned role of close partner and friend based on their shared historical experiences, but is taking a different approach for the Gulf of Tonkin issue — that is, in the South China Sea, Beijing describes Vietnam as “disput [ing] an undisputed area” (Amer, 2014). According to a May 12, 1988 memorandum on the Xisha (Paracel) and Nansha (Spratly) Islands issued by the PRC Ministry of Foreign Affairs (1988), all official documents and diplomatic notes issued by Vietnam prior to 1974 acknowledge Chinese sovereignty over those and other islands in the South China Sea. From the Chinese perspective, a more important error on Vietnam’s part is its perception of Deng Xiaoping’s proposal to “shelve disputes” as a sign of weakness in China’s claims to indisputable sovereignty in the area.

Tensions increased between the two countries over the Paracels and Spratlys between 2009 and 2011 (Amer, 2014). China unilaterally announced a fishing ban in the Paracels, set up an administrative center, seized Vietnamese fishing boats and fishermen (eventually releasing them), and organized visits for Chinese tourists. Vietnam reacted negatively, but was limited to protesting and claiming its own sovereignty over the Paracels via diplomatic channels, which China ignored. The heightened tensions drove the two countries to the negotiating table in Hanoi on October 28, 2010. According to Amer (2014), Vietnam claimed that the two countries “reached [a] consensus on speeding up negotiations on basic principles to settle sea issues, and satisfactorily settled fishermen and fishing boat issues” (p. 21), while the Chinese side made no mention of fishermen and fishing boats. Meetings between China and Vietnam over the Paracel Islands have been infrequent since 2010, and China has continued to take actions that Vietnam perceives as violations of its sovereignty. Essentially, Beijing simply refuses to talk with Hanoi about the Paracels.

In contrast, there have been intensive official talks between the two countries regarding the Spratly Islands and reefs, where China has less de facto control. Two incidents occurred in 2011, with one each in May and June. First, Chinese maritime surveillance vessels cut exploration cables that had been set by Vietnam’s Oil and Gas Group, and a Chinese fishing boat cut off another vessel operated by the same Oil and Gas Group. China’s apparent motivations were to reclaim sovereignty over the Spratly area and force Vietnam to accept the idea of other sovereignty disputes in the area that required negotiation. In official talks following the two incidents, China repeatedly used the terms “disputes” and “sovereign disputes,” while Vietnam rejected such terminology.

In summary, China's tactic of "disputing an undisputed area" is essentially a boycott strategy that blocks Vietnam's efforts to describe the Spratlys as not being under dispute. Apparently, the Chinese government is creating a consensus precondition as a means of weakening Vietnam's sovereignty claims, to be followed by less antagonistic consultations, negotiations, and exchanges.

Reciprocity

India

Variouly referred to as an emerging great power, Third World leader, and BRIC member country (Brazil, Russia, India, and China), India enjoys many of the same benefits of economic power and status as China (Mukherjee, 2015). Historically, the Chinese have always viewed India as a distant region and civilization with far-reaching influence. For the most part, interactions between Chinese and Indian civilizations have been more about cultural and religious contacts or the ancient Silk Road than political or diplomatic engagement (Zhao, 2012). Perhaps the most well-known classic Chinese novel, *Journey to the West (Xiyouji)* is the story of a Buddhist monk's pilgrimage to India during the Tang dynasty — an example of the remoteness of India from the perspective of the Middle Kingdom. China's current relations with India reflect a consensus that the two countries should try to build and fortify a special relationship because neither side poses a threat to the other.⁸ However, bilateral relations based on such a premise can easily be disrupted by minor confrontations or stalemates due to different interpretations of territorial disputes or, in the case of India, different positions regarding an issue such as Kashmir (Yuan, 2011).

⁸"Consensus" and "special relationship" require explanation. Consensus refers to the idea of "unilateral consensus" as described by Chinese scholar Jiwu Yin. According to J. W. Yin (2014), China tends to assume that both parties in a dispute must have a tacit mutual understanding of a targeted consensus (e.g., a resolution of Sino-Indian border issues) that can produce, at a minimum, cosmetic agreements or statements that neither side believes. According to this definition, China regularly promotes unilateral consensus views that both sides can use to treat each other as mutually beneficial partners rather than competitive parties or confrontational enemies. There are many examples, including the Joint Statement between the People's Republic of China and the Republic of India issued on May 20, 2013. Regarding "special relationships," it could be argued that from a Chinese perspective, all relations with other states are individually and bilaterally "special," since each one involves different player roles, conditions and contexts. Thus, China's relationship with India is "special" because India was the first non-socialist country to establish substantial official diplomatic relations with China, and both countries share similar scars from histories of colonialism and imperialism. Add to these factors a 2,000-year-old relationship, and the strong personal connection established by Jawaharlal Nehru and Zhou Enlai in the 1960s (Jain, 2004).

Hostilities between China and India peaked during the Sino–Indian War in 1962. Since then, hostile policies regarding territorial disputes have moved toward mutual dialogue, reciprocity, and step-by-step interactions. For an extended period after the war, bilateral relations were marked by chaotic uncertainty. During a period in which Indian Prime Minister Indira Gandhi (1966–1977) was regarded by some as a “hard realist” and others as a “cold-blooded practitioner of power politics” (Jain, 2004, p. 255), Prime Minister Gandhi and External Affairs Minister Y. B. Chavan proclaimed on several occasions that India was striving to normalize relations with China (A Serious Move, 1978). According to the *China Report*, China responded negatively to these claims (A Serious Move, 1978). However, Tiwari (1976) suggests that China did take steps toward restoring good relations with India, but held back in the interest of “appropriate timing”:

While Mr. Chou En-lai opened his country's doors to the United States and Japan and also to other Asian countries, it was reported here [London] among diplomatic quarters, that he was equally keen to normalize relations with China's big neighbours, Russia and India. Even during his illness and in his hospital he often talked about India and his friendship with Jawaharal Nehru. He was quoted as saying: “The problem is that we orientals are too proud. Somebody will have to break the ice some time. We have to live in peace sooner or later.”

Following a 14-year gap in official Sino–Indian relations, both sides expressed a willingness to discuss the sensitive border issue in 1976, and in 1979, Indian Foreign Minister A. B. Vajpayee visited China to explore the potential for rapprochement. According to B. M. Jain, when Vajpayee broached the issue with Deng Xiaoping, Deng replied, “We should have common ground while resolving differences. As for the boundary question between our two countries, we can solve it through peaceful consultation. This question should not prevent us from improving our relations in other fields” (Jain, 2004, p. 256). While the sensitive border issue was essentially shelved during this meeting, Deng's comment was important in that it pushed the two countries toward bilateral relations in other spheres. In the years that followed, the two sides made a sufficient number of concessions so that a trade agreement could be signed in 1984, even though border talks remained stalled. While this scenario can be interpreted as satisfying Deng's 1979 comment, from a Chinese perspective it fell short of the precondition that both sides recognize the situation as a dispute, without which the possibility remained for Chinese to move into the disputed land. Conflicts have arisen several times: in 1986, Chinese troops made incursions into the Indian state of Arunachal Pradesh, allegedly as an angry response to India's claim that the area “formed an integral part of its [India's] territory” (Jain, 2004, p. 257). The incident was followed by an invitation extended to Indian Prime Minister Rajiv Gandhi for the first official visit of an Indian head of state to China since 1954.

Another example is the so-called “tent confrontation” of 2013, when approximately 50 Chinese military personnel crossed the Line of Actual Control (LAC), ostensibly in response to aggressive Indian army patrols in an area under dispute (Jayasekera, 2013). Tensions decreased following a visit to India by Li Keqiang, his first official foreign visit as Chinese Premier. The most recent incident, known as the “Doklam standoff,” occurred in the summer of 2017 and ended with China offering a USD 200-billion loan to India — an offer officially denied by both governments. All of these conflicts can be viewed as examples of the Chinese tendency to follow a unilateral gift-giving policy in pursuit of a suitable bilateral relationship, even though such unilateral actions of goodwill are occasionally overshadowed by intense border confrontations.

South Korea

The widening post-Cold War power disparity between China and South Korea has many IR scholars examining the latter’s ability to balance its relationship with the U.S. with the emergence of a major world power in its neighborhood (Kang, 2009). However, surprisingly few have discussed how China is responding to its asymmetrical power relationship with South Korea. Historically, China had been both a protector and invader of the Korean Peninsula. Kang notes that as a protector, China has long viewed Korea as part of its tributary system: when China was strong, it had a stabilizing effect on the region, but when China was weak, other powers were tempted to try and bring Korea into their spheres of influence. At least one Korean IR scholar has described North and South Korea as sharing “a deep sense of apprehension and fear of a strong China” (H. Kim, 2012, p. 49). Knowing the complex and sometimes ambivalent emotions marking Chinese–Korean relations in the past, China has gone out of its way to reassure South Korea (as well as other non-Communist Asian neighbors) about its good intentions and desire to cooperate with them. From a power politics perspective, these stated intentions and related behaviors should be interpreted as setting the stage for territorial influence or expansion. Chinese President Jiang Zemin stated at the Fourth Plenary Session of the 14th Chinese Communist Party (CCP) Central Committee meeting in September 1994, “Although the ROK [South Korea] and DPRK [North Korea] confront each other, they both are our friends, and we should have friendship and cooperation with both of them” (Yi, 2002, p. 319). Unlike other major powers, China has expressed a Korean BoR policy. Prior to the normalization of relations between the two countries in 1992, South Korea clearly regarded Communist China as a potentially hostile enemy — at the time, South Korea

still officially recognized the Nationalist Chinese government in Taiwan as the sole legitimate government of the entire China. Some have described the 1990s as a period in which China and South Korea “were rushing to restore their 5,000-year-old ties after half a century of interruption caused by an ideological schism” (Yi, 2002, p. 316), but in hindsight, it is clear that the pre-normalization period consisted of a process of reciprocation involving top-ranked leaders in the two countries. In 1987, conservative South Korean president Roh Tae-woo started to back away from the long-standing policy of isolating North Korea and move toward normalizing relations with the communist governments in Beijing, Moscow, and Pyongyang — efforts collectively known as his “Northern Policy” (Wood, 1993). China made no immediate response to this policy (Qian, 2005), supposedly due to concerns about North Korea’s feelings, possible repercussions to official Sino–South Korean diplomatic relations, and the timing.⁹

China first considered the possibility of bilateral interaction with South Korea within the contexts of multilateral organizations and events such as the 1990 Asian Games. Such interactions were based on the principle of reciprocity — according to former Chinese Foreign Minister Qian Qichen, the transition was based on China’s unilateral decision to change the rules of its interaction with South Korea. As long as international organizations authorized South Korea to hold international events, and as long as China held membership in such organizations, Beijing was willing to send participants to South Korea and to accept South Koreans at events held in China. One interesting aspect of this formula was the perceived need on the part of Deng Xiaoping and other members of the Chinese leadership to offset the negative effects of the 1989 Tiananmen Square shootings, in addition to working on the “Taiwan problem” by improving relations with Seoul. Thus, in early 1991, China and South Korea began secret negotiations to find a way to allow China, Hong Kong, and Taiwan to join the Asia-Pacific Economic Cooperation (APEC) organization by November of that same year (South Korea was the host country for the next round of APEC meetings). During this same period, China tried to persuade North Korea to accept its suggestion to allow both Koreas to simultaneously enter the United Nations (UN) (I. J. Kim, 1998; Yi, 2002). North Korea agreed to apply for UN membership following a May 1991 visit to Pyongyang by Chinese Premier Li Peng. With China’s support, the UN General Assembly admitted both Koreas on September 17, 1991 under Resolution

⁹According to former Chinese Foreign Minister Qian Qichen’s description, when South Korea’s Foreign Minister expressed expectations that China could speed up the process for establishing Sino–South Korean diplomatic relations, Qian replied with a Chinese idiom, *shuidao qucheng* (水到渠成), meaning “where water flows, a canal forms.” See Qian (2005).

46/1; the first visit of a Chinese Foreign Minister to South Korea since 1945 occurred two months later. Since official relations were still one year away, Beijing had to make an exception for South Korean officials to visit China for the purpose of negotiating Chinese membership in APEC. After the PRC was accepted as an APEC member in November 1991, the Chinese government felt free to address the question of establishing full diplomatic relations with South Korea.

Pressing

The United States

One of the biggest problems for Sino–U.S. relations is determining how to define their diplomatic relationship in a broad strategic way. The countries do not have any territorial disputes like those between China and its immediate neighbors. Instead, they are dealing with structural matters on global and regional levels that tend to be reduced to a simplistic “China threat” type of discourse. To date, the problems associated with their relationship have neither been solved nor well managed. In the past 30 years, American administrations have established policies, definitions, and stages ranging from “strategic partnership” (Clinton) to “strategic competitors” (Bush) to a less clear “strategic partnership” collaborative strategy during a period in which the U.S. government was dealing with a serious economic recession (Obama). Throughout, many Americans — including policymakers — have continued to view China as a major economic as well as national security threat. Thus, as Chinese scholar Dingli Shen (2009) has observed, while areas of collaboration between China and the U.S. have steadily expanded since 2009, they have also become increasingly more complex, with many new potential areas for tension. It is imperative for the two countries to figure out a way to define their partnership for the long term.

A popular argument among today’s Chinese intellectuals and policymakers is that even though China’s comprehensive power still lags behind that of the U.S. (and will continue to do so for an unknown period of time), the two countries should nevertheless be perceived as equal great powers. This explains why when President Xi Jinping initiated the idea of *xinxing daguo guanxi* in 2013 and raised it again during his 2014 meeting with President Obama. The term was translated into two different ways: the Chinese Ministry of Foreign Affairs used the English phrase “new type of relationship between two great powers,” while the White House used “a new model of a major country relationship” (Yang, 2014). For unknown reasons, perhaps in response to American rejection of the “great powers” idea or due to the concept’s association

with the First World War (Anderlini, 2014), or in the interest of avoiding the appearance of a Group of Two (G2) condominium,¹⁰ China later replaced “great power” with “major power” or “major country.” Regardless of the terminology used in official documents, Chinese intellectuals and leaders are clearly addressing Sino–U.S. relations in symmetrical terms, especially after China overtook Japan as the world’s second-largest economy in 2010 and in light of the perceived decline in American power following the 2008 financial crisis (Monahan, 2011).

If Chinese perceptions of a relationship between two major powers signal an effort to push the U.S. to engage bilaterally, it has not been successful. Instead of signs of good intentions from the U.S., China continues to receive messages of growing mistrust. Both American and Chinese scholars who have studied the evolution of diplomatic relations between the two countries over the past four decades are well aware of their fragility (Harding, 1992). In light of growing mistrust on both sides (X. T. Yan, 2010), Washington views its relationship with Beijing as something that is still awaiting construction, while Beijing keeps looking for signs from Washington of an intention to begin. In such a context, China believes that it should use its resources to establish a better position for the time when it successfully convinces the U.S. to participate in bilateral relations.

The Sino–U.S. relationship in the period following America’s “pivot to Asia” policy is a good example of the Chinese strategy of pressing another country to accept a certain role in a preferred relationship that has not yet been fully established. In fact, today’s competition between China and the U.S. in the Asia-Pacific region illustrates how both countries are employing a pressing strategy. From the Chinese perspective, Obama’s attempt to strengthen relations with America’s Asian allies means that China must make more compromises in terms of its traditional security position as part of its engagement process with Washington. The act of pressing in China’s bilateral relations is not simply a way to block what others are doing, but rather a strategy for gradually applying pressure against others in order to get them to accept proposed values or relationship parameters. There are many examples of Chinese and American attempts to press one another. One example is the idea of *xinxing daguo guanxi* described earlier, which Chinese President Xi mentioned during his meetings with President Obama. Xi’s initial proposal was due to perceptions of increasing mistrust and an extended impasse between the two countries. According to Chinese scholar Ni Shixiong, Xi was very direct with Obama, stating that “we have no exit, and we need

¹⁰This point was offered in a personal interview held in Washington, D.C. on August 25, 2016 with Mark Manyin and Susan Lawrence, two specialists working for the Congressional Research Service in Asian Affairs of the Library of Congress.

to open roads when we run into mountains and build bridges when we run into water” (R. B. Zhang, 2016). However, this message did not receive the response that was desired or expected. Washington is still unwilling to be part of a “special” bilateral relationship with China, since it could be easily misconstrued as sacrificing Japan, South Korea, or other Asian allies. In addition, American China watchers often complain that China never reveals what it wants at the beginning of negotiations. According to Mark Manyin and Susan Lawrence, two specialists in Asian Affairs for the Congressional Research Service, when Xi first brought up the idea of a new type of major power relationship with Obama, the proposal initially looked like an attempt to draw the U.S. into a friendly and non-confrontational political relationship. Manyin and Lawrence stated in personal interviews that when President Obama and Secretary of State Hillary Clinton accepted Xi’s proposal, China immediately began to move from ideas of a non-confrontational relationship and mutual respect to emphasizing mutual respect and national interests, and then to mutual respect on “core interests” such as Chinese sovereignty over Tibet, Taiwan, and the South China Sea.¹¹

Ongoing disagreements over the South China Sea are a result of America’s rejection of Chinese proposals for bilateral relations. Neither side has succeeded in clearly defining the direct or indirect territorial disputes involved, preferring instead to bicker over ways of showing self-restraint or adhering to existing principles while avoiding direct confrontation. The key issues are Chinese claims to sovereignty in the region and American demands for freedom of navigation. The two countries continue to ask each other to think twice about what is best for everyone’s interests according to the principles they prefer to emphasize. The lack of willingness to make the first compromise means that someone must either make a concession unilaterally or demonstrate a more assertive position in order to force the other side to take part in a greater self-relationship. As the main target of American mistrust, China finds it hard to believe that the U.S. could ever appreciate a Chinese compromise, leading to the conclusion that Beijing must be more assertive. This explains why China sent fighter jets and two batteries of HQ-9 surface-to-air missiles to a contested island in the South China Sea while Chinese Foreign Minister Wang Yi was visiting Secretary of State John Kerry in the U.S. China had no intention of breaking off its relationship with the U.S., nor was it prepared to get involved in a military confrontation. Wang told reporters that the missiles were for defensive purposes only (Tomlinson, 2016), but also made clear China’s desire for the U.S to completely remove its military presence

¹¹Interview with Mark Manyin and Susan Lawrence, Washington, D.C., August 25, 2016.

in the area: “We don’t hope to see any more instances of close-up military reconnaissance or the dispatch of missile destroyers or strategic bombers to the South China Sea” (Tomlinson, 2016). According to Lucas Tomlinson’s report, the Chinese foreign minister emphasized the American practice of sending strategic bombers to the area, but he also expressed a willingness to resolve disputes through peaceful dialogue. Wang’s words are another example of the Chinese wish to have the U.S. treat China as an equal partner so that the two sides can eventually engage in a “major country relationship.” The U.S. was not open to that message or proposal: it responded by pressing back, sending a guided-missile destroyer, multiple B-52 bombers, and other warships to the South China Sea.

The Philippines

The asymmetric power relationship between China and the Philippines as perceived on the Chinese side can be explained in terms of both traditional and historical China-centric views regarding its periphery areas (Linantud, 2015). According to this view, the Philippines are to be treated as a small country (*xiaoguo*) within the *Tianxia* (“all under heaven”) worldview of the Chinese tributary system. In the Chinese point of view, China’s relations with the Philippines (which at one time consisted of several kingdoms, each with its own connection to the Chinese court) were maintained via limited Ming dynasty trading activity and a loose Qing dynasty political relationship. These relations were decidedly minor from the Chinese perspective (B. X. Chen & Zhong, 2012; Jiang, 1981). As with South Korea, the Philippines were slow to reject the idea of the Nationalist government in Taiwan being the sole legitimate representative of all of China. According to the current Chinese foreign policy discourse, the Philippines — similar to most Southeast Asian countries — is a “small and weak” power that holds favor as an American *xiao huoban* (“little partner”) (Li, 2016).

Similar to the asymmetric power relations between China and other Association of Southeast Asian Nations (ASEAN) countries, China prefers a pressing rather than boycott policy to manage unresolved territorial disputes with the Philippines. In the first type, China takes the initiative for actions aimed at eliciting responses, while in the second, China passively blocks attempts to respond to a dispute, Vietnam being the primary example. Since the end of the Cold War in the early 1990s, China and the Philippines can be described as participating in two types of political relationships focused on territorial disputes in the South China Sea: one between 1995 and 1998, and the other from 2009 to the present. Prior to 1995, the Chinese government

followed a policy of self-restraint in an effort to paint an image of itself as a nation interested in the peaceful resolution of South China Sea issues, but in 1995, it initiated a “creeping assertiveness” policy in a dispute involving Mischief Reef, which the Philippines claimed as its own. As Ian James Storey notes, this policy allowed for the gradual projection of a physical presence in the South China Sea without using military confrontation (Storey, 1999). Enactment started with a peaceful diplomatic statement and was followed by the establishment of territorial markers, reef occupation, and the building of permanent structures.

The Scarborough Shoal is the only disputed territory claimed by both China and the Philippines without the involvement of any other ASEAN country. Unlike the situation involving the Philippine-controlled Second Thomas Shoal, China had de facto control over reefs surrounding the Scarborough Shoal in 2012. Prior to that, it was the Philippines that had de facto control over Scarborough and the surrounding waters. Evidence indicates that China was not actively planning to take over the Scarborough Shoal in 2012, but that it took advantage of an attempt by the Philippine navy to arrest some Chinese fishermen for illegal poaching. Two Chinese maritime surveillance vessels that were operating nearby managed to put themselves between the Chinese and Philippine boats, initiating a standoff that lasted for almost two months. Some Chinese scholars now use the term “Scarborough model” to describe the tactic of using a civilian maritime force to exert control over a disputed area, backed by diplomatic and economic pressure (J. Zhang, 2013).

In contrast, some Western China observers describe the tactic as a “salami-slicing” strategy (i.e., small but persistent) aimed at the gradual accomplishment of significant Chinese goals (Haddick, 2012). China is clearly using a different approach with the Philippines compared to Vietnam, creating a standoff situation by either taking advantage of unforeseen events, or rejecting territorial or legal claims to an area. To accomplish its goals, China needs to make sure that naval frigates or maritime surveillance ships make regular visits near disputed areas to take advantage of opportunities and to create a sense of normalized Chinese operations. During the standoff, China did not hesitate to express a willingness to use military force for the resolution. At the time, Chinese Vice Foreign Minister Fu Ying commented that China had “made all preparations to respond to any escalation of the situation by the Philippine side” (Chan & Li, 2015, p. 38). The official Chinese media followed up with reports emphasizing that China had not ruled out the use of military force to resolve the Scarborough Shoal conflict (Chan & Li, 2015, p. 38). China employed two other methods to force the Philippines to make concessions. First, it used economic sanctions in the form of banning Philippine banana imports. Second, it mobilized all of its diplomatic influence to block the 2012 ASEAN conference in Phnom

Penh from issuing a joint statement on how to handle South China Sea disputes (J. Zhang, 2013). Finally, when the Philippines initiated an arbitration process under the UN Convention on the Law of the Sea to challenge the legality of China's claims, Beijing approved two new expressions of force in March and May of 2013 (Chan & Li, 2015).

One major difference between China's conflicts with the Philippines and Vietnam involves communication. As Richard Javad Heydarian (2016) has observed, "Even at the height of the 'oil rig crisis' in mid-2014, Hanoi and Beijing maintained constant communication at the highest levels, dispatching top-level envoys to each other's capitals in order to prevent full-blown bilateral estrangement." Such close communication during conflicts has never been observed between Beijing and Manila.

Conclusion

This paper has examined conventional definitions and understandings of the concept of "assertiveness" as they have been applied to China as a rising power, and in the context of the country's diplomatic and military-backed behaviors with neighboring countries and other major powers. The eight cases and four types of unilaterally self-imposed policy solutions discussed in this paper suggest that China has fewer concerns about power asymmetry when attempting to unilaterally impose its long-term bilateral relationship goals or a Chinese understanding of the "greater self" based on bilateral relationality with other parties. The use of unilateral engagement, punishment, compromise, and pressure is dependent on decisions made by the Chinese leadership regarding which method is best for integrating other parties into Beijing's relational agenda — not simply as a calculation of power/interest costs, but in the interest of establishing a collective sense of the greater self.

The eight cases discussed in this paper should not be interpreted as evidence that methods for any specific country are limited to engagement, boycotting, reciprocation, or pressing. Instead, this analysis is best viewed as a reconceptualization of existing and narrowly defined assertiveness terminology as expressed in Chinese foreign policy behaviors. From the Chinese perspective, actions that are usually described as examples of assertiveness are actually expressions of good faith and wider collective interests involving a greater self rather than limited self-interests. Therefore, an attempt has been made to explain why the Chinese leadership feels no sense of hypocrisy when shifting between claims of peaceful intentions and assertive actions.

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Introduction to the Special Issue — Social Media and Inquiry into Political Change

Collaborative Approaches to Confirmatory and Exploratory Research in the Digital Age

FRANK C. S. LIU



The idea for this special issue came to me before the 2017 Annual Meeting of the Taiwan Political Science Association, in which I joined scholars across the globe in a discussion concerning their use of social media data. In the same year, I hosted a year-long workshop series on “thick data” versus “big data,” which allowed me to brainstorm alongside 20 or so Taiwanese social science scholars from a variety of disciplines as we deliberated over the epistemology behind and the value of exploratory and confirmatory research traditions. These two courses of life experience have brought me to the position of Guest Editor and given me the opportunity to present studies that reflect this debate. The three papers presented in this special issue by no means represent the entire spectrum of social media research, but they do present a picture of how authors from different perspectives perceive and make the best use of social media-related data. Before I address the two, it is worth providing a brief overview of what I witnessed during my year of interaction with these several dozen scholars that has led to this special issue.

Challenges from a Wave of Data-Driven Research

The emergence and prevalence of “bigger data,” particularly social media data, has forced empirical researchers to think more about how to make the best use of this

FRANK C. S. LIU (劉正山) is a Professor and Director of Institute of Political Science at National Sun Yat-sen University. His research interests include political behavior, public opinion, political identification, political communication, comparative politics, web-survey methods, and methodology. He can be reached at <csliau@mail.nsysu.edu.tw>.

data format as well as how such an endeavor can aid in our pursuit of knowledge in the field. Some have adopted and embraced this approach while others have rejected it, and still a good number of social scientists are now managing to gain an inkling of precisely why this trend is occurring. Instead of falling into division, the majority of researchers are fortunately aware of the fact that social media data have the potential to aid us in our investigation of new discoveries and even new areas of inquiry.

Narrowing the scope of our observations down to the realm of positivism, where scholars collect and use empirical data for research, it appears that the availability of social media data such as text data from Twitter or Facebook is making new analysis techniques necessary for researchers, leading a group of positivist scholars to revive older data and method-driven paradigms. Such positivists possess a strong understanding of the logic behind the generation of knowledge — a near-intact chain connecting epistemology, methodology (e.g., induction and deduction for causal inference) and methods (e.g., surveys and statistics for hypothesis testing) — moving them to quickly adopt big data (Bond, 2007; King, 2014; Lupia, 2014). Their arguments appear clear and confident; big data have aided in the development of supplemental theory and the drawing of causal inferences from the available data (e.g., Pietryka & Debats, 2017). That is, big data that help to facilitate the testing of hypotheses enhance the authority of causal inferences — to “design better experiments, make better comparisons between precise populations of interest, and observe theoretically relevant social and political behavior that was previously difficult to detect” (Monroe, Pan, Roberts, Sen, & Sinclair, 2015, p. 74).

Any critique or defense of the value of big data appears to be rooted in one’s methodological stance, which is guided by the scholar’s epistemological beliefs. Non-positivists who reject the adoption of big data (and any kind of numerical/quantitative data, for that matter) have expressed their doubts about the representativeness of big data and its potential to solve empirical problems. The debate at the level of data and methods will inevitably lead one to see that those who demonstrate better use of data own more power of persuasion (George, Osinga, Lavie, & Scott, 2016). Additionally, the meaning and value of knowledge generated through this analytical approach is still under question. Scholars who do not share the views of positivists regarding big data argue that researchers will never manage to advance knowledge with its use (Gleiser, 2015). Such thinking includes concerns that big data and its related analysis may even hurt the policy-making process (Dalton, Taylor, & Thatcher, 2016; Levy & Johns, 2016) and that big data research gets lost on an epistemological basis (Mulder, Ferguson, Groenewegen, Boersma, & Wolbers, 2016; Symons & Alvarado, 2016). This special issue cannot cover every one of these challenges originating outside the

discipline of positivism. Still, these critiques do help us to better understand what has been going on within positivism, which is a debate between exploratory and confirmatory approaches.

The Need for Collaboration between Two Traditions for Social Media

The debate about big data in the social sciences has been framed as “Does big data have value for research?” or “How does one criticize or defend the value of big data?” (Gray, Jennings, Farrall, & Hay, 2015). Such debates at the method and data level are no more advanced than the debates between quantitative and qualitative methodologists that have lasted for decades (Dryzek, 2006; Grant, 2005). Today, positivists have not only felt the need to discuss this division, but have also faced the need to choose sides. Those who emphasize confirmatory studies tend to label studies that make use of social media as “data-driven” or “method-driven,” implying that such studies have less value because of a lack of theory, while those who embrace new analytical techniques and believe that “we’ve got the population” harbor a certain disdain for those who still value sampling and theoretical reasoning.

I see these three papers as supplementing each other in various ways. The first paper, entitled “*Attribute-Priming Effects on Presidential Approval: The Role of Risk Perception and Trust in Government Regulation*,” is authored by **Yue TAN** and **Ping SHAW**. Representatives of the confirmative research tradition, **TAN** and **SHAW** analyze a survey sample to test a series of hypotheses regarding whether the perception of risks, benefits, and trust in government regulations influences the Taiwanese public in their evaluation of presidential performance from 2012 onwards. This study is unique in its methodologically pluralist approach, combining survey data analysis, content analysis, and sentiment analysis based on Facebook posts. It demonstrates how confirmatory studies interact with social media data and utilize the format of data as a supplement in hypothesizing test results.

The second paper by **Jaе Mook LEE**, **Youngdeuk PARK**, and **Gi Dong KIM**, entitled “*Social Media and Regionalism in South Korean Voting Behavior: The Case of the 19th South Korean Presidential Election*,” is not about the direct use of social media data, but rather examines how the use of social media influenced regionalist voting behavior in the 2012 and 2017 Korean presidential elections. The authors employ several analytical tools from a conventional confirmatory approach, resulting in a more exploratory purpose. They aim to observe and explore how the role of social

media use has evolved over time between the two elections. Readers may wish to pause and rethink the value of such studies as this conducts a series of regressions without specified hypotheses. That is, they should reconsider the question of whether to reject this contribution from the perspective of the tradition of confirmatory studies or appreciate the effort of the authors in telling a story by way of regression.

The third paper, authored by **Kah-Yew LIM**, is “*An Exploration of the Use of Facebook by Legislators in Taiwan.*” Standing alongside an exploratory tradition which embraces the value of describing and searching for patterns, this study depicts how Taiwanese legislators (January 2015–January 2017) have made use of social media in their pursuit of reelection. This observational study, based on Facebook fan page data analyzed through tools frequently used by data scientists, summarizes several types of language used on Facebook fan pages. **LIM** also adopts a similar strategy to **LEE**, **PARK**, and **KIM**, extending his observations to exploration by way of regression, the tool conventionally used for the testing of hypotheses. Through several different methods, **LIM** constructs a pattern of how Taiwanese legislators establish communication styles for their specific campaigns.

The three papers presented in this special issue address social media from a variety of perspectives. I suggest the reader to take heed from these papers that the exploratory tradition is now seeing a revival among the younger generation of scholars, and that more deliberation and effort is required to go beyond the confirmatory stage. Exploration should precede confirmation; the formation of theory should be built upon both solid reasoning and exploratory efforts. Positivists will benefit from this conceptualization and see that there is room for collaboration in this new era of social media and big data research.

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Attribute-Priming Effects on Presidential Approval: The Role of Risk Perception and Trust in Government Regulation

YUE TAN AND PING SHAW

Combining data from a content analysis of leading newspapers, a random-sampled national survey (n = 1,306), and a semantic network analysis of Facebook postings, this study applies Network Agenda Setting and attribute-priming effects to examine how perceptions of risks, benefits, and trust in government regulation influenced the public's evaluation of the Presidential performance in the 2012 controversy over imports of American beef in Taiwan. The results show that only perceived risks to health directly affected the public's evaluation of the President; other types of risks damaged the public's trust in government regulation, which consequently harmed their evaluation of the President's performance.

KEYWORDS: Network agenda setting; media priming; semantic network analysis; risk perception; trust in government regulation; Presidential support.

* * *



Agenda-setting theory, originally proposed by McCombs and Shaw in 1972, states that the salience of objects and attributes can be transferred from the news media to the public. Attributes are characteristics and properties that describe an object (e.g., subtopics within a particular issue; see McCombs and Ghanem (2001)). As a consequence of first-level agenda setting, media-priming theory argues that people use information that has been recently activated by media coverage to

YUE TAN (譚躍) is Assistant Professor of Institute of Marketing Communication at National Sun Yat-sen University. Her research interests are social marketing, media effect research, political communication, technology risk communication, journalism and communication, and China mass media research. She can be reached at <yuctan@mail.nsysu.edu.tw>.

PING SHAW (蕭蘋) is Professor of Institute of Marketing Communication at National Sun Yat-sen University. Her research interests are media and gender, new media and youth, and media content analysis. She is the corresponding author and can be reached at <shawpin@cm.nsysu.edu.tw>.

make judgments about political policies, leaders, and parties. Similarly, the theory of attribute priming claims that the media's role in identifying specific attributes of an issue as salient is a significant factor in determining the public's attitude toward the issue (Kim, Scheufele, & Shanahan, 2002; McCombs, 2004).

The first goal of this study is to examine the attribute-priming process in the context of health communication. In post-industrial societies, managing public health risks caused by new interdisciplinary technologies has proved to be increasingly challenging for democratic governments (Scheufele, 2014). Over the past few decades, science communication scholars have tended to focus on "knowledge deficit models" and "normative models of media roles" (Scheufele, 2014), while health communication scholars have concentrated on the effect of "health campaigns" (Rim, Ha, & Kioussis, 2014). Both approaches assume that media coverage will have strong effects, without accounting for the larger context of political competition. Little research has been devoted to agenda-setting processes in the health communication context (Rim et al., 2014). Therefore, Scheufele (2014) suggested that agenda-setting and priming research should be extended to explain how the emphasis on or importance assigned to health and science issues by the media affects the perceived importance of these issues on the part of their audience, and to assess the extent to which this process can alter public attitudes on political issues or policy makers.

As a refinement of the attribute-priming theory, Sheaffer (2007) proposed what he called the "affective-priming hypothesis," which states that people use affective attributes (negative or positive evaluative tone) as an information shortcut that assists them in making evaluations and decisions. A second goal of this study is to further explicate the condition of affective-priming in terms of the specific risks associated with different attributes. In particular, this study investigates the moderating role played by the nature of the risks in the attribute-priming process. There is a growing body of research which suggests that negative information has a stronger impact on citizens' attitudes as compared with positive information (Cobb, 2005; de Vreese, Boomgaarden, & Semetko, 2011; Sheaffer, 2007). In the field of risk communication, several authors have suggested that affect has a strong influence on how non-experts assess the benefits and risks associated with food technologies (Siegrist, Cousin, Kastenholz, & Wiek, 2007). In line with the "risk as feelings" model (Loewenstein, Weber, Hsee, & Welch, 2001), Slovic and Peters (2006) suggested that affect helps non-experts to quickly make heuristic decisions without analyzing probabilities, employing logical reasoning, or considering all of the available evidence. By incorporating findings from other disciplines, such as risk communication and health communication, we aim to provide a new perspective on agenda setting and priming research.

The third goal of this study is to further explicate the psychological process underlying attribute-priming in terms of accessibility and applicability. In particular, this study investigates the mediating role played by trust in government regulation in the attribute-priming process. Some agenda-setting scholars argue that the impact of an accessible consideration can also depend on its appropriateness or applicability to the object being evaluated (Chong & Druckman, 2007; McCombs, 2004; Takeshita, 2006). Previous research in the field of risk communication shows that the public's confidence in government regulation is an important factor in determining the extent to which the risks associated with regulated technologies are deemed to be acceptable (Rim et al., 2014). In this sense, the public do not mindlessly rely on the most accessible risk attributes to evaluate Presidential performance. Instead, they will first evaluate the government's ability and performance of risk regulation. If they have high confidence in this regulation, the perceived risks would become acceptable and will not harm their evaluation of the President. Hence, their trust in government regulation may mediate the attribute-priming effect.

Finally, this study aims to explore the consequence of the recently proposed third level of agenda-setting effects. This theory asserts that issues and their attributes are linked as networks, both in media coverage and in the public consciousness (Guo, 2012; Guo & McCombs, 2011a, 2011b). The corresponding networks are called the media agenda network, the media attribute agenda network, the public network, and the public attribute agenda network (Guo, 2012). The third level of agenda-setting effect is called the Network Agenda Setting (NAS) model, which predicts that these network relationships can be used to transfer impressions of salience from the news media to the audience's mind. This new media effects model is supported by empirical evidence (Guo & Vargo, 2015; Vargo, Guo, McCombs, & Shaw, 2014; Vu, Guo, & McCombs, 2014) which shows significant positive correlations between media networks and public networks. However, no empirical study to date has explored how the attribute network constructed in the public mind influences the criteria that apply in judging elected leaders. Guo and Vargo (2015) proposed that future studies should consider applying the NAS model to identify this type of media-priming effect. Using a convenience sample of Facebook posts, this study explores how the Facebook users' attribute network of the political issue (in this case, the American beef controversy of 2012) is linked to their attribute network associated with the President through the most salient attributes in the media content.

In summary, this study uses a media-priming framework to investigate how a specific political issue, along with its salient attributes, served to influence the public's evaluation of Presidential performance. In addition to a content analysis of news

coverage relating to the American beef issue, this study analyzes the associated Facebook posts from the relevant time period, and links the online content data to survey data obtained from personal interviews with a representative national sample of Taiwanese citizens. In this way, we are able to gauge the public's response to a real crisis in a politically competitive context.

The NAS model applies the associate model of memory described in semantic network analysis in order to assess the frequency of co-occurrence and notional distance between single words, concepts, and their attributes (Guo & Vargo, 2015). Focusing on the interactions between these nodes allows the researcher to present an individual's cognitive understanding of social reality as a picture (Kaplan, 1973); this process reveals useful contextual information regarding the way in which people make sense of the world (Doerfel, 1998). Accordingly, we employ the semantic network analysis method described in the NAS model in order to explore how the attribute networks associated with the American beef issue and the performance of the President of Taiwan are linked in the context of Facebook posts. Although Facebook posts were not a representative sample of the Taiwanese public opinion in 2012, our empirical findings provide concrete data to evaluate the merits and limitations of the semantic network analysis method in comparison with the content analysis and opinion survey, which is traditionally used in agenda setting and priming studies.

Our findings show that health risks associated with American beef were used as an information shortcut, and that these perceived risks had a direct and negative effect on the public's evaluation of Presidential performance. Other types of perceived risk (including economic, health, and political risks) lowered the Presidential approval rates by decreasing the public's faith in the government's food safety regulations and import policies.

This study also demonstrates that traditional news media retain their ability to increase the accessibility of an issue's attributes, and to create and/or strengthen the relationships between attributes within a network. However, other mechanisms (such as media framing effects) may play a similar role in strengthening the relationships between different attributes within a network. Our findings may also have implications for understanding public responses to a range of other issues relating to perceived risks and scientific controversies.

The American Beef Issue and President Ma Ying-jeou

The debate on the American beef issue began when the first case of Mad Cow Disease was found in the United States in June 2005 and ended when the Taiwan

government lifted the U.S. beef ban in July 2012. We chose the American beef issue because it has some characteristics that help to fulfill the research goals regarding the theoretical development of the media-priming effect. First, this issue evolved over a long time and was well known to most Taiwanese. In our 2012 survey, only 20 (1.5%) respondents said they had never seen news reports on this issue. Second, this issue involved two highly scientific and controversial health risks: bovine spongiform encephalopathy (mad cow disease) and Ractopamine. Both subjects are scientifically complex and aroused significant public debate, during which trust in government regulation may have played an essential role in the media-priming process. Finally, this issue had important policy consequences as the perceived safety of American beef played a significant role in shaping Taiwan's policy regarding trade with the U.S.

In June 2005, immediately following the Taiwanese government's decision to halt imports of American beef in response to the first reported case of mad cow disease, the U.S. government suspended its free-trade negotiations with Taiwan. In October 2009, President Ma announced that Taiwan would allow the importation of American beef under 30 months old, in order to facilitate the renewal of the free-trade negotiations. The news media and some legislators strongly questioned the government's motives regarding this decision. In January 2011, the media disclosed that some American cattle were being treated with Ractopamine, a controversial leanness-enhancing drug. Since then, the political debate surrounding Taiwan's American beef policy has been centered on the issue of Ractopamine residue limits. The government did not stop importing American beef products until the fourth case of mad cow disease was reported in April 2012. This event led to a renewal of the public debate regarding the American beef policy; as a result, Congress voted in favor of a proposal by the opposition Democratic Progressive Party (DPP) to maintain a zero-tolerance policy on Ractopamine. In early July 2012, the Codex Alimentarius Commission voted to allow 10 parts per billion (ppb) of Ractopamine residue in beef and pork, which helped the ruling Kuomintang to end Taiwan's zero-tolerance policy.

Literature Review

Agenda Setting and Media Priming

Media-priming theory argues that people use information that has been recently activated by media coverage to make judgments about political policies, leaders, and parties. Similarly, the theory of attribute priming claims that the media's role in identifying the specific attributes of an issue as salient is a significant factor in

determining the public's attitude toward the issue (Kim et al., 2002; McCombs, 2004). As a refinement of this theory, Sheafer (2007) proposed what he called the "affective priming hypothesis," which states that people use affective attributes (negative or positive evaluative tone) as an information shortcut that assists them in making evaluations and decisions. The evaluation of the Presidential performance is examined as the core dependent variable in this study because it was considered the most important outcome variable of media-priming effects in the past research (Iyengar & Kinder, 1987; Roskos-Ewoldsen, Klinger, & Roskos-Ewoldsen, 2007).

The media's agenda-setting, priming and framing hypotheses focused on the fundamental power exerted by the media regarding how individuals perceive and respond to their political and social worlds (Moy, Tewksbury, & Rinke, 2016). Despite the limited effect of paradigm prevalent in the mid-20th century, media-priming theory contends that the media wield widespread and substantial effects on both the Presidential approval and consequent voting preferences. The theory holds that the news media alter the criteria people use to evaluate elected officials by determining the content of news to which they are exposed (Hart & Middleton, 2014).

The traditional research on agenda setting shows that an issue's perceived importance is affected by the amount of coverage the issue receives in the media (McCombs & Shaw, 1972). First introduced in the early 1980s, media-priming theory builds on this traditional research (McCombs, 2004) by hypothesizing that extensive media coverage of an issue increases the likelihood that people will use it as a criterion to judge a leader's performance (Iyengar & Kinder, 1987; Roskos-Ewoldsen et al., 2007).

Attributes are characteristics and properties that describe an object (e.g., sub-topics within a particular issue: see McCombs and Ghanem (2001)). By expanding the concept of an agenda, which is a prioritized list of items, to include attributes as well as objects, agenda-setting theory can be extended to include second-level agenda setting (McCombs, 2004). This type of agenda setting is based on the premise that mass media can affect the perceived importance of attributes through their coverage. One of the outcomes of agenda setting as applied to attributes is known as attribute priming — this is a process by which the media emphasize certain attributes of an issue, which increases the perceived importance of these issues in the context of public opinion (Kim et al., 2002). In accordance with the attribute agenda-setting effect and the attribute-priming effect, we propose the following hypotheses:

Hypothesis 1a (H1a): consumption of news relating to the American beef dispute will be positively correlated with the salience of this issue's attributes in an individual's memory.

Hypothesis 1b (H1b): at the aggregate level, the ranking of attribute salience on the media agenda will be positively correlated with that on the public agenda.

Hypothesis 2 (H2): the salience of this issue's attributes in an individual's memory will significantly predict their evaluation of President Ma's performance.

The Psychological Mechanism of the Attribute-Priming Effect

In psychological terms, priming effects are typically explained in terms of an accessibility-based model (Kim et al., 2002; Price & Tewksbury, 1997). This model theorizes that media coverage makes specific issues or attributes more accessible in the audience's memory when they are required to give opinions (Iyengar & Kinder, 1987).

Many scholars have stressed the importance of schemas as information-processing routines that determine how people encode, store, and recall messages from their memory (Entman, Matthes, & Pellicano, 2009; Fiske & Taylor, 1991). Fiske and Taylor (1991) defined schemas as "cognitive structures that represent knowledge about a concept or type of stimulus, including its attributes and the relations among attributes" (p. 131). This definition of schemas looks similar to the concept of an associative memory network as featured in the NAS model. This model suggests that news media serve to "construct and reconstruct the audience's associative memory network by creating new nodes to the network or altering the strength of the existing connections among different constructs" (Guo, Vu, & McCombs, 2012, p. 56).

To explore the public's cognitive understanding of the American beef issue and the President's performance, we apply a semantic network analysis following the NAS model, to help understand how the attribute networks relating to the American beef issue and the President's performance are associated with one another in a convenience sample of Facebook users' opinion.

Attribute Valence and Risks

McCombs, Llamas, Lopez-Escobar, and Rey (1997) divided attributes into two categories: substantive and affective. A candidate's substantive attributes include descriptions of their ideology, qualifications, experience, personality, and positions on relevant issues. A candidate's affective attributes include positive, negative, and neutral descriptions of the candidate. Schuck and de Vreese (2006) proposed the use of the terms "risk" and "opportunity" as more specific and precise measures of emotional valence, as opposed to the use of "negative" or "positive" labels. The present study

uses the terms “risks” and “benefits” to follow the fact that perceived risks and benefits are often emphasized as the most important determinants of consumer acceptance where food technologies are concerned (Frewer et al., 2011). For greater precision, we further distinguish between six specific concerns: (1) health risks to the public, (2) economic risks to the domestic breeding industry, (3) political risks of deviating from other countries’ policies regarding imports of American beef, (4) the low probability of health risks, (5) personal choice (control) over the risks, and (6) the economic benefit of aiding free-trade talks with the U.S. The first three attributes involve risk creation (negative valence); (4) and (5) involve risk mitigation (positive valence); and the last one involves potential benefits (positive valence).

Empirical studies have confirmed attribute priming regarding both the substantive attribute agenda (Kim et al., 2002) and the affective attribute agenda (Geers & Bos, 2017). However, few studies have compared the relative impacts of these two types of attributes. Not all attributes are equal in terms of their impact. According to the affective priming hypothesis, people use affective attributes (positive or negative) as an information shortcut that assists them in making political evaluations and decisions (Sheafer, 2007). In particular, the public often punishes an incumbent leader in response to bad news. Although Moon (2013) and Camaj (2014) found that attribute agenda-setting effects can trigger stronger attitudes toward candidates, their studies did not differentiate between the effects of cognitive and affective attribute measures (Camaj, 2014, p. 642).

Similarly, there is a growing body of research that suggests that negative information, as compared with positive information, has a stronger impact on citizens’ attitudes (see e.g., Cobb (2005); de Vreese et al. (2011); Sheafer (2007)). Possible explanations for this effect include the theory that negative messages are more trusted (Cobb, 2005), draw attention more readily (Balmas & Sheafer, 2010), and/or arouse stronger feelings, such as fear (Chang, 2012), aversion, and anxiety (Schneider et al., 2001), in comparison with positive messages. Affect has a strong influence on how non-experts assess risks and benefits associated with food technologies (Siegrist et al., 2007) because it helps them to make quick heuristic decisions without analyzing probabilities, employing logical reasoning, or considering all of the available evidence (Slovic & Peters, 2006).

However, psychologists classify emotions in terms of both their valence as well as the arousal they engender (Zhu & Thagard, 2002). Valence refers to whether the affect related to an emotion is positive or negative, but arousal refers to the strength of the tendency for action induced by that emotion (Ekman, 1992). Despite the same valence, different types of risks may induce different levels of activation and may have

different effects on the following evaluation. Compared with economic and political risks, health risks involve a higher level of personal relevance, which tends to increase personal interest in politics (Moy et al., 2016). When coupled with high levels of trust in the media sources, this interest leads to a stronger priming effect (Miller & Krosnick, 2000). Thus, we predict that health risks should be most often addressed in the news media, most salient in public opinion, and most powerful in harming the Presidential evaluation, through which the priming effect is strengthened. Therefore, we propose the following hypotheses:

Hypothesis 3 (H3): citizens will assign more weight to risk attributes than to risk mitigation and benefit attributes when evaluating the overall performance of the President.

Hypothesis 4 (H4): citizens will assign more weight to health risk attributes than to economic and political risk attributes when evaluating the overall performance of the President.

The Mediating Role of Trust in Risk Regulation

Trust is considered to be an important factor when issues are too large or complex for individuals to accurately assess risks (Poortinga & Pidgeon, 2005). The government's perceived ability to effectively regulate or control technological risks affects the degree to which these risks are perceived to be acceptable (Poortinga & Pidgeon, 2005), and influences public attitudes toward these technologies (Anderson, Scheufele, Brossard, & Corley, 2012). This is because public institutions are thought to have a duty to protect the public from risks relating to their specific mandates (Poortinga & Pidgeon, 2005). However, public trust in the government's assessment of risks relating to food-based hazards may be lowered where such information is thought to be distorted, motivated by vested interests and/or self-protection, or where similar information has been proved wrong in the past (Frewer, Howard, Hedderley, & Shepherd, 1996).

Poortinga and Pidgeon (2003) argued that both risk perception and trust in regulations are indicators of a general attitude toward a particular technology. This affect heuristic (consisting of positive or negative feelings and cognitive representations) operates as a kind of mental shortcut for more specific evaluations, including policy preferences, coping behaviors, and assessments of perceived risks (Smith & Leiserowitz, 2012). Based on the aforementioned literature, we speculate that the public's trust in government regulation of risk factors is an important mediator of the relationship between perceived risk and the evaluation of the Presidential performance

in terms of U.S. trade policy. According to Baron and Kenny (1986), the mediating role can be proved through testing three specific hypotheses:

Hypothesis 5 (H5): the public's perception of risk attributes associated with importing American beef containing Ractopamine will undermine the public's trust in government regulation.

Hypothesis 6 (H6): trust in risk regulation will significantly influence the public's evaluation of the Presidential performance.

Hypothesis 7 (H7): the impact of risk perception on the evaluation of the Presidential performance will significantly decrease after controlling for the effects of trust in risk regulation.

Finally, we applied the network analysis method to explore the mediating role of "trust in regulation" in the semantic network relating to the American beef issue, especially in connecting the concepts of risk with the performance of President Ma.

Methods

Opinion Surveys

The survey data were obtained from the Globalization Studies Survey, which was conducted in four waves by the Institute for Advanced Studies in Humanities and Social Sciences at the National Taiwan University between 2009 and 2012 (Chiang, Liu, & Wen, 2013). The data sets are available to the public. The last wave of the survey was conducted in May 2012, one month after the fourth case of mad cow disease was reported by the media. The data were collected by computer-assisted telephone interviews which randomly sampled 1,306 Taiwanese adults between the ages of 20 and 65; the response rate was 52%.

For control purposes, we included the following demographics in the regression models: respondents' age ($M = 45.7$ $SD = 11.7$), gender (54% female), education (primary or middle-school: 18.9%, high-school: 31.7%, and college or above: 49.5%), monthly family income (median between USD 2,030.5 and USD 2,707.3), marital status (71.6% married), location of residence (48.1% in cities), employment status (67.6% employed), party identification (Pan-Blue coalition supporters: 32.6%, Pan-Green coalition supporters: 17.8%, and Independents: 48%), and national identity (Taiwanese: 64%, Chinese: 4.5%, both: 30%, and neither: 1.6%).

Dependent variable

As the only dependent variable, President Ma's overall approval level was measured using the following question: "Are you satisfied with the way Ma Ying-jeou has been handling his job as the President in the recent three months?" Responses were coded as follows: 1 = *very satisfied*, 2 = *somewhat satisfied*, 3 = *somewhat dissatisfied*, and 4 = *very dissatisfied*.

Independent variables

Following Balmas and Sheafer (2010) study, the accessibility of issue attributes in a respondent's memory is measured according to whether they mentioned a single attribute when they were asked why they supported or opposed the government's decision to allow imports of American beef containing Ractopamine. The six major attributes considered in this study are causes or consequences of the Taiwanese policy regarding American beef. Opponents of the policy were concerned about (1) the negative impact of the imported beef on human health, (2) the negative impact of imports on the domestic pig and cattle breeding industry, and (3) other countries' tough policies against importation. In contrast, proponents responded with the arguments that (1) there is no evidence that Ractopamine poses a threat to human health, and therefore the chance of becoming ill is extremely low; (2) with clear labels, individual consumers can choose whether or not they want to consume American beef; and (3) only when Taiwan opens its market to American beef, will it be possible for Taiwan to sign a free-trade agreement with the U.S. In the regression models, the dependent variables were regressed on all attributes, which were dummy-coded so that the single attribute mentioned by the respondent was assigned a value of 1, while the remaining attributes were assigned a value of 0.

Trust in government regulation was measured by asking to what extent respondents "trust in the American beef policies and regulations that the government adopted to protect food safety and consumers' rights" on a four-point scale (1 = *do not trust at all*, 4 = *trust very much*). Individuals' news consumption was measured by the survey question: "How frequently do you read or watch the news reports about the American beef issue?" (1 = *never*, 2 = *rarely*, 3 = *sometimes*, or 4 = *often*).

The interaction effects between news exposure and issue attributes were also entered into the model (in Table 1) to examine the moderating effect of news exposure. Significant interaction effects suggest that the impact of salient attributes on the evaluation of the Presidential performance changes with news consumption levels or vice versa.

Table 1.
Attribute Perceptions in Predicting Approval of Presidential Performance

Attributes	News Consumption	Trust in Government Regulation	Approval of the Presidential Performance	
Trust				
In media reporting	0.04	0.00	-0.04	-0.04
In government regulation	—	—	—	0.44***
Attributes				
Harms health	0.12*	-0.31***	-0.28***	-0.14**
Harms domestic industry	0.03	-0.18***	-0.14**	-0.07
Other countries forbid	0.09*	-0.23***	-0.14**	-0.05
Low health risk	0.06 ^a	-0.03	-0.03	-0.04
Personal choice	0.13*	0.01	-0.03	-0.01
Helps free-trade talk with the U.S.	0.11**	-0.01	-0.01	0.01
Exposure*harms health	—	-0.09 ^a	-0.05	-0.02
Exposure*harms domestic industry	—	-0.02	-0.04	-0.02
Exposure*other countries forbid	—	0.04	-0.01	-0.02
Exposure*low health risk	—	0.09 ^a	0.04	0.03
Exposure*personal choice	—	0.06	0.02	-0.01
Exposure*helps free-trade talk	—	-0.04	0.01	0.02
Attribute importance				
Trade development over health risk	-0.06*	0.03	-0.03	-0.06*
Beef consumption	0.09**	0.03	-0.01	-0.02
Liking the U.S.	-0.05	0.06*	0.10**	0.07*
Sample size	984	943	942	906
Adjusted R^2	0.05***	0.34***	0.34***	0.47***

Notes: Entries are standardized Ordinary Least Squares (OLS) regression coefficients, after controlling for national identity, party identification, gender, education, age, employment status, family income, marital status and liking the U.S. The survey data were obtained from the Globalization Studies Survey, which was conducted in four waves by the Institute for Advanced Studies in Humanities and Social Sciences at the National Taiwan University between 2009 and 2012.

^a < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001.

Other control variables

In accordance with the prior literature on media priming, we controlled for variables including media credibility (Miller & Krosnick, 2000), perceived attribute importance (McCombs, 2004; Takeshita, 2006), frequency of beef consumption (1 = *never*, 2 = *seldom*, 3 = *sometimes*, 4 = *often*), and the favorability of attitudes toward the U.S. (1 = *lowest favorability*, 10 = *highest favorability*). Trust in the media's coverage of the American beef issue was rated on a 100-point scale ($M = 57.9$, $SD = 21$). To measure the perceived importance of issue attributes,

respondents were asked to choose whether they considered food safety or free trade with the U.S. to be a more important issue. Three multiple regressions were run using news consumption, trust in regulation, and approval of the Presidential performance as dependent variables (see Table 1).

Content Analysis

To measure the extent of news media coverage of the American beef issue and its attributes, we tallied the number of stories about each attribute in four major national newspapers in Taiwan (*Apple Daily*, *Liberty Daily*, *Time Daily*, and *United Daily*). This analysis covers a period of three months prior to the date of the public opinion poll (Wanta & Hu, 1994), from February 8 to May 7, 2012. Newspapers were chosen because they often set the agenda for television news (McCombs, 2004). We used the Taiwan News Smart Web online database to search the text of the chosen newspapers, and counted the number of stories mentioning this issue during the sample period. The search terms used were “American (US) beef” and “Ractopamine.” The search yielded a total of 879 news stories containing at least one of these keywords. Two graduate students read through those articles, of which they identified 646 as being directly related to the American beef issue.

Following extensive training, the same two graduate students coded the 646 news stories in terms of issue attributes. The coders were asked to identify the presence or absence of the six attributes that were used to support or oppose the importation of American beef products. The inter-coder reliability (Scott’s $\pi = 0.79$) was calculated by double-coding a random sample of 15 days. Of the 646 articles, 525 mentioned at least one of the six attributes relating to the American beef issue. If the same attribute was mentioned several times in a single article, we counted them as one mention. Some articles mentioned more than one attribute. In total, the six attributes were mentioned a total of 926 times. Following the methods proposed by Guo (2012), we created a media agenda network matrix based on the frequency of two attributes’ co-occurrence in the same news report (see Figure 1).

Attribute Agenda Network on Facebook

The nature of the opinion data (one respondent only chose one attribute to state why he/she supported or opposed the importing American-beef policy) does not allow us to directly test the NAS model because our survey questions did not permit people to choose both risk and benefit attributes when advocating their position on the

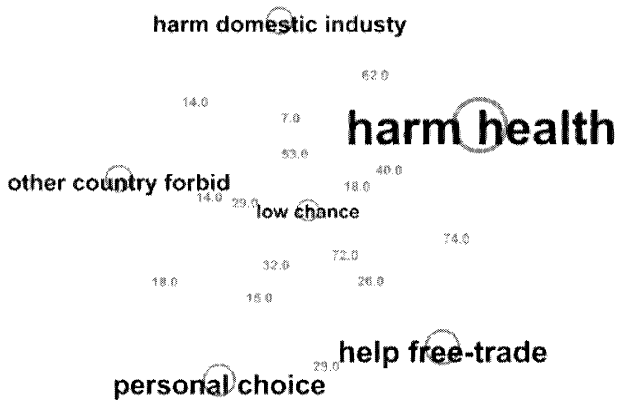


Figure 1. Media attribute agenda network.

American beef issue. In this study, instead, we employed a convenient sample of Facebook posts to explore the consequences of the NAS effect by constructing a model of the users' attribute agenda network. Methodologically, posts from ordinary users on Facebook reflected their unsolicited thoughts about the American beef issue and the President. We did not use the six predetermined attributes to analyze the content of the Facebook data, as the major purpose of this analysis was to explore the possible consequential priming effect rather than to test the NAS model. Exploratory use of semantic network analysis reveals issue attributes that are not determined in advance.

We constructed the attribute networks in a manner analogous to the methodology applied by Guo and Vargo (2015) in constructing their issue ownership network. Guo and Vargo proposed the concept of an issue ownership network, which refers to a network of issues that are associated with a given political candidate. Using terminology from network analysis, issue ownership addresses the interconnection between two objects — a political candidate and a given issue. In their study, a candidate's issue ownership network is represented as an ego network in which the candidate serves as the single “ego” that is connected with other nodes (issues). If a tweet mentions a candidate and one of the 16 analyzed issues, a link was identified.

In particular, we constructed ego networks to represent the attribute networks, where “American beef with Ractopamine” and “President Ma and his cabinet” serve as the egos (focal nodes) for the respective networks. These two egos are directly tied to the most frequently co-occurring words, and the strength of the ties is represented by the frequency of co-occurrence (Figure 2). Semantic network theorists have argued that the co-occurrence among words and concepts allows researchers to explore the meaning embedded in the text (Danowski, 1993; Yuan, Feng, & Danowski, 2013). For instance, Yuan et al. (2013) used the method of concept co-occurrence of “privacy”

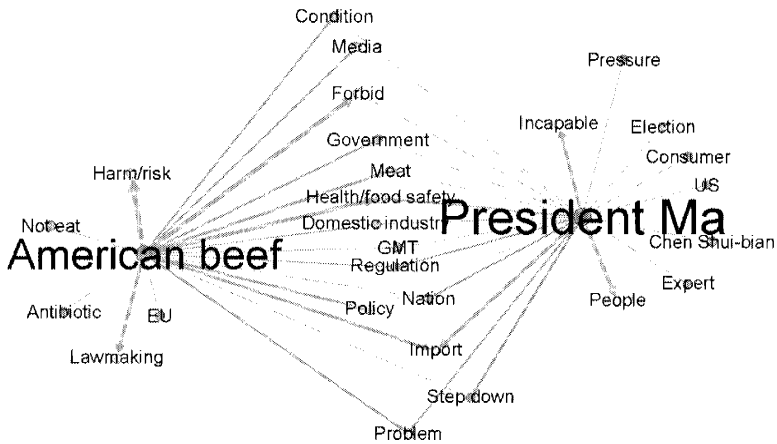


Figure 2. The semantic network of the attributes of “American beef” and “President Ma” on Facebook.

and other words to map the meaning structure of Weibo posts to represent their collective understanding of the privacy issue in contemporary China.

We extracted the relevant Facebook data from the Facebook platform in July 2016 by undertaking keyword searches (“American (US) beef” and “Ractopamine”) on all pages and groups using the Netvizz data extraction application (app) (v1.3).¹ The Netvizz app was initially developed by Rieder in 2009 (Rieder, 2013). It accesses Facebook data via the Facebook Application Programming Interface (API). This means that most of the posts used in this study were retrieved from public accounts. Because the American beef issue is a public issue, the public pages and groups are not considered to be a biased representation of the Facebook users. Using this method, 5,958 unique items were sampled from February 8 to July 31, 2012.

We then used the WordSmith software package (v. 7.0) to identify words that co-occurred with the terms “American (US) beef,” “Ractopamine,” “President Ma,” and “Ma’s cabinet” within a 10-word window more than 20 times in the corpus. WordSmith provides a “mutual information” (MI)² score to represent the relationships between each word and the terms “American beef” and “President Ma.” The first

¹Netvizz provides several modules to retrieve Facebook data. We chose the “Search Module” to use Facebook’s search function for both pages and groups using the query phrases of “American (US) beef” and “Ractopamine.”

²The formula of calculating MI takes into account not just the most frequent words found near the word in question, but also whether each word is often found elsewhere, well away from the word in question. This formula, derived from Goussier, Lange, and Meunier, is where the probability is based on total corpus size in tokens (Oakes, 1998).

Table 2.

Groups of Words (Chinese, MI Score) Used to Associate with President Ma & His Cabinet (馬英九和馬政府) and American Beef (美國牛肉&瘦肉精)

People	國人 (People), 我們 (we), 民衆 (public), 人民 (people)
Import	進口 (import), 解禁 (lift the ban), 開放 (open), 進來 (come in), 接受 (accept), 支持 (support)
Incapable	無能 (incapable), 爛 cvil (黑心)
Step down	下台 (step down), 罷免 (recall)
Health/food safety	安全 (safety), 食品安全 (food safety), 健康 (health), 狂牛病 (mad-cow disease), 症 (disease), 禽流感 (Avian Influenza), 人體 (human body), 動物 (animal), 死 (death)
Problem	問題 (problem), 焦點 (focus), 強調 (emphasis), 爭議 (dispute), 背後 (behind the door), 訴求 (appcal), 事件 (event), 議題 (issue), 影響 (impact)
Regulation	把關 (regulation), 管 (regulate), 驗出 (test positive), 檢出、檢驗 (test), 名單 (list), 標準 (standard)
Nation	國家 (nation), 臺灣 (Taiwan), 國內 (domestic)
Forbid	卡住 (hold), 抗議 (protest), 反對 (against), 零 (zero), 禁用 (forbid), 禁止 (prohibit), 不要 (resist), 反狂 (anti-mad)
Condition	條件 (condition)
Domestic industry	業者 (industry), 農委會 (Agricultural committee)
GMT	國民黨 (GMT)
Meat	肉品 (meat), 豬肉 (pork), 豬 (pig), 牛排 (beef), 牛 (cow), 肉 (meat)
U.S.	美國 (US), 美方 (US)
Chen Shui-bian	陳水扁 (Chen Shui-bian)
Government	政府 (government), 官員 (officials), 行政院 (The Executive Yuan)
Policy	政策 (policy)
Expert	專家 (expert)
Pressure	壓力 (pressure)
Consumer	消費者 (consumer)
Election	選 (elect), 選舉 (election)
Media	媒體 (media), 報導 (reporting)
Lawmaking	立委 (lawmaker), 修法 (law making), 立法院 (Legislature)
American beef	美牛 (American beef), 美國牛肉、瘦肉精 (Ractopamine)
Harm/risk	除不盡 (can't be cleaned), 照得 (catch discasc), 有害 (harmful), 危害 (harm), 嚴重 (serious), 可怕 (terrible)
Antibiotic	抗生素 (Antibiotic)
EU	歐盟 (EU)
Not eat	拒絕 (resist), 不吃 (not eat), 吃素 (Vegetarian)

author reviewed all co-occurring words with positive MI scores, filtered out meaningless words (e.g., “stop words” contained in markup language), and manually combined words with similar meanings into attribute groups (see Table 2). Based on these criteria, we identified 23 terms/concepts that were linked with the Presidential

performance, and 19 terms/concepts that were linked with American beef. These words were then used as nodes and loaded into the Gephi visualization engine³ in order to provide a visual representation of the semantic network for each keyword. The size of each node is proportionate to the number of other nodes linked to it, and the width of the ties reflects the strength of the relationship between these concepts (Figure 2). Finally, the content of the Facebook posts was processed with the Linguistic Inquiry and Word Count software engine (LIWC).⁴ This computerized linguistic program was developed by social psychologists and has been widely used in the social psychology and communication literature (Correa, Scherman, & Arriagada, 2016); in particular, this method has been validated in the context of detecting psychological expressions in short texts on Chinese social networking sites (Zhao, Jiao, Bai, & Zhu, 2016). This study analyzed the sample Facebook posts to identify the presence of positive and negative emotions. Positive emotions were measured according to how often the author used words such as “happy,” “good,” “nice,” and “sweet”; negative emotions were measured according to how often the author used words such as “hate,” “ugly,” “nervous,” “fear,” “horrible,” “distressing,” etc.

Results

Media Attribute Agenda Network from Content Analysis Data

Following the methodology proposed by Guo (2012), we transferred the content analysis data to a matrix in which each cell contains a numerical value that represents the frequency of two attributes’ co-occurrence in the same newspaper article. The more frequently the two attributes co-occur in the set of newspaper articles, the stronger their tie is. Based on this matrix, we used Gephi to visualize the media agenda networks as shown in Figure 1. This figure is based on the co-occurrence of the six attributes that we coded in the news coverage of the American beef issue. The size of each node is proportional to the total frequency of the attribute’s co-occurrence with all other attributes, and the thickness of the association lines is proportional to the strength of the association.

The ranking of the frequencies of co-occurrence is similar to that of the frequencies of occurrences considered independently. During the three months prior to the survey, the newspapers mentioned the six attributes 926 times in total. The most

³Available online at <<https://gephi.org>>.

⁴Available online at <<http://ccpl.psych.ac.cn/textmind/>>.

frequently mentioned attributes were harming health (35%, the biggest node in Figure 1) and personal choice (16.6%), followed by helping free-trade with the U.S. (15.3%). In addition, mentions of harming the domestic breeding industry appeared in 12.7% of all articles, low chance of health risk in 10.8%, and banned in other countries in 9.5%.

The top attribute dyads in Figure 1 are “harm health” with “help free trade,” and “harm health” with “personal choice.” This means that when covering the American beef issue, the newspapers were most likely to discuss potential health risks. Furthermore, when discussing these health risks, the newspapers were most likely to mention the benefits of free trade, and the consideration of personal choice.

At the aggregate level, as shown in Table 3, the ranking order of the frequencies with which the six attributes were featured in the media coverage is highly correlated with the public attribute agenda network ranking (Spearman’s $\rho = 0.89$). At the individual level, the regression data in the second column of Table 1 illustrates that four of the six attributes that are shown to be salient in an individual’s memory are positively correlated with the consumption of news relating to the American beef issue. This provides support for our first hypothesis (H1). In addition, the ranking of the sizes of the coefficients is strongly correlated with that of the media attribute agenda (Spearman’s $\rho = 0.71$).

Table 3.
Frequencies (%) of the American Beef News Stories Mentioning Each Attribute

Attributes	News Coverage ^a		Public Opinion	
	No.	Rank	No.	Rank
Oppose because:				
Harms human health	324 (35%)	1	728	1
Harms domestic breeding industry	118 (12.7%)	4	151	3
Other countries forbid the import	88 (9.5%)	6	94	4
Subtotal (negative valence)	530 (57.2%)		973	
Support because:				
Low chance of health risk	100 (10.8%)	5	10	6
Personal choice	154 (16.6%)	2	170	2
Helps free-trade with the U.S.	142 (15.3%)	3	32	5
Subtotal (positive valence)	396 (42.8%)		212	
Total mention of attributes	926 (100%)		1,185	

Note: ^aThe time frame is from February 8 to May 7, 2012, total number of articles = 525.

It is noteworthy that this attribute network is based on content analysis data that were coded deductively. The six issue attributes were predetermined by the authors based on a review of a small sample of news articles and were limited to the reasons that people used to support or oppose the American beef importing policy.

Public Attribute Agenda from Opinion Survey Data

Table 1 presents the results of attribute priming by estimating our models with Ordinary Least Squares (OLS) regression. Attribute-priming theory predicts that the salience of substantive and affective attributes in an individual's memory will be positively correlated with the evaluation of President Ma's performance (H2). As shown in the fourth column of Table 1, three of the six attributes significantly decreased the evaluation of President Ma's performance; these attributes were "harming health" ($\beta = -0.28$), "harming domestic industry" ($\beta = -0.14$), and "banned in other countries" ($\beta = -0.14$). This finding is consistent with hypothesis H2.

Notably, all of the statistically significant attributes are risk attributes with negative valence, as opposed to risk-mitigation and benefit attributes. Perceptions of risk-mitigation and benefit attributes are shown to have no statistically significant impact on the Presidential approval. These results are fairly consistent with our third hypothesis (H3), which predicted that citizens would assign more weight to risk attributes than to risk-mitigation and benefit attributes when evaluating the overall performance of the President.

As can be seen from the non-significant interaction effects between news exposure and salient attributes (see Table 1, columns 4 and 5), none of the "risk priming" effects were affected by the respondents' level of news consumption. In other words, once a risk attribute became salient in an individual's mind, its negative impact on the evaluation of the Presidential performance did not change with news consumption levels. Heavy and light news viewers are similarly influenced by the salient attributes regarding their evaluation of the President.

At the same time, the non-significant interaction effects in column 3 suggest that the negative effects of all salient attributes on trust did not change as news consumption varied. These findings suggest that news consumption can neither reduce the negative impact of the health risk attribute nor stimulate the positive impact of the health-mitigation attribute on trust in regulation.

The third column of Table 1 reveals several significant relationships between attribute salience and trust in government regulation. Again, only the risk attributes "harming health" ($\beta = -0.31$), "harming domestic industry" ($\beta = -0.18$),

and “banned in other countries” ($\beta = -0.23$) significantly decreased individuals’ trust in government regulation. Perceptions of positive attributes had no impact on trust in government regulation. These findings support our fifth hypothesis (H5), in that perceived risk significantly undermined trust in government regulation.

Finally, we entered “trust in government regulation” into the regression model in order to predict approval of the Presidential performance (column 5 of Table 1). “Trust in government regulation” became the best predictor ($\beta = 0.44$), and increased the total R -squared from 0.34 to 0.47. Moreover, most of the previously significant attributes (see column 4) became insignificant (see column 5) when “trust in government regulation” was added as an explanatory variable. These results support our seventh hypothesis (H7), which predicted that the impact of perceived risk on evaluations of the Presidential performance would decrease after controlling for trust in risk regulation. Among all the predictors in the final model, trust in government regulation is the best predictor of the public’s approval of the Presidential performance, which is consistent with our sixth hypothesis (H6). These results confirm that “trust in government regulation” plays a mediating role between perceived attributes and the Presidential approval.

In addition, in the full model, liking the U.S. and perceived attribute importance are also significant predictors of approval of the Presidential performance ($\beta = 0.07$ and $\beta = -0.06$).

Attribute Agenda Network from Facebook Data

Table 4 lists the top attribute dyads observed in Facebook users’ descriptions of the American beef issue and the President. Figure 2 illustrates the way in which the attribute networks corresponding to the American beef issue and the President are associated with each other in the context of Facebook users’ opinions. The relationship between each attribute and the two subjects under consideration is represented by the thickness of the lines connecting them. Thicker lines indicate more frequent co-occurrences and a stronger relationship. To make the network easier to read, in Figure 2, we have filtered out 24% of the weakest ties according to the frequencies with which the terms coincide.

The words that most frequently coincided with the American beef issue corresponded to the concepts of “harm and risk,” “forbid import,” and “health and food safety.” By contrast, the words that most frequently coincided with mentions of the President were “people,” “import,” and “incapable.” The lists of most frequently co-occurring words show that most of the top attributes have negative valence

Table 4.
Word Associations in the Corpus for the 20 Most Frequently Occurring Words (MI Scores > 0.05)

	President Ma & His Cabinet	American Beef & Ractopamine	Total
People	1,179	NA	NA
Import	1,003	866	1,869
Incapable	992	NA	NA
Step down	621	177	798
Health/food safety	543	1,244	1,787
Problem	525	606	1,131
Regulation	490	357	847
Nation	463	197	660
Forbid	317	1,263	1,580
Condition	274	531	805
Domestic industry	273	374	647
GMT	271	287	558
Meat	267	878	1,145
U.S.	265	NA	NA
Chen Shui-bian	240	NA	NA
Government	210	601	811
Policy	207	756	963
Expert	203	NA	NA
Pressur	188	NA	NA
Consumer	187	NA	NA
Election	178	NA	NA
Media	123	531	654
Lawmaking	108	1,065	1,173
Harm/risk	NA	1,541	NA
Antibiotic	NA	273	NA
EU	NA	255	NA
Not eat	NA	248	

(see Table 4). In the Facebook postings, the LIWC program identified 3,223 (13.6%) and 2,337 (0.68%) words that expressed negative and positive emotions, respectively. The corresponding percentages were 3.4% and 1.69% on Weibo (Zhao et al., 2016). These results show that the sampled Facebook posts are significantly skewed toward negative emotions, which suggest that the Facebook users' discussion of the American beef issue featured more references to negative than to positive attributes.

According to the data in Table 4, "import," "forbid import," and "health and food safety," the three most frequently co-occurring terms, are salient attributes that are

shared by the two entities. The next three attributes most often shared between the American beef issue and the President were “problem,” “regulation,” and “step down.” Unshared attributes indicate a failed transfer of salience from the American beef issue to the users’ evaluations of President Ma’s performance. This structure implies that the high “risk and harm” associated with American beef was not a significant factor in the users’ evaluations of the President’s performance. Instead, its negative impact on these evaluations worked mainly through the discussion of the health and food safety issue, the decision of whether to allow or disallow American beef imports, and their trust in governmental regulation. Salient attributes that are shared by the two entities revealed the cognitive path of issue salience transferred from issue evaluation to the Presidential evaluation. Among the six attributes examined in the opinion survey, only “health and food safety” are the cognitive paths transferred from the evaluation of the American beef issue to the evaluation of the President. This finding is consistent with the results of the opinion survey.

Conclusion and Discussion

In this study, we have applied both traditional methods of testing attribute priming and an emerging media effects model (the NAS model), in order to present an original empirical study regarding the public’s evaluation of the President in the context of health communication. Our results show that the public’s assessments of the American beef issue and the President’s performance were influenced by separate and unique attributes. Therefore, other applicable concerns (such as trust in the government’s food safety and beef-importing policies) played a mediating role in determining the impact of the American beef issue on public attitudes toward the President. The use of semantic network analysis enables the visualization of attribute networks generated by the news media reports and by Facebook postings.

As predicted by the attribute agenda-setting theory, there is a significant positive relationship between media attention and public perception in terms of issue attributes at the aggregate level, and between news consumption and attribute salience in an individual’s memory. In the attribute networks corresponding to the American beef issue as described in the news media (Figure 1) and in Facebook users’ opinions (Figure 2), health risks and food safety are the most important concerns. The issues of free trade and beef import policy are the next most important considerations. Other prominent attributes within the media agenda are also shown to be salient in the users’ mind. For example, the data show a correspondence between “personal choice” in the

media agenda and the choice of “not eating” American beef in the users’ agenda. Similarly, “EU” in the users’ agenda corresponds with the “banned in other countries” attribute in the media agenda. However, because the coding categories for media content were determined in advance, several salient attributes appeared in the Facebook postings that do not correspond to the six attributes identified in the media coverage. For instance, the discussion of the American beef issue is shown to be related to the topics of other meat, other antibiotics, news media reporting, and the performance of other government officials and lawmakers. As argued by Doerfel (1998), the semantic network analysis allows researchers to investigate more contextual and nuanced information about how people make sense of the world.

In the media attribute agenda network, two domains of discourse are of particular interest. The first is a private domain, which is represented by the “harm-health” and “personal-choice” dyad. In this private domain, the American beef issue is framed as a personal choice to eat or not to eat the beef, based on an individual’s assessment of the perceived risk. The second is a public domain, which is represented by the “harm health” and “free-trade dyad.” In this public domain, importing the American beef is framed as a necessary trade-off in order to enable free trade with the U.S.

These two frames are also present in the attribute agenda network on Facebook. The first frame, relating to personal choice, is represented by the triad of “harming risk,” “American beef,” and “not eat.” In this private domain, the American beef issue is framed as a personal choice, in which the individuals are free to eat or not to eat the beef in accordance with their perceived risk of harm. The framing of the public domain is more complicated. Here, concerns relating to health and food safety are shown to be connected to the government’s regulation, and its policy on beef imports.

The two domains reflect different rationales by which members of the public allocate responsibility for managing risk (Sheafer, 2007). The treatment recommendation plays a primary role in the media’s framing of public issues (Entman, 1993). When the American beef issue is framed as a personal choice, the President’s approval ratings are not affected. In contrast, when the issue is considered as a consequence of the government’s regulation and policies, those who have lost faith in the government’s food safety regulation tend to exhibit a negative attitude toward the President. In democratic societies, the government (including the President) is held to be accountable to the people it represents where risk management is concerned, especially when the assessment of such risks is too complex for individuals to manage by themselves.

The public opinion survey results support the predictions of the attribute-priming theory in the sense that some salient attributes are shown to have significant effects on

the public's evaluation of President Ma's performance. These results are consistent with the affective-priming hypothesis proposed by Sheafer (2007), which states that negative attributes are used as informational shortcuts when making political evaluations. The survey data show that only risk attributes with negative valence are statistically significant predictors of the Presidential approval, and that their impact does not vary in accordance with changes in individuals' levels of news consumption. Nevertheless, when "trust in government regulation" is introduced as an explanatory variable in the model, only perceived health risk remains a statistically significant factor.

In summary, these results show that the perception of health risks directly decreased individuals' approval of the Presidential performance, and the perception of all types of risks (health-based, economic, and political) indirectly decreased individuals' approval of the Presidential performance by adversely affecting their trust in government regulation. These findings also suggest that salient issue attributes and links alone are unlikely to be the primary cause of the observed attribute-priming effects; in other words, a construct has to be relevant (or applicable) as well as accessible in order to generate attribute-priming effects (Althaus & Kim, 2006). We conclude that the NAS effect mainly increases the accessibility (salience) of network relationships, while the media's framing of issues in terms of allocating responsibility may increase the applicability of the relationships. Future research should further explore this distinction, and may seek to apply the NAS model in order to extend existing research on media framing.

It is noteworthy that the semantic network analysis, as an exploratory methodology in this study, is not directly used to test the NAS model or the attribute-priming effect. Rather it is a new method to represent the cognitive structure underlying the relationship among different attributes of the American beef issue and the evaluation of the President. Still, the semantic network analysis of the Facebook posts provides many valuable insights that supplement our understanding of the survey results. First, the word groups in the semantic network serve to indicate the important dimensions of people's evaluation of the American beef issue and the Presidential performance as reflected in the Facebook postings. These dimensions can delineate the diverse social contexts wherein these two entities interact in Taiwanese society. Health risks and harms are the most immediate and tangible concerns when individuals think about the American beef issue. By contrast, competence, especially in representing the interests of the people, is the most salient and palpable attribute associated with evaluations of the President.

The salience of these attributes in the public mind did not make them directly accessible when members of the public were surveyed regarding their opinions on the

relevant issues. Instead, in the public discourse on Facebook surrounding the American beef controversy, the issues of health and food safety, the decision of whether or not to permit imports, and trust in governmental regulation each played a mediating role in linking the attribute networks relating to the American beef issue and the President. These findings are inconsistent with the traditional accessibility-based model; in particular, these findings support the hypothesis that the impact of an accessible consideration can also depend on its appropriateness or applicability to the issue being evaluated (Chong & Druckman, 2007). Since people think about people and issues in different ways (Willnat, 1997), the impact of accessible attributes on specific issues, such as determining one's attitude toward the President, will be determined by the extent to which these attributes can be framed in the context of reasonable arguments, such as trust in government regulation and policy decisions regarding beef imports.

Overall, risk attributes (especially those relating to health risks) are shown to be much more important than risk mitigation and benefit attributes in the context of the American beef issue. Based on the theory presented by Poortinga and Pidgeon (2003) and Smith and Leiserowitz (2012), it is possible that the public acquired a generally negative attitude toward Ractopamine in American beef as a result of being exposed to news coverage relating to the American beef issue. The affective imagery associated with this coverage operates as a mental shortcut when assessing trust in specific government regulation, preferences regarding trade with the U.S., and the Presidential performance. This result is consistent with the previous findings that in science and health communication, people are more likely to respond to qualitative statements rather than quantitative measures (Wahlberg & Sjöberg, 2000). The role of risk attributes in political communication, especially those relating to health risks, should be further explored in the future.

This study is limited by the fact that it used 1-degree ego networks to represent the semantic networks corresponding to the Facebook users' understanding of the American beef issue and its assessment of the President. In the two ego networks, the two focal concepts were used to identify other words that were used in conjunction with the egos. However, we did not extend the 1-degree network to a 1.5-degree network by including connections between all of the other words (attributes) in the network. Although the 1-degree network makes it simple to trace the major relationships between the attributes, it is not a complete network. With complete networks, researchers could describe the cognitive structure of the core concepts with both overall network metrics (i.e., size, density) and node/edge ranking metrics (i.e., betweenness, closeness centrality). Besides these descriptive statistics, future studies may also examine the relationships between node-level characteristics with edge level

characteristics, or examine the relationships among different ego networks using statistical tests, such as Quadratic Assignment Procedure (QAP) correlation and regression tests.

In addition to the rational choice and accessibility-based models, future research may also wish to examine the effects of media priming in the context of online processing and motivated reasoning, as both of these approaches focus on the central role of affect (Druckman, Kuklinski, & Sigelman, 2009). Another limiting factor in this study is that the intercoder reliability (Scott's $\pi = 0.79$) of the content analysis was not as high as is usually expected. Therefore, in order to increase validity, computerized content analysis is recommended to supplement the human coding. Finally, because the Facebook postings were sampled in 2012 when Facebook was not as commonly adopted in Taiwan as it is today, it is very likely that Facebook users did not constitute a representative sample of the general public at the time. In particular, these Facebook users tended to be younger males with higher levels of education as compared with the population as a whole.

Appendix

The survey questions

President Ma's overall approval

請問您對馬英九總統近三個月的整體表現是? (Are you satisfied with the way Ma Ying-jeou has been handling his job as the President in the recent three months?)

- (1) 非常不滿意 (very dissatisfied)
- (2) 不太滿意 (somewhat dissatisfied)
- (3) 有點滿意 (somewhat satisfied)
- (4) 非常滿意 (very satisfied)
- (5) 看情形 (it depends)
- (6) 無意見 (no opinion)
- (7) 不知道 (don't know)
- (8) 拒答 (refuse to answer)

Choices from 5 to 8 are recoded as missing values.

Trust in government regulation

關於開放美國牛肉進口的政策, 您對政府宣佈採行的食品安全與保護消費者的措施有沒有信心? (Do you trust in the American beef policies and regulations that the government adopted to protect food safety and consumers' rights?)

- (1) 非常沒有信心 (do not trust at all)
- (2) 沒有信心 (do not trust)
- (3) 有信心 (trust)
- (4) 非常有信心 (trust very much)
- (5) 沒有意見 (no opinion)
- (6) 不知道 (don't know)

Choices from 5 to 6 are recoded as missing values.

Trust in media reporting

請您就媒體所報導關於美牛新聞的可信度表現打個分數 (0分代表報導最不可信, 100分代表報導最可信, 60分代表及格? How do you rate the credibility of the news reporting the American beef issue (0 represents least credible, and 100 represents most credible).

“Don't know” or “no opinion” are recoded as missing values.

The accessibility of issue attributes in a respondent's memory

請問您贊不贊成政府開放含瘦肉精的美國牛肉進口到台灣? (Do you support or oppose the government's decision to allow imports of American beef containing Ractopamine?)

- (1) 非常贊成 (strongly support)
- (2) 贊成 (support)
- (3) 不贊成 (oppose)
- (4) 非常不贊成 (strongly oppose)
- (5) 沒有意見 (no opinion)

According to the answers, 1–2 go to answer Q1a and 3–4 go to answer Q1b.

Q1a: 請問您贊成的主要理由是? (What is the major reason for your support?)

Low health risk (1) 沒有證據顯示含瘦肉精會對人體造成危害 (there is no evidence that Ractopamine poses a threat to human health, and therefore the chance of becoming ill is extremely low)

Personal choice (2) 只要有明確的標示, 消費者可以自行選擇是否消費美國進口的牛肉 (with clear labels, individual consumers can choose whether or not they want to consume American beef)

Helps free-trade talks with the US (3) 開放含瘦肉精的美國牛肉進口才能與美國簽訂自由貿易協定 (only when Taiwan opens its market to American beef will it be possible for Taiwan to sign a free-trade agreement with the U.S.)

Q1b: 請問您反對的主要理由是? (What is the major reason for your opposition?)

Harms health (1) 瘦肉精會對人體造成危害 (the negative impact of the imported beef on human health)

Harms domestic industry (2) 保護國內養豬養牛產業 (the negative impact of imports on the domestic pig and cattle breeding industry)

Other countries forbid (3) 許多國家皆禁止瘦肉精牛肉進口 (other countries' tough policies against importation)

Please find how this variable is recoded on p. 15.

News exposure

請問您曾經透過媒體看到關於進口美國牛肉的新聞報導? (How frequently do you read or watch the news reports about the American beef issue?)

- (1) 從來沒有看到 (never)
- (2) 很少看到 (rarely)
- (3) 有時會看到 (sometimes)
- (4) 經常看到 (often)

Attribute importance

請問您所接觸的關於美國牛肉的新聞, 您心中較關心的項目是? (When consuming the news about the American beef issue, which aspect do you care about more?)

- (1) 健康和食品安全 (health and food safety)
- (2) 和美國的自由貿易 (free trade with the U.S.)
- (3) 兩者都有(不提示此選項) (both, this option is not read out)

We recoded the choice of health and food safety as “-1”, both as “0”, and free trade with the U.S. as “1”.

Beef consumption

請問您從小到大有沒有吃牛肉? (Have you eaten beef since your childhood?)

- (1) 經常吃 (never eat)
- (2) 偶爾吃 (rarely eat)
- (3) 很少吃 (sometimes eat)
- (4) 不吃牛肉 (often eat)
- (5) 以前有吃現在沒吃 (不提示此選項) (used to eat but stopped now, this choice is not read out)

Liking the U.S.

請問您認為您對美國的喜愛程度在第幾層? 第一層代表喜愛程度最低, 第十層代表喜愛程度最高。(To what extent, do you like the U.S.? 1 indicates the least favorable level, and 10 indicates the most favorable level.)

Controlled variables

Party identification

目前國內有幾個主要政黨, 包括國民黨、民進黨、親民黨以及台灣團結聯盟, 請問您比較支持那一個政黨? (Among the following major political parties in Taiwan, which party do you support more?)

- (1) 國民黨 (the Kuomintang)
- (2) 民進黨 (the DPP)
- (3) 親民黨 (the People First Party)
- (4) 台聯 (the Taiwan Solidarity Union)
- (5) 無黨籍 (non-partisan)
- (6) 其他 (others)
- (7) 沒有偏向哪一黨 (選人不選黨) (no preference)
- (8) 不知道, 拒答 (don't know)

The political parties are recoded into two groups: the pro-unification Pan-Blue coalition, comprising the Kuomintang and the People First Party (PFP); and the pro-independence Pan-Green coalition, comprising the DPP and the Taiwan Solidarity Union (TSU).

National identification

目前社會上有人會說自己是台灣人,有人會說自己是中國人,請問您認為自己是台灣人還是中國人?(In society, some people identify themselves as Taiwanese, and some people identify themselves as Chinese. Which one do you think best describes you?)

- (1) 台灣人 (Taiwanese)
- (2) 中國人 (Chinese)
- (3) 兩者都是 (both)
- (4) 兩者都不是 (neither)

We recoded the choice of exclusively Taiwanese as “1”, both and neither as “0”, and exclusively Chinese as “-1”.

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Social Media and Regionalism in South Korean Voting Behavior: The Case of the 19th South Korean Presidential Election*

JAE MOOK LEE, YOUNGDEUK PARK AND GI DONG KIM

This study examines the moderating effects of social media use on regionalist voting behavior in South Korea. Analyzing the survey data conducted during the 2017 Korean presidential election, we test how social media functions in electoral processes, particularly with respect to region-based voting in the Korean electorate. The findings of this study reveal that social media use affects region-based voting behavior among the Korean electorate by connecting people with different regional backgrounds in online political communication. That is, social media use can create “bridging” social capital rather than “bonding” social capital in society. In this respect, results differ significantly from findings in the 2012 presidential election. In 2012, only the independent effects of social media existed with a liberal bias, without revealing interaction with regional dummies. These independent effects disappeared in 2017, and different kinds of social media were statistically significant only when they functioned as moderating variables for regional dummies. This implies that as the functions of social media in the Korean election process have evolved in more complexity, they now are able to affect progressive as well as conservative voters.

JAE MOOK LEE is an Assistant Professor in the Department of Political Science and Diplomacy at Hankuk University of Foreign Studies in Seoul, South Korea. His research interests include political behavior, public opinion, and research methods. He has published his works in peer-reviewed journals such as the *Journal of International and Area Studies*, *PS: Political Science and Politics*, and *Social Indicators Research*. He can be reached at <jaemook@hufs.ac.kr>.

YOUNGDEUK PARK is a Research Professor in the Social Science Data Innovation Center at Yonsei University in Seoul, South Korea. His research interests include comparative political behavior and politics of inequality. His most recent works have appeared in the *Korean Political Science Review*, *Comparative Democratic Studies* and other peer-reviewed journals. He can be reached at <mercuromc@gmail.com>.

GI DONG KIM is a Ph.D. student in Political Science at University of Missouri, Columbia, USA. His research interests include legislative politics, voting behavior, and electoral systems. He has published his works in peer-reviewed journals such as the *Korean Political Science Review*, the *Korean Party Studies Review*, and the *Journal of Asia-Pacific Studies*. He can be reached at <gkdte@mail.missouri.edu>.

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This study delves into the effects of social media use on regionalist voting behavior in South Korea, particularly in the 19th Korean presidential election. No single factor can precisely explain the political behavior of Korean voters, but most Korean political scientists would agree that one's regional background is one of the most prevailing factors (Kwon, 2004). South Korea is a relatively homogeneous society sharing common ethnic, linguistic, and cultural traditions, so few significant cleavage structures are found other than regional ones that divide the Korean population across geographic lines. From the perspective of political sociology, an individual's hometown or residence is able to affect his or her voting choices. In this respect, a voter's choices can be analyzed by determining either where he or she is born or resides.

However, several articles have reported that the importance of a voter's regional background has been waning since the 2000s. Since the beginning of the 21st century, regional ties have become weaker as younger generations replace older generations, and an ideological gap has been growing between them. Several scholars argue that competing divisions such as generations and ideologies, at times overlapping, are gradually replacing regionalism in voting behavior among Koreans (J. Y. Choi & Cho, 2005; Chung, 2012; Kang, 2003, 2010; H. M. Kim, Choi, & Cho, 2008; Moon, 2005).

Additionally, the growth of the Internet along with information and communication technologies has caused dynamic changes in Korea's political environment, introducing new possibilities for change in the behavior of Korean voters. In particular, forms of social media such as Facebook, Twitter, and Instagram have widely proliferated in Korea, affecting how people acquire and process political information as well as how they interact in the public sphere. Social media has the potential to form new and diverse networks among individuals, as well as open their minds by giving them access to new networking resources. In this regard, J. M. Lee and Kim (2017) have revealed that conditional effects of social media use decreased the effect of one's regional background on voting choices in the 20th Korean general election in 2016.

Therefore, this study tests how the effects of social media function by analyzing survey data from the 19th presidential election in 2017. Findings of this study may play a critical role in explaining a new possibility for changes in Korean regionalism. This study is organized as follows: First, we briefly review regionalism and its changes in Korean elections, examining the role of the Internet and social media in particular.

The following section presents an empirical analysis. The last section summarizes our findings and concludes our argument.

Regionalism and Its Changes in Korean Elections

Regionalism in voting behavior is not a unique phenomenon around the world. According to Putnam (2000), Italy has suffered from severe regionalism nationwide. Northern and Southern Italy have experienced different historical paths; while the former has historically existed as being independent, the latter has undergone several foreign invasions. As a result, the two regions differ in both their cultural traditions and economic performance at both microscopic and macroscopic levels.

This phenomenon is not confined only to Italy. Canada, Turkey, and former Soviet countries including Ukraine have also experienced severe regionalism, and this has had politically critical results (Akarca & Baslevent, 2011; Gidengil, Blais, Nadeau, & Nevitte, 1999; Kubicek, 2000). Such countries can be divided into a number of separate regions according to their ethnic compositions, historical experiences, cultural traditions, and economic idiosyncrasies. Interestingly, however, culturalists who explain regionalism and regionalist voting behavior in terms of modernization theory argue that traditional bonds such as familial and geographical ties weaken as modernization proceeds (C. L. Kim, 1980). This makes it pertinent to note the uniqueness of regionalism in Korea, as it has in fact intensified with modernization.

In Korea, regionalism has been the most prevailing factor in almost every election. In particular, the most salient regional divide in Korea has been the rivalry between the southeastern region of Yeongnam and the southwestern region of Honam (Kwon, 2004). Scholars of Korean politics have suggested several reasons for the emergence of region-based electoral competition, including differing historical backgrounds, uneven economic development, and emotional hostility.

Regionalism in Korean voter behavior has been analyzed from three different perspectives. The first is based on the logic of the political economy (Choi, 1996; Chon, 1992; D. O. Lee & Bruun, 1996; Park, 2003). For instance, there is the idea that regionalism has originated from an unequal economic growth strategy of past authoritarian regimes, resulting in a considerable economic gap between Yeongnam and Honam. As a late-industrialized country with limited factors of production, the Korean developmental state initiated economic growth strategies that invested resources into specific regions, of which Yeongnam received the lion's share. This uneven economic development resulted in dissatisfaction among the people of Honam. Second, Korean regionalism can be explained by the political mobilization strategies of politicians

(Choi, 1993). According to this claim, regionalism in Korea has resulted from certain electoral strategies chosen by influential political leaders intent on mobilizing regional bases of support. When a party had a stronger regional political leader, they received stronger support in the region (Moon, 2005). Kim Young-sam, Kim Dae-jung, and Kim Jong-pil, known as the three Kims, often made use of this region-based mobilization strategy. A third explanation approaches regionalism from the perspective of rational choice. According to this argument, regionalism in Korea is the result of neither government policy nor political mobilization from above. Rather, it is the natural result of voters' rational choice as they maximize their interests in electoral games and consider economic growth in their residence-based regions (Cho, 1998).

Although the three different approaches present different perspectives regarding the origins of regionalism in Korea, most scholars agree that region-based electoral politics has negative consequences, and this has long been regarded as a malady. For example, regionalism may be eliminating the need for candidates to offer competitive policies, since campaign strategies targeting regional ties are often more effective. Additionally, since parties or candidates without a regional stronghold are less likely to survive in an election race, regionalism in elections limits the choices available to voters (Shin, Kim, & Chung, 2000). For these reasons, many political elites and scholars have suggested the creation of proper institutional and cultural solutions for regional rivalry in Korea, but signs of regionalism have still prevailed in recent Korean elections (J. M. Lee, 2014; Yoon, 2012).

However, some scholars note that regionalism in voting is not as dominant as it has been in the past. Since the 2000s, ideological and generational divides have emerged that had not previously been significant in Korean electoral politics. During the 1997 financial crisis, Korean society underwent a series of neoliberal economic reforms that resulted in both economic hardship for the middle class and an increase in economic inequality. This economic shock triggered left–right ideological conflicts in Korean politics and class voting (W. Kim, 2010). Additionally, a generation gap has emerged in Korean electoral politics since the 16th Korean presidential election in 2002. Kang (2003) argues that while the effects of regional divisions continued in the 16th presidential election, new ideological rifts emerged at the same time, and a changing structure of divisions contributed to more diverse choices available to voters. Similarly, J. Y. Choi and Cho (2005) contend that a generational shift and the emergence of ideological differences triggered significant changes in the division between Yeongnam and Honam in the 17th Korean general election. These new empirical findings of alternative divisions in the electorate have often been regarded as significant cues for the possibility for the changing or weakening of Korean regionalism.

Regionalism may also be regarded as the bonding of social capital. Putnam (2000), one of the most eminent scholars in the research of social capital, divides social capital into “bonding” and “bridging” forms depending on their different functions. While the former refers to social networks between homogeneous groups such as neighbors in the same region, the latter refers to cross-cutting ties between socially heterogeneous groups. More concretely, bonding social capital intensifies such offline personal connections as family ties, relatives, and friends, strengthening solidarity between those of the same race, class, occupation, and gender. In contrast, bridging social capital forms new networks among different people while maintaining broad and shallow connections.

These two kinds of social capital render two ambivalent hypotheses to explain the puzzle of Korean regionalism. How do the choices of voters vary as they are increasingly exposed to social media? The first hypothesis is based on bonding social capital, claiming that the more the people use social media, the more likely they are to choose a candidate from the party that is based in their region. Several scholars suggest the concept of “homophily” to explain these phenomena (Ahn, 2014; J. M. Lee, 2014; Rogers & Bhowmik, 1970). The second hypothesis, conversely, is based on the expectation that the use of social media increases bridging social capital. The more the people use social media, the less likely they are to vote for their regional parties. People become free from the regional communities to which they belong and perceive themselves as having greater independence in their political decisions. Open communication based on “heterophily” weakens regionalism and regional homogeneity (Ahn, 2014; Rogers & Bhowmik, 1970).

The Changing Political Landscape of Social Media and Social Capital

Given that regionalist voting behavior is based on bonding social capital, establishing a wide network can be a potential key to solving regional conflicts in Korea. Social media has a critical role as it connects people irrespective of their political views or the regions in which they live. In Korea, if the voters of Yeongnam and Honam can engage in cross-cutting interaction through social media, the use of social media can mitigate long-standing political and regional conflict. However, this possibility depends on the circumstances under which social media is used.

Several scholars emphasize the cross-cutting nature of networks on the Internet. This perspective advocates the possibility that social media can offer bridging effects. The Internet may have the potential to reduce or overcome structural factors such as

geographic boundaries or political orientation (Brundidge, 2010, p. 684) that constrict heterogeneous political communication. The Internet enables broader social interaction among users by lowering transaction costs (Ellison, Steinfield, & Lampe, 2007; Neves, 2013; Vitak et al., 2011; Wellman, Hasse, Witte, & Hampton, 2001). In online networks created for non-political purposes, liberals and conservatives find themselves in the same group and have new opportunities to interact (Wojcieszak & Mutz, 2009). If this cross-cutting mechanism works, social media is able to form bridging social capital.

However, the cross-cutting network hypothesis overlooks the possibility that the network is formed by the autonomous and intentional selections of users. Given that users can decide with whom to communicate, their preferences are projected onto the networks they form. These skeptical perspectives stress that people are naturally averse to heterogeneity and pursue psychological consistency (e.g., Festinger (1957)). Unlike traditional mass media, users on the Internet have more choices about what to read, whom to follow, and whom to friend or unfriend. This selectivity enhances their aversion to different opinions. In the same vein, Iyengar and Hahn's (2009) experiment revealed that Democrats have an aversion to news from Fox News and prefer Cable News Network (CNN) and National Public Radio (NPR), while Republicans have an aversion to news from CNN and NPR and instead follow Fox News. The tendency for selective exposure is more distinct where the partisanship of participants is stronger (Iyengar & Hahn, 2009). This implies that social media has a bonding effect, since people prefer to communicate with like-minded people.

In Korea, cross-cutting interaction rarely occurs among people with different political views because liberals have dominated a larger portion of social media than conservatives. Young and liberal citizens in Korea have adopted the Internet early on as their main communication channel. The Internet use of liberals made a powerful impact in the 16th presidential election in 2002, supporting the underdog candidate Roh Moo-Hyun. Additionally, most demonstrations in Korean civil society have involved progressive agendas, such as opposition to the importation of United States beef. A number of prior empirical studies argue that the use of the Internet or social media is linked to younger ages and a liberal ideology.

Be that as it may, the political landscape of the Internet in Korea has changed in general and in presidential elections since the 2010s. Conservatives rarely willing to put up with liberal-biased Internet environments are now actively making use of the Internet. They have now built their online spaces and are expressing their political opinions. Though initially launched as an online community to share humorous posts, Ilbe.com has since been highly politicized and turned to the extreme right during the two major elections in 2012. In social media such as Facebook and Twitter, many

pages and tweets have emerged that support conservative ideas. As conservatives use online spaces to deliver their political, economic, and social perspectives to the public, social media has become a political arena facilitating cross-cutting interaction.

With regard to social media, changes in political circumstances imply that there are different relationships between a voter's social media use and regional background. When social media was dominated by liberals, it had only independent effects on voting choices, particularly for liberal candidates, while interaction effects with regions did not. However, according to prior research on the 20th general election (J. M. Lee & Kim, 2017), social media appears to affect voting choices by interacting with one's regional background. Regionalist voting behavior is affected in different ways by the use of social media. Therefore, we expected to see these effects in the 2017 Korean presidential election.

Research Design

To estimate the effects of social media use on regionalist voting behavior, we examined survey data gathered during the 2017 Korean presidential election. One thousand two hundred respondents were surveyed by the Korean Social Science Data Center (KSDC) immediately after the election to evaluate various aspects of political behavior in the Korean electorate. All participants in this survey were eligible voters. Survey respondents were sampled proportionally according to region, gender, and age (stratified sampling). Social media use, hometown, and region of residence are the main independent variables in this study and were included as questions in the survey.

Dependent Variables

This study investigates whether the use of social media influences regional voting in South Korea. Hence, the dependent variable in this analysis is individual voting choice, with three kinds of binary variables: Voting for Moon Jae-in (the Democratic Party (DP)), voting for Hong Joon-pyo (the Liberal Korea Party (LKP)), and voting for Ahn Cheol-soo (the People's Party (PP)). We focus solely on these three major candidates among the five candidates that garnered more than 1% of the national popular vote in the electoral race.¹ If a survey respondent answered that he or she voted for one of the three candidates, the observation was coded as 1, and otherwise as 0.

¹The other two candidates, Yoo Seung-min (the Bareun Party) and Sim Sang-jeong (the Justice Party), earned approximately 6% of the popular vote.

According to survey results, Moon, Hong, and Ahn earned approximately 50%, 21%, and 16% of the participants, respectively. Because the dependent variable is a dummy variable, the Binary Logistic regression model was used to estimate the effects of social media on regional voting.²

Independent Variables

To examine the effects of social media use on regional voting, the level of social media use was included as a primary independent variable. The survey included a question regarding how often a respondent uses social media during the election period. A respondent chose only one answer among “very often” (4), “often” (3), “sometimes” (2), and “seldom” (1). Approximately 4% used social media “very often,” approximately 30% “often,” approximately 31% “sometimes,” and approximately 36% “seldom.”³

To account for a voter’s regional affiliations, the voter’s hometown and region of residence were included as another explanatory variable in the analysis. The region in which a voter lives has been regarded as a very powerful factor that affects voting choices in Korean elections. Although party identification, ideology, social class, age (generation), and economic status have often been chosen as explanatory factors that predict Korean voting choices as in advanced western democracies, one’s regional background has been considered to be the most important factor in Korea (Cho, 1998; S. M. Kim & Lee, 2015; Kwon, 2004; Yoon, 2012). Thus, abundant research on the influence of the regional affiliations of Korean voters on their voting choices has been conducted over a long period of time. Previous studies have used two ways to measure a voter’s regional background (S. M. Kim & Lee, 2015); one for their place of birth, and another for their current residence. While the former is an emotional and psychological concept based on affection and attachment to the hometown they left, the

²Some may raise a question about the selection of this statistical method. For example, multinomial logistic regression could have been used instead of a binary logistic model. In the analysis below, however, binary logistic regression was more useful to interpret the results than multinomial logistic regression. Besides, there were no significant differences between the two results in terms of substantive implications. Results with multinomial logistic regression are available in Table A.3, Figures A.1, and A.2 of Appendix.

³This independent variable of our study might be controversial due to the considerable variation in different social networking services (SNSs), as they can be either open or closed in nature. First of all, while the degree of openness may vary depending on the type of SNS, their essential attributes are fundamentally the same in that they are online platforms that allow users to share opinions freely with others on the basis of participation, sharing, and opening up to one another (C. H. Lee & Jung, 2014). Secondly, if we consider the psychological effects as well as the use of SNSs themselves, the essential similarities between them need to be more emphasized (Wang, Jackson, Gaskin, & Wang, 2014). Finally, by mentioning only “SNS,” the survey includes both open and closed types.

latter is a rational and economic one based on expectations for economic development in their current region of residence. For this reason, we have accounted for both kinds of regional information in our analysis. To examine regional voting, we divide major regions of potential conflict into three categories: PK (the southern region of Yeongnam), TK (the northern region of Yeongnam) and Honam (the southwestern part of Korea).⁴ Among respondents, approximately 20% were born in PK, approximately 16% in TK, and approximately 17% in Honam. Approximately 16% live in PK, approximately 10% in TK, and approximately 10% in Honam.

The purpose of this study is to examine the effects of social media use on regionalism in voting behavior. To test conditional effects, the social media use variable is interacted with each regional background variable. If using social media influences regionalist voting behavior, the interaction term between SNS and each regional variable in our model will be statistically significant. More specifically, if the interaction term has effects that can be described as an increase in bridging social capital, regionalist voting behavior will be weakened. On the other hand, it can be strengthened when the interaction term is instead associated with bonding social capital.

Control Variables

Other than the main independent variables described earlier, various other factors can affect voting choices. For example, a voter's party identification can have a significant influence (Tan, Ho, Kang, & Yu, 2000).⁵ The Michigan school has claimed that this is the most fundamental variable for explaining individual political behavior in American politics. Campbell, Coners, Millers, and Stokes (1960) explain that party identification is not a rational or logical concept, but an affective one. As in America, party identification affects voting choices in Korean politics (e.g., Gil (2013); Jang

⁴Historically, the most significant regional division in South Korea has been the rivalry between Yeongnam and Honam. However, since the 2000s, new political differences have been noted within Yeongnam. For example, while TK has strong supporters in the conservative party, PK voters have supported liberal parties since the 2000s.

⁵Some say that independent voters have accounted for from as little as 30% to as much as 50% of the vote in Korea (S.-Y. Kim, 2015; Tan et al., 2000). However, as Korean-independent voters are not monolithic, they have their own party identifications at different levels. Similar to the U.S. and other democracies, there are not many pure independents, but more leaners among self-identified independents in Korea (W.-H. Park & Song, 2012). Before the presidential impeachment and by-election, there were more conservative voters identifying with right-wing parties than progressive partisans and independents. Due to the collapse of conservative political parties caused by the impeachment of the former president Park Geun-hye, many conservative voters found themselves orphaned after becoming disappointed with the ruling party's corruption scandals. Thus, it is crucial to understand how the political events of 2017 will influence the partisan composition of voters and their realignment in the long run.

2015). The analysis includes both identification with the LKP with its strong base in Yeongnam and the DP of Korea with its strong base in Honam.⁶

Ideology has been as a meaningful factor in Korean politics since the 2000s (W. Kim, 2010). Generally, liberals vote for left-wing parties and vice versa. In the 19th presidential election, Moon from the DP was the most liberal candidate,⁷ while Hong was the most conservative candidate. Ahn from the PP was between the two in ideology. Ideology is measured based on self-identification, ranging from 0 (most liberal) to 10 (most conservative).⁸

Finally, another control variable worth noting is how voters evaluate the former government. According to Fiorina (1981), voters cast a ballot based on their evaluation of the former government's performance. Prior research on Korean voting behavior (e.g., Kang (2008)) notes that this variable has significant effect on voting choices. The evaluation variable is measured with a four-point scale, ranging from 1 (very bad) to 4 (very good).⁹

According to prior research on voting behavior in Korean politics (e.g. Jung (2016); Moon (2009)), socioeconomic variables such as education, age, income, and gender are used to explain voting choices. In particular, Jung (2016) reveals that the higher the level of education, the more likely an individual will be liberal. Conversely, Moon (2009) finds that elderly are more supportive for conservative candidates. The rich are more likely to vote for conservative parties (K. Lee, Lee, & Kim, 2013). In this analysis, the education level variable is divided into six categories: 1 (elementary school), 2 (middle school), 3 (high school), 4 (college), 5 (university), 6 (graduate). Age is divided into six categories, ranging from one's 20s to 60s. The income variable is measured based on monthly household income. The lowest category is lower than 1,000,000 won (1), and the highest over 5,000,000 won (6). Finally, with regard to the gender respondents, female is coded as 1 and male as 0. Descriptive statistics are shown in Table A.1.

Additionally, Table 1 displays the expected directions of causal links between dependent and independent variables in our study. Here, variables which have ambivalent directions are worthy of note. As candidate Moon is from a liberal party, it is expected that he would receive strong support from Honam in both hometown-based

⁶Among all of the respondents (1,200), only 715 respondents answered that they have a supporting political party, while 485 respondents said they have no supporting party. Among these 715 partisan, 197 identified with the LKP and 363 identified with the DP.

⁷Although Sim from the Justice Party was the most liberal candidate in the election, we focus on three candidates — Moon, Hong, and Ahn — in the analysis here.

⁸The median and mean of this variable are 5 and 4.93.

⁹The median and mean of this variable are 1 and 1.47.

Table 1.
Expected Directions of Causal Links

Independent Variables	Dependent Variables		
	Voting for Moon	Voting for Hong	Voting for Ahn
SNS	+	-	+
PK (home)	-/+*	+	-
TK (home)	-	+	-
HN (home)	+	-	+
SNS × PK (home)	+/-	-	+
SNS × TK (home)	+	-	+
SNS × HN (home)	-	+	-
PK (residence)	-/+*	+	-
TK (residence)	-	+	-
HN (residence)	+	-	+
SNS × PK (residence)	+/-	-	+
SNS × TK (residence)	+	-	+
SNS × HN (residence)	-	+	-
Ideology	-	+	+
LKP-Identifiers	-	+	-
DP-Identifiers	+	-	-
Evaluation of former Government	-	+	-
Female	-	-	-
Age	-	+	-
Education	-	-	-
Income	-	-	-

Note: *The relationship between PK and candidate Moon is ambivalent. While he is a candidate from the liberal party who traditionally has received his support from Honam (*Expected Directions* = (-)), he can also receive support from PK because he is from the PK region (*Expected Directions* = (+)).

and residence-based contexts, while he would receive weak support from TK, as he is not from the region. However, people who are from or live in PK might be ambivalent in their support toward candidate Moon. According to a traditional perspective, they would have negative attitudes toward him because PK is part of Yeongnam, a conservative regional alliance. Yet, in the early 2000s, regional divisions in Korean politics started to weaken with the retirement of the Three Kims (Kim Young-sam, Kim Dae-jung, and Kim Jong-pil) (Choi & Cho, 2005; Chung, 2012; Kang, 2003, 2010; Kim et al., 2008; Moon, 2005). Liberal parties in PK were not necessarily unwelcome. Roh Moo-hyun in fact won the 16th Korean presidential election, the first presidential election in the 2000s. He received strong and ardent support, not only from traditionally liberal Honam, but also the PK region where he is originally from.

This phenomenon had also occurred in the 19th Korean presidential election, which is the subject of our study. Contrary to traditional expectations, candidate Moon was able to garner strong support from his home region of PK while also being a candidate for the liberal party. The emergence of liberal candidates such as Roh and Moon, both of whom are from Busan in the PK region, has been seen as evidence that strong regionalism in Korean electoral politics is on the wane.¹⁰

Empirical Findings

Table 2 reports the results of regression from the models. Analyses of each candidate are conducted based on their hometown and region of residence, respectively. The main purpose of this study is to examine the conditional effects of social media use on regionalist voting. Before estimating the interaction terms, it is necessary to examine the independent effects of social media use. However, the social media use (SNS) variable is statistically insignificant in every model in Table 2, meaning that using social media does not independently alter the choices of voters. This is an interesting finding because social media use has been increasing exponentially (Korea Internet and Security Agency, 2017). Additionally, its effects were statistically significant in the 18th presidential election in 2012 (Table A.2). As revealed in the Appendix, the effects of social media use on voting choices were significant in most of the reported models.¹¹

Although independent effects of SNS use were not observed in the 2017 election, interaction terms between SNS and regional variables, the main variables in this study, are statistically significant in Model 1 and Model 5. Those interaction effects (SNS \times PK (home) and SNS \times HN (home)) are significant at the 0.10 level. The results together imply that SNS use had a moderating effect on the regionalist voting behavior of Korean voters in 2017. That is, voters from Busan were more supportive of Moon, who is from the same region. Yet, the regionalist voting behavior of these

¹⁰In the election results, presidential candidate Moon received strong support from PK, the southern province of the Yeongnam region. Even in the recent local election held in June 2018, support for his liberal party was found to be very high there. This stands in contrast to the northern Yeongnam province of TK.

¹¹Comparability between the two elections might be controversial. However, although the 2017 presidential election was not a bilateral competition but a multilateral one, it can still be comparable with a two-way election due to the impeachment of the former president. Having led the movement to impeach the former president, Moon received overwhelming support from voters in 2017, while a two-way competition structure formed between candidates Hong and Ahn. The two candidates were seen as each representing the regions of Yeongnam (particularly TK) and Honam, respectively.

Table 2.
Social Media Use and Regionalist Voting (The 19th Election of 2017)

The 19th Election (2017)						
DV	Logit Coefficients (Standard Errors)					
	Voting for Moon		Voting for Hong		Voting for Ahn	
Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
SNS	0.558 (0.389)	0.438 (0.357)	-0.712 (0.523)	-0.512 (0.422)	-0.227 (0.267)	-0.165 (0.238)
PK (home)	2.629 (1.607)		-0.874 (1.619)		-1.469 (1.656)	
TK (home)	0.644 (1.724)		1.123 (1.826)		-1.384 (1.191)	
HN (home)	1.682 (2.055)		-3.958 (4.785)		-1.310 (1.613)	
SNS × PK (home)	-1.184* (0.673)		0.717 (0.759)		0.536 (0.636)	
SNS × TK (home)	-0.859 (0.749)		0.462 (0.853)		0.330 (0.493)	
SNS × HN (home)	-0.674 (0.819)		0.953 (1.942)		1.158* (0.690)	
PK (residence)		2.636 (1.646)		-1.057 (1.596)		-0.135 (1.542)
TK (residence)		1.397 (1.942)		2.170 (2.004)		-3.457* (2.039)
HN (residence)		3.020 (2.623)		0 (omitted)		-0.398 (2.108)
SNS × PK (residence)		-0.960 (0.730)		0.750 (0.730)		-0.206 (0.672)
SNS × TK (residence)		-0.875 (0.820)		-0.453 (0.871)		1.095 (0.730)
SNS × HN(residence)		-1.065 (1.011)		0 (omitted)		0.757 (0.835)
Ideology	-0.339*** (0.129)	-0.381*** (0.131)	0.340** (0.149)	0.344** (0.149)	-0.096 (0.101)	-0.111 (0.101)
LKP-Identifiers	0.967 (0.721)	0.931 (0.734)	7.400*** (1.225)	6.754*** (1.124)	-3.792*** (0.581)	-3.708*** (0.582)
DP-Identifiers	7.516*** (0.741)	7.488*** (0.730)	1.330 (1.241)	0.745 (1.226)	-6.883*** (1.107)	-6.514*** (1.056)
Evaluation of former Government	-0.710* (0.382)	-0.690* (0.376)	0.693* (0.407)	0.521 (0.378)	0.170 (0.323)	0.270 (0.322)
Female	0.239 (0.483)	0.215 (0.478)	0.096 (0.550)	0.087 (0.517)	-0.104 (0.344)	-0.207 (0.343)

Table 2. (Continued)

The 19th Election (2017)		Logit Coefficients (Standard Errors)				
DV	Voting for Moon		Voting for Hong		Voting for Ahn	
Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age	0.034 (0.021)	0.030 (0.021)	-0.028 (0.025)	-0.016 (0.024)	0.021 (0.016)	0.021 (0.016)
Education	0.517* (0.283)	0.509* (0.281)	-0.367 (0.314)	-0.292 (0.292)	-0.053 (0.212)	-0.018 (0.209)
Income	0.125 (0.147)	0.139 (0.148)	-0.115 (0.177)	-0.135 (0.170)	0.081 (0.111)	0.071 (0.112)
Constant	-6.276*** (2.343)	-5.863*** (2.279)	-4.535* (2.667)	-4.594* (2.556)	-0.005 (1.660)	-0.208 (1.576)
<i>N</i>	646	646	646	577	646	646
Pseudo R^2	0.8289	0.8266	0.8381	0.8153	0.5456	0.5428

Note: In Model 4, Honam (residence) variable is omitted due to perfect failure of prediction. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Busan-originated voters tends to be moderated as they are increasingly exposed to online social networking, possibly with people from different regional and political backgrounds. Similarly, voters born in the Honam region have been traditionally very supportive of the DP and are more likely vote for Ahn, the third party candidate, as their usage of social media increases. In other words, the political attachment of voters to their traditional regional parties could become moderated as they actively engage with people from different backgrounds online.

Although independent effects of SNS use do not exist, it is still able to affect voting choices by interacting with the regional backgrounds of voters, especially their hometowns. This may be regarded as a sign of the conditional effects of social media use on regionalist voting. Namely, if regionalist voting behavior is considered to be highly exclusive and group oriented in nature, Korean voting behavior can be uniquely influenced and moderated by the changing socio-political environment presented by the expanded use of social media. While social media has two conflicting possible outcomes (i.e., bonding and bridging) in terms of its linking and networking effects, the empirical findings here suggest that online social networking tends to serve more for bridging rather than bonding in the context of Korean regionalist voting.

The empirical findings here are somewhat different from the analyses of the 2012 presidential election. As shown in Table A.2 of the Appendix, interaction effects between regionalist voting and SNS use were not found in the 18th presidential

election in 2012, while only independent effects of SNS were statistically significant. Given that younger generations are more active on the Internet and SNS, these online spaces are more likely to have liberal-leaning users, and we believe that this is observable in our analysis of the 2012 presidential election. That is, the more the voters are likely to vote for the liberal candidate, the more they use social media. However, as more Koreans of all ages are exposed to social media and online social networking sites, the political and partisan effects of SNS use have become more complicated than simply a more liberal bias, and our empirical analysis of the 2017 presidential election indicates that the effects of SNS are in fact related to the way Korean voters interact with other people with various political backgrounds.

Among control variables, ideology, party identification, one's evaluation of the former government and education levels are statistically significant. Results are consistent with prior research (W. Kim, 2010; Moon, 2009) that revealed ideological voting in Korea. The ideology variable is statistically significant in Models 1–4. Liberals voted for Moon, while conservatives were more likely to vote for Hong. In the case of Ahn, the ideology variable was insignificant as his ideological position was expected to be between Moon and Hong's.

Studying party identification in Korea, Jang (2015) and Gil (2013) argue that attachment to a certain party has strong effect on voting choice. According to the results in Table 2, voters that identify with the DP were more likely to vote for Moon, and voters that identify with the LKP to vote for Hong. Both kinds of voters were less likely to vote for Ahn from the PP. In all, party identification variables reveal statistical significance in every model in Table 2.

Other significant control variables in Table 2 are one's evaluation of the former government and level of education. Results imply that a voter's evaluation of the former government of President Park Geun-hye affects one's voting choices (Kang, 2008). A more negative evaluation of Park's government appears to increase support for Moon, while a positive evaluation generates votes for Hong.¹² The higher their level of education, the more likely the voters are to support Moon, a liberal candidate (Jung, 2016).

The succeeding figures reveal the conditional effects of social media use on regionalist voting for each candidate. Figure 1 shows graphical results based on regionalist votes based on one's hometown, while Figure 2 shows results based on residence-based regionalist votes.¹³ In these figures, each shape of dot represents

¹²Former President Park Geun-hye was from the Saenuri Party, which was followed by the LKP.

¹³Since no respondent in the survey sample said he or she voted for Hong Joon-pyo in Honam region, a predicted probability line for Hong is missing in the center panel of Figure 2.

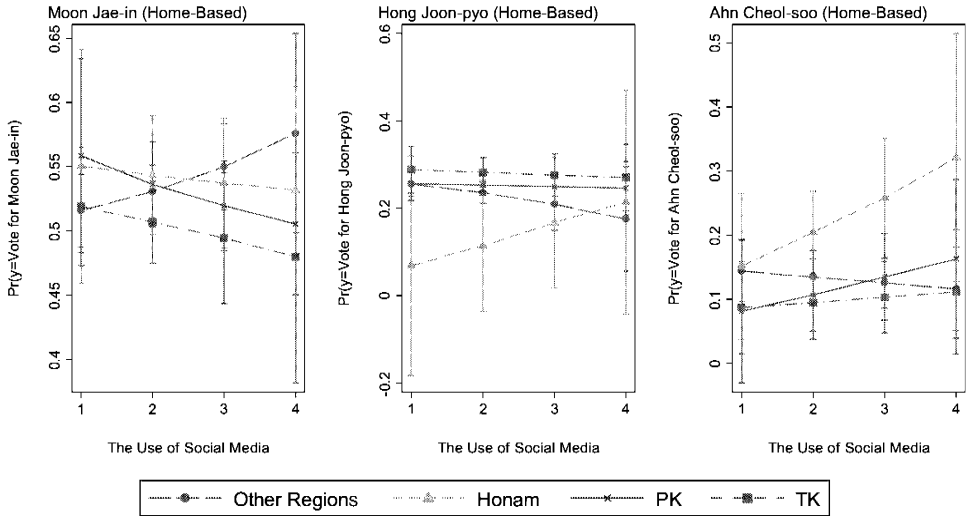


Figure 1. The conditional effects of social media on regionalist voting: Hometown-based model.

different regions, and each of the four lines indicates a predicted probability. The y-axis denotes the size of predicted probability, and the x-axis represents the frequency of social media use.

First, PK voters as seen in Table 2 are less likely to vote for Moon as they use social media more frequently. Although PK is a part of the historically conservative

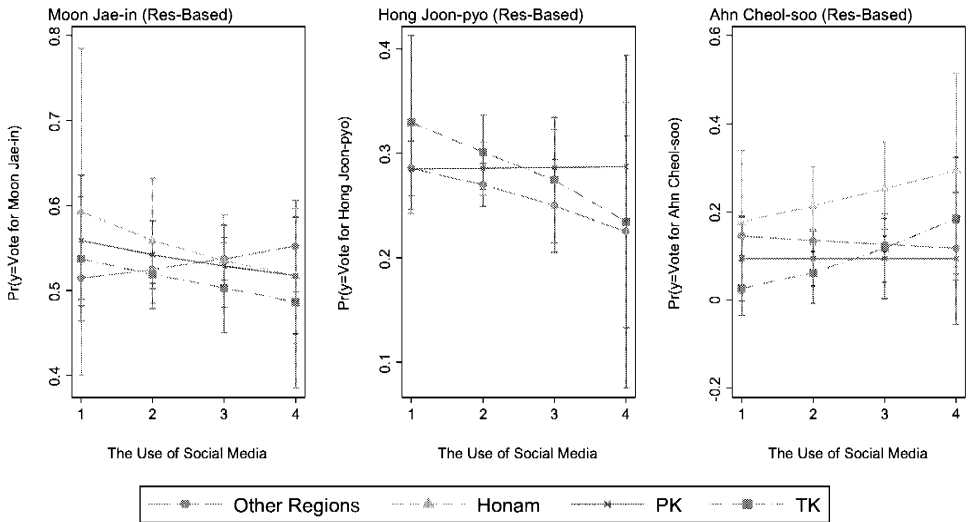


Figure 2. The conditional effects of social media on regionalist voting: Residence-based model.

Yeongnam region, it has grown closer to liberal parties since the 2000s and developed an aversion to conservative parties in the wake of Park's impeachment. PK's support for Moon is examined in Table 2, though both home-based and residence-based variables are statistically insignificant. In this context, PK voters reveal the strongest support for Moon (social media use = 1), but the probability of voting for Moon decreases as they are more exposed to social media.

This pattern is also witnessed in the TK and Honam regions. Unlike the SNS × PK (home) variable, the SNS × TK (home) and SNS × HN (home) variables are statistically insignificant. However, this does not necessarily mean that there are no significant interaction effects. Simulation results in the figures represent that for TK voters disappointed with the former president and Honam voters who have traditionally supported the DP, there is a downward tendency in predicted probability with an increased level of social media use.

Second, Hong is from the conservative LKP. He is therefore unpopular among liberal Honam voters. However, according to the hometown-based model in Figure 1, Honam voters are more likely to vote for Hong when they use social media more frequently. Although this pattern is not revealed in the residence-based model in Figure 2 due to the perfect failure of prediction in the Honam (residence) variable, the hometown-based simulation results do confirm this tendency clearly. However, this does not mean that the conditional effects of social media are absent in regionalist voting that is based on residence. As the most ardent supporters of the conservative LKP, voters in the TK region are less likely to vote for Hong as their usage of social media increases, as the residence-based model in Figure 2 indicates.

Finally, in the third table in Figure 2 showing votes for Ahn, interaction effects are clear in the Honam region. As displayed in Table 2, voters who either were born or reside in Honam demonstrated strong support only for Moon from the DP in the 2017 presidential election. However, the more the same voters were likely to vote for Ahn, the more they used social media. Support for Ahn in Honam displays a sharp slope in the hometown-based model in Figure 1, indicating that the conditional effects of social media use are highly discernable there. This pattern is also observable among PK and TK voters in hometown-based regions, as well as TK voters in residence-based regions.

Conclusion

In sum, this study has investigated the conditioning effects of social media use on regionalist voting behavior. The empirical findings of this study have shown that there have been significant interaction effects between social media use and regional

background variables, while the independent effects of social media variables on voting choices are statistically insignificant. This implies that region-based voting behavior among the Korean electorate can be moderated by the active use of social media. By connecting people with different regional backgrounds in political discussion online, social media does have the potential to reduce regional rivalry by creating bridging social capital in society.

We carefully examined the conditional effects to determine if they create either bonding or bridging social capital. If the use of social media tends to increase bonding by homophily, regionalism would increase with the use of social media. However, if social media creates bridging by heterophily, increased social media use would instead cause regionalism to weaken. According to our analysis, as revealed in the figures earlier, social media use in Korea promotes social capital that is bridging rather than bonding.

Conversely, our analysis of the 2017 presidential election data has been somewhat different from findings from the 2012 presidential election in terms of the effects of social media on the electoral behavior of Korean voters (Table A.2). While no significant interaction effects were found between SNS and regional dummies in the analyses of the 2012 presidential election, the independent effects of social media were significant in a majority of the empirical models. According to Table A.2, a more frequent use of social media during the election process was significantly associated with one's likelihood of choosing a more liberal candidate (e.g., Moon) in 2012. That is, a liberal bias may have existed in 2012. Yet, independent effects of social media use have disappeared in the 2017 elections, and this implies that the manner in which social media moderates the electoral process in Korea has since changed. The properties of social media have shifted to affect liberals as well as conservatives. Thus, statistical significance capturing liberal bias has disappeared in the 2017 election, but interaction effects have emerged that reveal a more complicated nature for their roles. This is consistent with prior research that has revealed similar moderating effects for social media from an analysis of data from the 20th Korean general election in 2016 (J. M. Lee & Kim, 2017).

Given these empirical findings, we argue that such a trend will continue and even strengthen in future elections. Because of the increased number of social media users and a new abundance of bridging social capital, the regionalism that has been so influential to elections in Korea appears to be in the process of change.

Appendix

Table A.1.
Descriptive Statistics of Variables

Variable	<i>N</i>	Mean	Std. Dev.	Min	Max
Voting for Moon	961	0.496	0.500	0	1
Voting for Hong	961	0.428	0.821	0	1
Voting for Ahn	961	0.480	1.101	0	1
SNS	1,200	2.008	0.894	1	4
PK (home)	1,200	0.196	0.397	0	1
TK (home)	1,200	0.155	0.362	0	1
HN (home)	1,200	0.170	0.376	0	1
PK (residence)	1,200	0.137	0.344	0	1
TK (residence)	1,200	0.100	0.300	0	1
HN (residence)	1,200	0.100	0.300	0	1
Ideology	1,170	4.931	2.131	0	10
LKP-Identifiers	715	0.275	0.447	0	1
DP-Identifiers	715	0.507	0.500	0	1
Evaluation of former Government	1,200	1.474	0.652	1	4
Female	1,200	1.504	0.500	1	2
Age	1,200	46.573	13.972	20	82
Education	1,200	3.762	1.100	1	6
Income	1,200	4.734	1.686	1	11

Table A.2.
Social Media Use and Regionalist Voting (The 18th Election in 2012)

The 18th Election (2012) DV	Logit Coefficients (Standard Errors)			
	Voting for Park		Voting for Moon	
Variable	Model 1	Model 2	Model 3	Model 4
SNS	-0.233 (0.143)	-0.313** (0.133)	0.261** (0.128)	0.262** (0.119)
PK (home)	-0.096 (0.537)		-0.199 (0.530)	
TK (home)	1.210** (0.618)		-0.407 (0.650)	
HN (home)	-0.206 (1.213)		0.366 (0.746)	
SNS × PK (home)	0.086 (0.260)		-0.010 (0.238)	

Table A.2. (Continued)

The 18th Election (2012) DV	Logit Coefficients (Standard Errors)			
	Voting for Park		Voting for Moon	
Variable	Model 1	Model 2	Model 3	Model 4
SNS × TK (home)	-0.414 (0.279)		0.005 (0.289)	
SNS × HN (home)	-0.454 (0.784)		0.001 (0.405)	
PK (residence)		-0.467 (0.562)		0.155 (0.559)
TK (residence)		0.800 (0.747)		-0.623 (0.842)
HN (residence)		-0.374 (1.211)		0.413 (0.744)
SNS × PK (residence)		0.305 (0.280)		-0.107 (0.262)
SNS × TK (residence)		-0.228 (0.328)		0.129 (0.373)
SNS × HN (residence)		-0.380 (0.783)		0.006 (0.404)
Ideology	0.155*** (0.056)	0.154*** (0.056)	-0.113** (0.053)	-0.113** (0.054)
LKP-Identifiers	2.582*** (0.237)	2.599*** (0.239)	-2.842*** (0.325)	-2.860*** (0.327)
DP-Identifiers	-2.282*** (0.332)	-2.256*** (0.331)	2.165*** (0.227)	2.168*** (0.226)
Evaluation of former Government	0.775*** (0.150)	0.777*** (0.150)	-0.732*** (0.142)	-0.744*** (0.143)
Female	-0.040 (0.206)	-0.028 (0.206)	-0.248 (0.193)	-0.250 (0.193)
Age	0.017* (0.009)	0.017* (0.009)	0.009 (0.008)	0.009 (0.008)
Education	0.128 (0.208)	0.135 (0.206)	0.209 (0.197)	0.199 (0.196)
Income	-0.029 (0.035)	-0.027 (0.036)	0.007 (0.033)	0.007 (0.033)
Constant	-3.646*** (0.918)	-3.525*** (0.909)	0.532 (0.850)	0.525 (0.846)
<i>N</i>	1,108	1,108	1,108	1,108
Pseudo <i>R</i> ²	0.5761	0.5749	0.5306	0.5301

Note: Variables, measurement, and statistical models are same as those in the analysis of the 2017 election (Table 2). It is clear here that unlike the results in Table 2, while only independent effects of SNS are statistically significant, none of the interaction terms are significant. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A.3.
Results of the Multinomial Regression Model

Variable	Logit Coefficients (Standard Errors) (Base Outcome = Vote for Ahn)			
	Hometown-Based		Residence-Based	
	Voting for Moon	Voting for Hong	Voting for Moon	Voting for Hong
SNS	1.082** (0.520)	-0.189 (0.671)	0.813* (0.483)	-0.203 (0.542)
PK (home)	6.043* (3.243)	2.241 (3.222)		
TK (home)	3.589 (2.266)	3.829 (2.677)		
HN (home)	2.514 (2.743)	-1.697 (5.060)		
SNS × PK (home)	-2.533** (1.240)	-0.470 (1.324)		
SNS × TK (home)	-1.730 (1.077)	-0.513 (1.225)		
SNS × HN (home)	-1.337 (1.089)	-0.310 (2.087)		
PK (residence)			4.281 (2.844)	0.961 (2.760)
TK (residence)			8.161** (3.840)	8.253** (4.120)
HN (residence)			3.575 (3.046)	-12.543 (4,193.602)
SNS × PK (residence)			-1.451 (1.307)	0.128 (1.304)
SNS × TK (residence)			-2.893* (1.507)	-1.943 (1.615)
SNS × HN (residence)			-1.435 (1.160)	0.044 (1,796.296)
Ideology	-0.160 (0.174)	0.367* (0.210)	-0.187 (0.183)	0.314 (0.208)
LKP-Identifiers	3.464*** (0.969)	8.588*** (1.611)	3.608*** (0.991)	8.625*** (1.741)
DP-Identifiers	8.917*** (1.300)	6.157*** (1.834)	8.975*** (1.332)	6.529*** (1.967)
Evaluation of former Government	-0.978* (0.571)	-0.025 (0.603)	-0.984* (0.540)	-0.183 (0.525)

Table A.3. (Continued)

Variable	Logit Coefficients (Standard Errors) (Base Outcome = Vote for Ahn)			
	Hometown-Based		Residence-Based	
	Voting for Moon	Voting for Hong	Voting for Moon	Voting for Hong
Female	0.690 (0.638)	0.700 (0.773)	0.555 (0.617)	0.420 (0.704)
Age	0.022 (0.028)	-0.043 (0.036)	0.015 (0.027)	-0.028 (0.033)
Education	0.535 (0.381)	-0.178 (0.425)	0.505 (0.375)	-0.136 (0.395)
Income	0.006 (0.180)	-0.028 (0.233)	0.081 (0.189)	0.040 (0.233)
Constant	-6.990** (3.196)	-5.552 (3.679)	-6.314** (2.934)	-5.823* (3.476)
N	591		591	
Pseudo R ²	0.8504		0.8439	

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

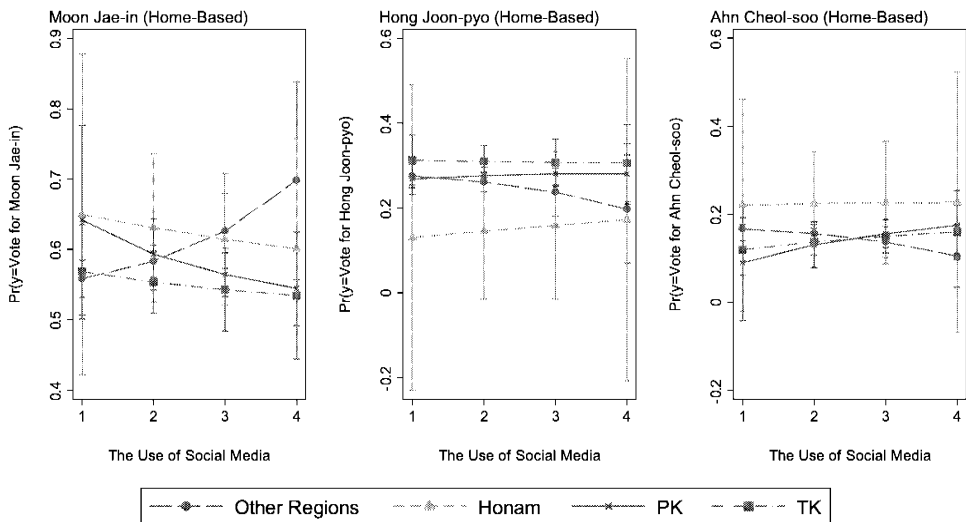


Figure A.1. Conditional effects of social media on regional voting: Hometown-based model.

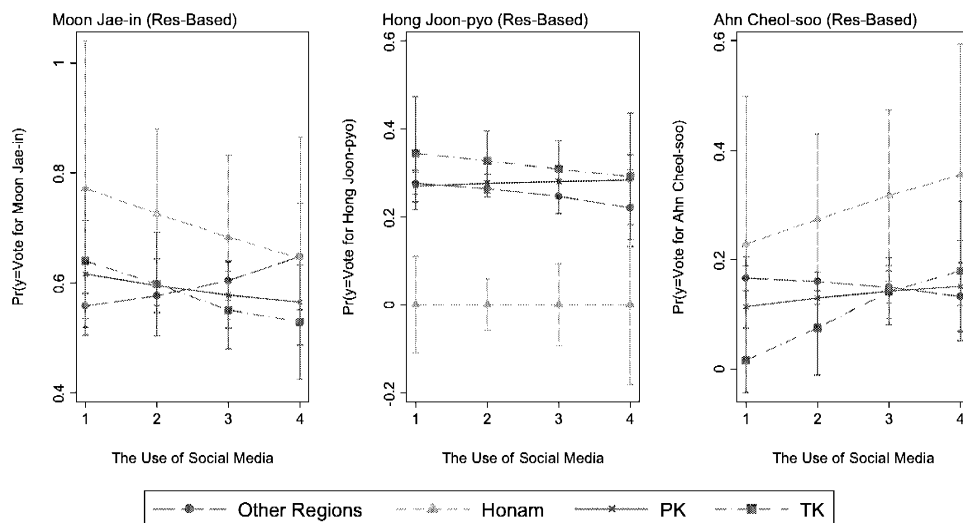


Figure A.2. Conditional effects of social media on regional voting: Residence-based model.

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An Exploration of the Use of Facebook by Legislators in Taiwan

KAH-YEW LIM

Previous studies have found that how to win an election is always an important question for legislators. Their behavior in lawmaking and constituency service is also associated with their aspirations for re-election. In the era of booming social media, how legislators can use social media to increase their chances for election and re-election has become a compelling issue. This study argues that legislators do indeed maximize the benefits of social media to win elections. On this account, this study intends to explore two main questions: (1) What kind of messages legislators choose to convey to voters on their fan pages; and (2) Whether the political characteristics of legislators affect the types of the messages they convey there. In this study, posts were collected from the fan pages of 25 Taiwanese legislators. These text messages were then converted into numerical data that could be quantitatively analyzed with the content analysis method. It was found that legislators tend to start with soft messages in their communications with the public. They share some details of their daily schedules and everyday lives with their voters before they begin image building and posting political material. This study also found that the political characteristics of legislators, including their party membership, their status either as a district or proportional representation (PR) legislator, and their incumbency all affect the content of posts on their fan pages. For example, compared to Kuomintang (KMT) and Democratic Progressive Party (DPP) legislators who share information from their daily lives, New Power Party (NPP) legislators prefer to share only political information. PR legislators devote more attention than district legislators to criticizing the government on their fan pages. Incumbents are significantly less likely than challengers to share daily information, but more likely to share political information. This study found that the aforementioned differences have resulted from the many ways that different types of legislators use to increase their chances of winning an election.

KEYWORDS: Political communication; social media; Facebook; legislators.

* * *

KAH-YEW LIM (林啟耀) holds a PhD from the Department of Political Science at National Chengchi University. His research interests include public opinion, election studies, and political behavior. He can be reached at <kylim.ivan@gmail.com>.



While lawmaking and constituency service are the two main pre-election approaches that legislators use to build rapport with voters, the management of social media is also becoming imperative. Currently, only 11 of the 113 legislators in the Taiwan's Legislative Yuan do not have a Facebook presence. The number of fans each legislator has also varies widely, from fewer than 1,000 to more than 300,000. There is also a considerable variety in the content of their posts; some use their fan page to cultivate a personal image, while others use it to provide political information or even to attack their opponents. The topic of greatest concern in this study is: What factors affect the way legislators manage their fan pages on Facebook?

It has been suggested in previous studies that political views affect not only legislative behavior but also an individual's motivation to perform well and the necessity to establish a relationship with voters (Barker, Boston, Levine, McLeay, & Roberts, 2003; Lancaster & Patterson, 1990; Stratmann & Baur, 2002). Social media usage is low budget, allows the use of large screen displays, and has a high interaction rate (Hong, 2006). There are also a number of publishing strategies (Bichard, 2006; Carlson & Strandberg, 2005). This study argues that differences in content may be related to the political characteristics of legislators themselves: some may be either district or party-listed, first-elected or re-elected, or be either from the ruling party or the opposition.¹ Some scholars have also stressed that the behavior of a legislator whose main purpose is to run for re-election must be related to election factors (Mayhew, 1974) and social media posts may be very different before and after an election.

This study examines posts by members of the 9th Legislative Yuan to their Facebook fan pages dated a year before and after their elections (January 15, 2015 to February 1, 2017). Posts were collected for content analysis, and the text information was converted to digital form for statistical analysis, then used to answer the following questions: (1) What kind of messages do legislators choose to offer to voters on their fan pages? (2) What factors affect the function of these messages? Although there have been numerous studies of representative behavior, the use of Internet technology by politicians has scarcely been investigated (Wang, 2009). The intention of this study is to find answers to these questions using relevant theories and gain a clear understanding of the connection between legislators and Internet technology.

¹The political characteristics of legislators can be divided into quite a few kinds of which three, i.e., party membership, incumbency, and status as a district or proportional representation (PR) legislator are most often used to explain their behavior (Cain, Ferejohn, & Fiorina, 1987; Hix, 2004; Jun & Hix, 2010; Keefer & Khemani, 2009; Soule, 1969).

Social Media and Political Communication

The reason that social media is so powerful is that its influence is not confined solely to the Internet, but is also capable of being disseminated widely on political, social, and cultural levels. Social media has also become a main channel for a majority modern people to learn about the real world (Hanneman & Riddle, 2005). Social media refers to the web-based community that allows people to express themselves, connect with other social networks, and keep in touch with others (Ellison, Steinfield, & Lampe, 2007). Facebook, the social media service used by the largest number of people in the world, is a prominent example. By 2017, Facebook had more than 2 billion monthly active global users, accounting for almost one quarter of the global population. As of July 2016, the number of active Facebook users in Taiwan had already grown to 18 million, and Facebook is currently the largest social media service used in Taiwan. In response to the rapid growth of social media use, many governmental organizations around the world have begun to use Facebook as a main channel for image building, communication and advocacy (Briones, Kuch, Liu, & Jin, 2011). As for Taiwan, the Ministry of National Defense has also transferred a large amount of policy advocacy and communication with the public to its fan pages on Facebook (Fu, 2016).

In addition to its use by government departments, the rapid development of network technology has resulted in the wide use of social media by politicians. Politicians now use social media to communicate with voters, and in the instance of Facebook, this is becoming widespread (Ferber, Foltz, & Pugliese, 2008). Its low-budget outlay, large layout, high interactivity, and controllability (Hong, 2006) make Facebook an alternative channel to help politicians contact the public directly and manage their relationships more efficiently (Schweitzer, 2005). Williams and Gulati (2009) found that some US Members of Congress used Facebook as an effective means to mobilize voters in both the 2006 and 2008 congressional elections. Moreover, Fraser and Dutta (2008) found that all candidates had tried to engage with voters through social media in the 2008 US congressional elections. Even President Barack Obama made great use of the political communication effects of social media in the 2008 presidential election, successfully raising a huge sum of money and mobilizing young voters to the polls, one of the crucial factors for his success in the election (Macnamara & Kenning, 2011). Kim and Geidner (2008) point out that social media can effectively mobilize users to vote, and civic responsibility can also be cultivated in young people. The number of Taiwanese citizens using social media has risen vertically, and Taiwanese politicians have also started to use social media as a new channel to engage with the public. In the 2009 “3-in-1” local elections, more than 80% of the candidates used Facebook in this way (Hong, 2006).

Factors That Affect the Use of Social Media by Politicians

More and more politicians are now using social media, and researchers have started to direct their attention to the factors that affect such use. Hernnson, Stokes-Brown, and Hindman (2007) point out that compared to incumbents, challengers are generally more willing to use campaign sites to raise funds. Graham (2002) found that the degree of urbanization in a constituency is an important factor affecting the decision by candidates to use network technology. The age of a candidate is another important factor, and younger candidates tend to be readier to make use of network technology (Carpenter & Buday, 2007).

Apart from willingness and frequency of use, many scholars are concerned about the strategies politicians use in their engagement with the public through social media. It is also believed that their intentions for using social media may be less than obvious. Bichard (2006) points out that in the process of using social media to interact with the public, politicians have specific objectives: (1) to convey the ideas of political figures; (2) to promote election campaigns; (3) to verify the endorsement of specific people; (4) to call for action in ways such as canvassing, mobilization and fund-raising; and (5) to attack their opponents. Bystrom, Banwart, Robertson, and Kaid (2004) suggest that the network strategies politicians use include calling for change, inviting participation in activities, and strengthening their own image. Trammell, Williams, Postelnicu, and Landreville (2006) classify the main strategies as calling for change, inviting participation, emphasizing hope for the future, and attacking opponents. Zavattaro (2010) argues that politicians prefer to use network technologies such as personal websites and blogs to highlight their professionalism, experience, and personalities. Yanoshevsky (2009) believes that candidates used social media to interact with the public during the 2008 presidential election by appealing for voter participation, narrowing their distance from the public and attracting more potential voters. After a review of relevant past studies of the use of the Internet by politicians, Chen and Chu (2013) organized their findings into six categories: Mobilization, Attacking an Opponent, the Sharing of Daily Life, Political Information, Personal Characteristic Image, and Endorsement. These authors classified Attacking an Opponent and Political Information as hard messages, the Sharing of Daily Life and Personal Characteristic Image as soft messages, and Political Information and Endorsement as election messages.² Wen (2014) compared the

²Carmines and Stimson (1980) differentiated issues into “hard” or “easy” categories. Hard issues are issues with relatively higher information costs where voters must invest more time and mental effort to interpret and make judgments. Easy issues are relatively simple and judgment requires little effort. Adopting this concept, Chen and Chu (2013) classified messages as hard messages and soft messages, the former being harder for the public to interpret directly and the latter easier to understand.

Facebook posts of Kuomintang (KMT) and Democratic Progressive Party (DPP) candidates two months before and after the 2012 elections, finding that the majority of posts were about taking credit and seeking recognition for achievements, while the content of the posts was largely about a candidate's policy and not their personality. Further comparison showed that in posts from incumbent president Ma Ying-jeou, posts that took credit for achievements and defended policies increased significantly after the election. This was accompanied by an increase in combative posts from the successful candidate, Tsai Ing-wen.

Legislators and Their Strategies

Previous studies have shown that legislators think rationally and will choose the most favorable actions for the pursuit of their personal political goals (Carey & Shugart, 1995). Fenno (1973) argues that most members of Congress have three political goals: re-election, power in Congress, and good public policy. Of these, re-election is a precondition for the accomplishment of other political goals, and it can thus be regarded as the most important goal for a legislator (Fiorina, 1989). This means that legislators are motivated to win votes to maximize their chances for re-election (Mayhew, 1974; Taagepera & Shugart, 1989). On this account, legislators with different political characteristics may take different political actions.

A comparison of district and party-list legislators showed that these two types of legislators do indeed decide on different political actions. For example, party-list legislators usually pay more attention to national-level issues or defending the policies of their party, while single district legislators usually take more care of their own constituencies and have a closer connection with their voters (Lancaster & Patterson, 1990). Stratmann and Baur (2002) found that in Germany, district legislators and party-list legislators tend to have different criteria in the selection of committees. Kerevel (2010) found that in Mexico, bills proposed by the two types of legislators also tend to differ in the content. In a study of Taiwanese legislators, Batto (2005, 2009) found that there are significant differences between district and party-list legislators, both in the selection of committees and in voting on proposed bills. Still other characteristics than the type of constituency can affect the political behavior of legislators. Fenno (1978) suggests that newly elected legislators will invest more time into constituency services to ensure their votes, while veteran legislators usually invest their time into congressional activities. Sheng (1999, 2000) found that both newly elected legislators and KMT legislators were more likely to be constituency oriented in Taiwan.

Researchers believe that legislators with different political characteristics may have different ways of maximizing the benefits of social networks. Greenberg (2012) found that younger members of the US Congress are more willing to use Facebook. Republicans use Facebook to communicate with their voters more often than Democrats. Straus, Glassman, Shogan, and Smelcer (2013) found that the use of social media by legislators from minor parties is higher than from those in major parties. Williams and Gulati (2009) found that in the 2006 and 2008 US congressional elections, the more educated candidates were more willing to use Facebook as a media tool in their election campaigns. An analysis of the 2006 US congressional elections by Williams and Gulati (2013) concluded that non-incumbents and challengers used Facebook more actively to promote themselves than incumbents, due to a lack of resources and positions that were not as prominent. Taiwanese legislators are using Facebook more and more, and some scholars have started to pay attention to this fact. Chen and Chu (2013) found the content of posts from Taiwanese legislators during the election to be different from that seen in general sessions. During the election period, legislators posted significantly more image-building material in addition to endorsements and drives for mobilization. Also, similar to Wen's (2014) study, Chen and Chu also found that Taiwanese candidates were less likely to attack their opponents on Facebook, which is quite different to the behavior prevalent in online blogs of the past.

Purpose, Question and Theoretical Framework

The number of social media users has risen enormously in unison with the rapid development of network technologies, and this has posed new challenges for legislators. As social media is low in cost, broad in its approach, spreads quickly, and is highly interactive, legislators now have more direct access to their voters and an easier way to respond to their needs.

As emphasized in previous studies, the actions of legislators are generally based on increasing their chances of being elected (Carey & Shugart, 1995; Fenno, 1973). It is reasonable to assume that Taiwan's legislators have the same purpose and preferences. Social media can not only help legislators reach out to voters who cannot be reached through traditional media, but also convey more diverse messages to better satisfy voters and respond to their needs. On this account, it is easy to imagine that Taiwan's legislators try their best to maximize the benefits of social media. From previous studies, we have also found that the messages conveyed by politicians serve specific functions. These include enabling voters to understand them better, building their image, conveying political information, and mobilizing supporters (Bystrom

et al., 2004; Chen & Chu, 2013; Trammell et al., 2006). Taiwan's legislators also convey different kinds of messages to voters on their Facebook fan pages. In summary, this study argues that in order to maximize their chances of being elected or re-elected, Taiwan's legislators use social media to convey messages of different functions to voters. In this study, two questions are proposed: (1) What kind of message do legislators wish to convey to voters on their fan pages? (2) What factors affect the functions of the posted messages? Answering these questions would enable us to understand how politicians communicate with voters through social media as well as the reasons behind their choices. In addition, such answers would also help us understand whether politicians manage social media differently from their personal websites and blogs.

Many previous studies have found that legislative behavior is affected by the politics of the individual and is also closely connected to the pursuit of re-election (Fenno, 1978; Kerevel, 2010). In terms of the messages that legislators choose to post on their fan pages, what factors affect their choices? As an electoral race becomes more competitive, district candidates and legislators should be more likely to use social media to mobilize voters, convey messages and build their personal images than proportional representation (PR) ones. To be better understood by voters, PR legislators and candidates with lower visibility may be more likely to provide information about their daily lives. Likewise, new candidates may also have to deal with the problem of insufficient visibility. They tend to convey similar messages to reach their voters. To increase their chances for election, new candidates and legislators may also need to mobilize voters or draw attention to external support. With a certain level of visibility, incumbent legislators may prefer to discuss political affairs or express their policy positions on fan pages. Finally, legislators of opposition parties are more inclined to give criticism on the ruling party or officials, while legislators of the ruling party are less likely to criticize officials of the same party. Therefore, it is reasonable to infer that before the presidential election, DPP legislators preferred to convey offensive messages, while KMT legislators showed similar preferences after the election. As it was an opposition party both before and after the election, legislators of the New Power Party (NPP) have continued to convey combative messages on their fan pages even after the election.

Important control variables were incorporated in this study to determine if a legislator's political affiliation affects the functional orientation of posts on his or her fan page. It has previously been found that the timing of a given post is an important factor affecting the way politicians communicate with voters, and this is particularly evident both before and after an election. Also, legislators who are engaged in an

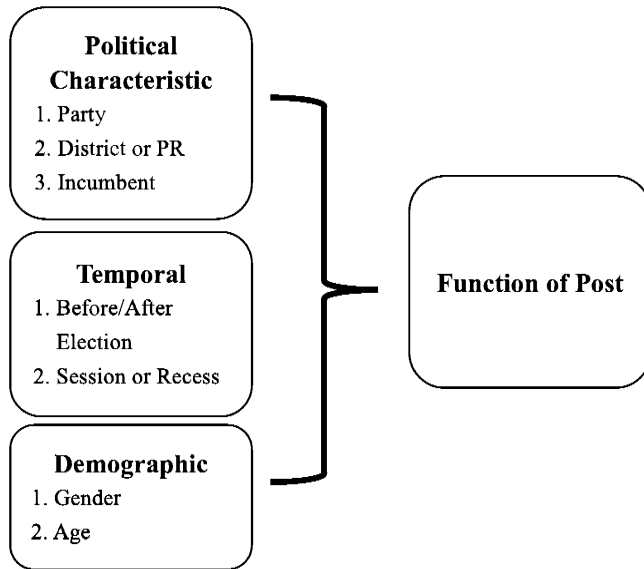


Figure 1. Research framework.

active session of the Legislative Yuan may communicate with voters in a way that is different from when they are not busy with actual legislation. In addition to timing, other personal characteristics such as gender and age were also incorporated as control variables.³ The research framework of this study is shown in Figure 1.

Methodology

Why Legislators?

In this study, there are several advantages in the selection of legislators over the many other types of elected public officials in Taiwan. Firstly, when compared to the president and the heads of counties and cities, legislators can serve as both local and national political figures. Secondly, legislators are more politically diverse in that they may be either incumbents or aspirants, be on either a district or party list, and may belong to one of several parties. These factors have made legislators suitable research subjects for a study of the influence of political characteristics on the use of Facebook.

³The education level of legislators theoretically has an effect on how they run their fan pages, but there happens to be little variation in the educational level of the legislators, and only one has a college degree. Therefore, educational level was not used as a control variable in this study.

Procedure

Data collection

The information required for this study can be divided into two parts. The first concerns basic information such as party membership, status as either a district or party candidate, incumbency, gender and age. This information was collected from the official website of the Legislative Yuan (<http://www.ly.gov.tw/>). The second part involves the posts that legislators have made to their Facebook fan pages.⁴ By using the Rfacebook package in R software, this study retrieved all posts made by the 102 legislators with Facebook fan pages for a period of one year before their election and one year after taking office (January 16, 2015 to January 31, 2017). After collection, the two parts were combined into a data file not only using “post” as an analysis unit, but also relevant information about the legislators.

Sampling

Four of the legislators with Facebook fan pages were Aboriginal. So, their issues are very different from those of general legislators that they were excluded from this study. Furthermore, among the remaining 98, one legislator was non-party and two were People First Party (PFP) members, and these were also excluded due to there being too few samples. Although the NPP had only five seats, they did receive strong support from young voters and were therefore kept in the sampling frame. However, it would require considerable time and labor to conduct a content analysis of every post on the fan pages of the 95 legislators of the period. To save time and labor costs and make the sample more representative, this study performed stratified sampling on the 95 legislators and selected representative legislators for further analysis. Three variables were used to build the sampling frame to determine if the political views of the legislators affected the orientation of fan page posts; and these were party affiliation, type of constituency and incumbency. The remaining 95 legislators were classified according to these three variables, as in Table 1. One-fourth of the 95 legislators were randomly selected from each cell of Table 1 to be the target of our analysis and 25 legislators were selected as a result. The names of those selected are shown in gray in Table 1. For a detailed description of the sampling process, please see Appendix A.

⁴Facebook was chosen over other social media services because it is currently the largest service used in Taiwan and is used by a majority of legislators. Although a legislator could have both a personal page and a fan page on Facebook, personal pages are sometimes not open to the public, and only information from fan pages was collected for this reason.

Table 1.
Sampling Frame

	District		PR	
New Legislator	KMT	Yang Cheng-Wu	Chen Yi-Ming	
		Chiang Wan-An	Tseng Ming-Chung	
		Lin Wei-Chou	Lin Li-Chan	
		Lee Yen-Hsiu	Chang Li-Shan	
	DPP	Lin Chun-Hsien	Chen Lai Su-Mei	Hsu Yu-Jen
		Lo Chih-Cheng	Chang Liao	Chiu Tai-Yuan
			Wan-Chien	Lin Ching-Yi
		Tsai Yi-Yu	Chang Hung-Lu	Yu Wan-Ju
		Wang Ding-Yu	Chiang Yung-Chang	Wu Kuen-Yuh
	NPP	Lim Tshiong-Tso	Huang Kuo-Chang	Chung Kung-Chao
		Hung Tzu-Yung	Kolas Yotaka	
Incumbent	KMT	Ma Wen-Chun	Shih Yi-Fang	
		Fai Hrong-Tai	Hsu Yung-Ming	
	Lu Yu-Ling	Lo Ming-Tsai	Wang Yu-Min	
	Lai Shyh-Bao	Hsu Shu-Hua	Wang Jin-Pyng	
DPP	Lee Kun-Tse	Yen Kuan-Heng	Huang Chao-Shun	
	Lee Chun-Yi	Lin Te-Fu		
	Su Chen-Ching	Ho Hsin-Chun	Chiu Yi-Ying	
		Yao Wen-Chih	Huang Wei-Che	
	Chen Ming-Wen	Huang Kuo-Shu	Yu Mei-Nu	
	Chao Tien-Lin	Yeh Yi-Jin	Tuan Yi-Kang	
	Chen Ting-Fei	Hsiao Bi-Khim	Ker Chien-Ming	
		Chen Ou-Po	Chen Chi-Mai	

Coding

After sampling was completed, the content analysis method was used to code the content of the collected fan page posts by the 25 legislators. The text was converted into numerical data that could be quantitatively analyzed. There have been many previous attempts to categorize the purposes and functions of statements made by politicians on the Internet (Bichard, 2006; Bystrom et al., 2004; Zavattaro, 2010). After a review of relevant studies, Chen and Chu (2013) divided statements posted by politicians to the Internet into six functional categories: Daily Life Sharing, Personal Characteristics or Image, Endorsement, Mobilization, Attacks on an opponent and Political Information (see Table 2). Statements that share a politician’s Daily Life are classified as “soft messages” because they express warm and friendly feelings, while statements that include Attacks and Political Information are classified as “hard messages” because they involve political issues. The Endorsement and Personal Image categories are intended for candidates to take credit for prior achievements, while Mobilization messages are usually about election campaigns and activities. Chen and Chu’s categories are well classified and their coding frame was adopted to code the

Table 2.
Coding Framework

(0) Daily Life Sharing	Sharing personal daily life Daily schedules, care for voters, comments on activities
(1) Personality/Image	Building a professional, kind-hearted and amiable image Links to care for the disadvantaged, traditional values, personality and fairness and justice
(2) Endorsement	Support and endorsement from others Support from experts, specific groups and politicians
(3) Mobilization	Appealing for the public’s participation in campaigns and political activities Mobilizing voters to serve as volunteers, raise funds and participate in campaigns and other activities
(4) Attacking	Criticizing the deficiency, ineligibility and lack of experience of opponents Negative messages attacking political parties, policies, politicians and political opinions
(5) Political Information	Providing information on inquiries, policies, political opinions and democracy Sharing campaign and political information, views on policies and political opinions and the process of democracy

content of the posts of the 25 legislators selected in this study. In addition, the posts of legislators to their fan pages can be divided into seven categories: plain text, plain images, plain videos text with images, text with videos, images with videos and text with images and videos. As video content can be lengthy and have many different meanings, plain video posts were excluded from this study. For a detailed description of the coding process, please see Appendix B.

How Legislators Use Facebook Fan Pages in Taiwan

In Taiwan, only 11 legislators out of a total of 113 do not have a Facebook fan page, including 73 district legislators, 34 party-list candidates, and six aboriginals. Table 3 shows that five of these 11 candidates are from the party lists, four from districts and two are aboriginal legislators. It is highly unlikely that party-list legislators will be nominated in the next election. As ordinary citizens without any political background and elected for the first time, they have little incentive to set up a Facebook presence. The three district legislators were from Ping-Tung County, Lian-Jiang County and Peng-Hu County; places where urbanization is generally much slower. The last, Chiang Nai-hsin from Taipei City, was also the oldest of the 11.

The 102 legislators with Facebook pages had made a total of 66,131 posts, with an average of 648 per legislator and 0.86 posts per day, from January 16, 2015 to January 31, 2017. With regard to the number of posts, the discrepancy between individual legislators was remarkable. Yosi Takun, an aboriginal KMT incumbent

Table 3.

Legislators without a Facebook Fan Page

Legislator	Party	District	Incumbent	Age	Gender
Wang Jung-chang	DPP	PR	No	53	Male
Wu Yu-qing	DPP	PR	No	53	Female
Chou Chun-mi	DPP	PR	No	51	Female
Chou Chen Hsiu-hsia	PFP	PR	No	59	Female
Chuang Jui-hsiung	DPP	District in Pingtung	Yes	54	Male
Chen Hsueh-aheng	KMT	District in Lienchiang	Yes	65	Male
Yang Yao	DPP	District in Penghu	Yes	51	Male
Liao Guo-dong	KMT	Aboriginal	Yes	62	Male
Tsai Pei-hui	DPP	PR	No	46	Female
Chiang Nai-hsin	KMT	District in Taipei City	Yes	69	Male
Sra Kacaw	KMT	Aboriginal	Yes	61	Male

Table 4.
Legislators with the Highest Frequency of Posts

Legislator	Party	District	Incumbent	Age	Gender	Posts	Posts/Day
Wang Ding-yu	DPP	District in Tainan City	No	48	Male	1,255	1.743056
Liu Shih-fang	DPP	District in Kaohsiung City	No	57	Female	1,250	1.736111
Chen Chi-mai	DPP	PR	Yes	52	Male	1,236	1.716667
Chen Hsueh-sheng	KMT	District in Taoyuan City	Yes	59	Male	1,234	1.713889
Chiang Chi-chen	KMT	District in Taichung City	Yes	45	Male	1,233	1.7125
Lcc Chun-yi	DPP	District in Chiayi City	Yes	51	Male	1,232	1.711111
Tsai Yi-yu	DPP	District in Chiayi County	No	36	Male	1,220	1.694444
Tuan Yi-kang	DPP	PR	Yes	53	Male	1,213	1.684722
Chao Tien-lin	DPP	District in Kaohsiung City	Yes	44	Male	1,201	1.668056
Hsu Yung-ming	NPP	PR	No	51	Male	1,194	1.658333

legislator, had the fewest at only 27 posts. The most active, Wang Ding-yu, a district DPP legislator but a non-incumbent, posted 1,255 times. We took a close look at the top 10 individuals with the highest number of posts (see Table 4). Their average number of daily posts reached 1.65 or more, suggesting that fan pages were an important channel for interaction with their voters. It is also worth noting that three of the 10 were from the party lists, and seven from districts. Five of the seven district legislators were from the six metropolitan cities. It was evident that the more urbanized their constituency is, the more legislators are motivated to have a Facebook presence. This agrees with Graham's observation on politicians using Internet technologies (Graham, 2002). At least seven of the top 10 reportedly were planning to run in the major 2018 elections, a very good reason for the proactive operation of their fan pages.

Chen and Chu (2013) and Wen (2014) show that politicians manage their fan pages differently before and after an election. To examine this argument, a trend chart was made (see Figure 2) showing the total number of posts made by each of the 102 legislators each month. The figure indicates that posts did increase from month to month during the pre-election period. Candidates hoping to be elected to the

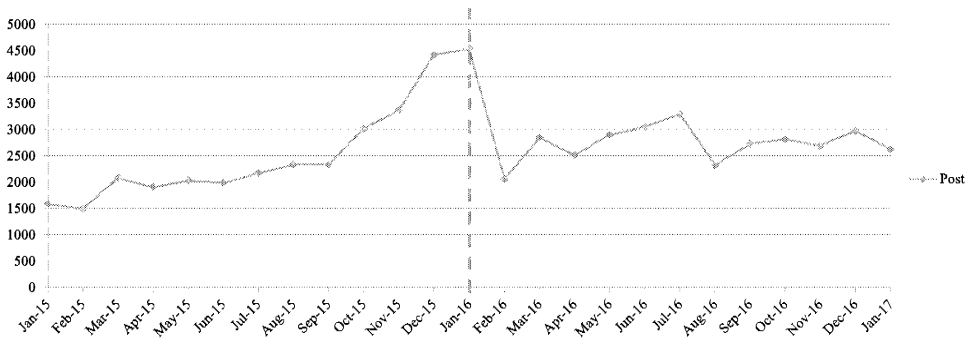


Figure 2. Posting frequency on the fan pages of legislators by month.

legislature mobilized aggressively, solicited votes, marketed their images and engaged in many different kinds of campaign events to interact with voters. Not surprisingly, the number dropped remarkably after the elections. When the legislators took office and parliamentary sessions began, the number of posts increased incrementally. The rate of posting did not diminish significantly until the parliamentary recess in August 2016. It is reasonable to infer that the frequency with which legislators used their fan pages to communicate with voters varied considerably and depended on the time and circumstances.

Political Characteristics and Function of Posts

The main focus of this study was a determination of how much effect the politics of legislators in Taiwan had on the crafting of their fan page messages. Coding for the analysis process was carried out using the posts from the 25 individuals selected from the 102 legislators with a Facebook presence. There were 20,706 posts from January 16, 2015 to January 31, 2017. All were coded, categorized and summarized as shown in Table 5. The results showed that more than 50% of the posts consisted of daily information. These were followed by posts either emphasizing the politician's image and personality (18.6%) or containing political information (17.9%). The remaining posts (5%) were attacks on opponents, criticism of the government, the mobilization of specific events or endorsements by celebrities. These results show that Taiwan legislators prefer to use their fan pages for disseminating soft messages such as daily information rather than hard political material or attacks on opponents. This behavior is quite different from the past where posts on election websites or related blogs usually employed strategies for the sabotage or denigration of opponents (Wang, 2009).

Table 5.
Frequency Table of the Functions of Posts

Function	<i>N</i>	%
Daily information	10,682	51.66
Personality/Image	3,846	18.60
Endorsement	613	2.96
Mobilization	707	3.42
Attacks	1,125	5.44
Political Information	3,704	17.91
Total	20,677	100.00

A multinomial logit model was used for analysis to determine if different political characteristics had an impact on the content of the posts of legislators. As Table 6 clearly indicates, a legislator's respective political characteristics significantly influence the way he or she makes use of Facebook. To make the results in Table 6 easier to interpret, the Average Marginal Effects (AMEs) of the three independent variables, i.e., party membership, incumbency and constituency category, were represented, respectively, in Figures 3–5. The effect of interaction terms on dependent variable in Table 6 is also presented in Figure 6.

As shown in Figure 3, NPP legislators are less inclined than DPP legislators to share daily information on their fan pages, while KMT and DPP legislators show no significant difference in the frequency of sharing their daily information. Compared to DPP legislators, NPP legislators are significantly more inclined to share political information on their fan pages. KMT legislators are also slightly more inclined to share this kind of information than DPP legislators. From the aforementioned analysis, it is evident that compared to legislators from the other two dominant parties, NPP legislators are more inclined to convey hard messages on their fan pages, using the fan page as a platform to discuss political affairs with voters and express their policy positions to attract their attention. In contrast, KMT and DPP legislators prefer to convey soft messages on their fan pages to help voters get to know them better and get closer to them. Moreover, compared to DPP legislators, NPP legislators are also more inclined to mobilize voters and post political endorsements for them on their fan pages, due to having relatively insufficient resources. At the same time, NPP legislators also prefer to utilize the low-cost, fast-spreading features of social media to mobilize their voters. From the aforementioned analysis, it can be found that legislators of different parties prefer types of posts on their fan pages that are most effective at increasing their chances of being elected.

Table 6.
Analysis of the Function of Posts to Legislators' Fan Pages

	Personal Image/ Daily Information		Endorsement/ Daily Information		Mobilization/ Daily Information		Attacks/ Daily Information		Political Information/ Daily Information	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Political Characteristics										
KMT (DPP = 0)	-0.236***	0.066	-0.994***	0.270	1.051***	0.232	0.571***	0.103	0.104	0.061
NPP (DPP = 0)	1.209***	0.876	0.808**	0.308	-0.572	1.020	1.617***	0.132	1.627***	0.084
District (PR = 0)	0.133**	0.050	0.341**	0.113	1.012***	0.129	-0.798***	0.076	0.172**	0.051
Incumbent (Non-incumbent = 0)	0.209***	0.043	0.492***	0.103	0.978***	0.098	0.379***	0.081	0.719***	0.045
Temporal										
Before election (After = 0)	-0.275	0.049	0.908***	0.127	1.930***	0.184	0.093	0.089	-0.894***	0.056
Session (Recess = 0)	-0.022	0.042	-0.335***	0.086	-0.471***	0.080	0.310***	0.075	0.680***	0.050
Demographics										
Age	0.046***	0.003	0.046***	0.006	0.017**	0.006	0.058***	0.005	0.031***	0.003
Male (Female = 0)	-0.287***	0.051	-0.325**	0.124	-0.083	0.125	0.558***	0.108	-0.110*	0.055
Party * Election										
KMT * Before	-0.199*	0.090	-0.299	0.304	0.929***	0.251	-1.891***	0.200	-0.501***	0.090
NPP * Before	-1.185***	0.125	0.794*	0.314	2.065**	1.023	-1.804***	0.191	-1.604***	0.156
Constant	-3.479***	0.163	-6.886***	0.438	-5.282***	0.366	-5.140***	0.302	-3.291***	0.169

Notes: $n = 20,677$; $G^2 = 3,757.43$; $p < 0.001$; Pseudo- $R^2 = 0.168$; *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

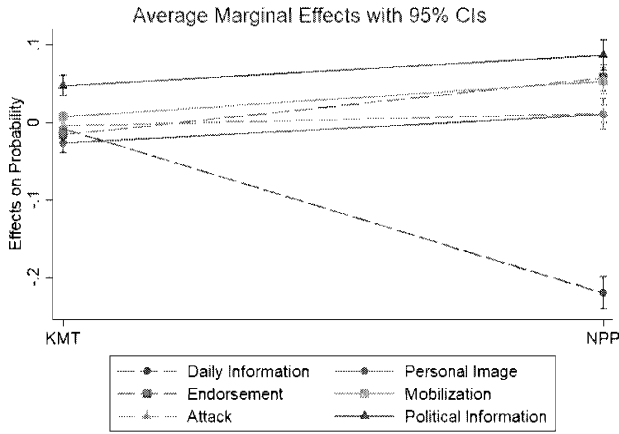


Figure 3. Average Marginal Effects (AMEs) of party membership on the function of posts.

In addition to political parties, district and PR legislators also have different purposes for their fan pages. As shown in Figure 4, compared to PR legislators, district legislators are less inclined to criticize the government or their opponents on their fan pages, which may be attributed to the main role of a PR legislator is to supervise government policies. Additionally, due to the higher level of competition in their constituencies, district legislators need to attract more personal votes. This makes them more inclined to build their personal image and conduct mobilization on their fan pages compared to PR legislators.

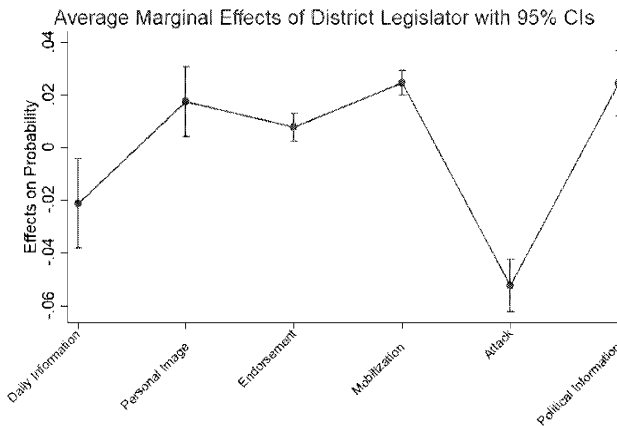


Figure 4. Average Marginal Effects (AMEs) of legislator type on the function of posts.

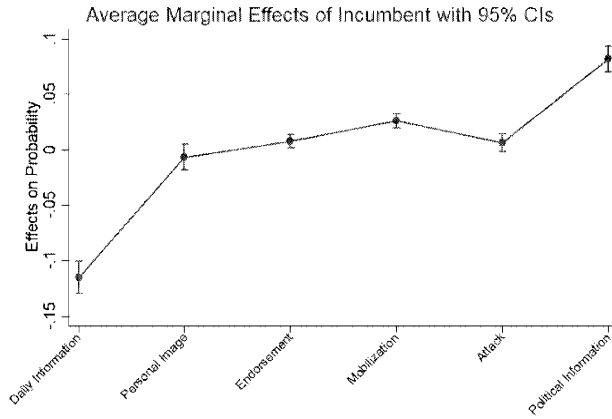


Figure 5. Average Marginal Effects (AMEs) of incumbency on the function of posts.

The functional orientation of the fan page posts is also significantly different between incumbents and non-incumbents (challengers). As shown in Figure 5, incumbents are less likely than challengers to share their daily information, but more likely to share political information. Since there is a higher chance for challengers to be political amateurs, it is understandable that they choose to share more daily information on their fan pages help voters get to know them better and get closer to them. For incumbents who are usually well known to voters, it is less necessary to use their fan pages for this purpose.

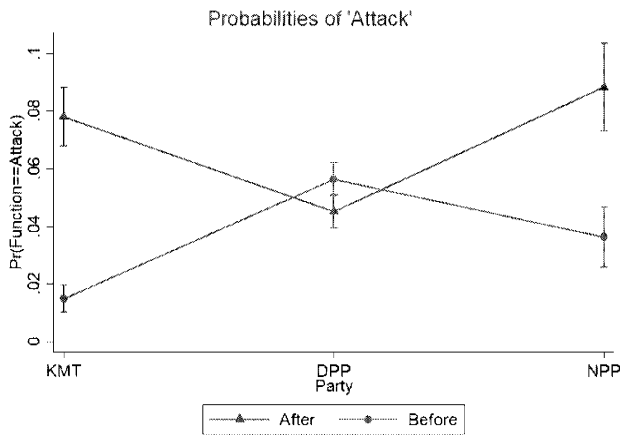


Figure 6. The relationship between independent variables and the predicted probabilities of the functions of posts.

Our study also examined the effects of the individual political views of the legislators on their Facebook behavior and the different functions of their various posts in government and the period. Results show that legislators are likely to post endorsements from others and mobilize voters before the elections. After the elections, they usually use the pages to share political information and government criticism. It is clear that legislators tend to rely on soft messages to their voters before elections and change to harder posts afterward. Furthermore, as the DPP became the ruling party after a long period of KMT rule, the model was altered to determine if this change led members of each party to modify their Facebook strategies before and after the election. To answer this question, an interaction term of electoral timing and party is included in the model. It was found that the strategies of both DPP and NPP legislators were very similar both before and after the election. Both tended to use their fan pages for mass mobilization and the sharing of daily information before the election. Both were also more likely to use their Facebook presence for the dissemination of political information or to establish their personal image after the election. The only discrepancy observed was that more attacks against the government were made by DPP legislators before the election, while KMT legislators did so after the election. As shown in Figure 6, DPP legislators were more likely to post criticism of the government than KMT and NPP legislators before the election but significantly less likely afterward. This was the complete opposite for KMT legislators. This is also in line with our expectations, since DPP legislators were in the opposition party before the election and thus more motivated to attack or criticize the government. After gaining seats in the Legislative Yuan, NPP legislators are even more likely to post messages that criticize the government, as they are more inclined to highlight their role as opponents of the ruling party.

Finally, differences in the personal characteristics of legislators, including sex and age, are also reflected in their posts. Table 6 shows that older legislators are more likely to share their daily schedules and other daily information to demonstrate an image of approachability. Younger legislators are not only more likely to mobilize and cultivate an image, but also more inclined to convey political information to their supporters and attack opponents. In addition, men are more inclined than women to attack opponents on their Facebook pages. Female legislators prefer to maintain their image, convey political information and emphasize endorsements from others on Facebook.

The aforementioned analysis has responded to the two questions raised in this study: First, posts of Taiwanese legislators to their fan pages in communication with the public are largely soft messages. They prefer first to share their schedules and other

information from their daily lives, followed by posts that cultivate their image and convey political information. Second, political characteristics such as party membership, status as a district or PR legislator and incumbency also affect the types of messages that legislators convey to voters. While there are differences in the content of posts between different types of legislators, they all tend to convey messages that serve to increase their chances of winning the election.

Conclusion

The rapid advance of Internet technology has resulted in social media becoming an important platform for people to connect with and understand this world. The cost is low, the outreach broad, and transmission is fast, making all kinds of information rapidly and easily available to all. Politicians soon became aware of this feature and began to use social media as a platform for communication with the general public. This study has examined the types of messages disseminated by legislators in Taiwan using Facebook as well as the possible influence of their political affiliations on the type and content of such messages.

Results have shown that legislators use Facebook mainly to spread soft messages to the general public by sharing their daily schedules and daily information with voters on their fan pages. Fan page posts are also used to maintain a personal image and to spread political information. The objectives of articles and posted material vary and are dependent on individual political affiliations. Both DPP and KMT legislators preferred to disseminate soft messages on their fan pages and get closer to voters, while the NPP members were more inclined to spread political information and criticize government policies than the other two parties. They used Facebook to broadcast issues of public interest and their own political views and stances. This study also asked whether being a member of the ruling party influenced a legislator's approach in their Facebook posts. This was confirmed when the KMT became the opposition party and its members started to post messages attacking the ruling government. The percentage of such attacks increased significantly, while the situation was completely opposite for DPP legislators. Finally, both newly elected and party-list legislators preferred to use soft messages to increase their popularity and improve their image with voters.

This study has revealed two important prospects for future research: (1) This study has only examined posts made a year before and after the election, and a better understanding of how legislators interact with the public through social media could

be achieved if a collection of all the Facebook posts made during their tenure could be analyzed; (2) This study only considered posts by the legislators, it would help us understand the complete process of interaction between legislators and the public if responses from the public could also be collected and analyzed.

Appendix A. Sampling Procedure

To make the sample more representative, stratified sampling was performed on the 95 legislators that met the conditions set by the study, and one-fourth of them were taken for further analysis. The variables used in stratification were the political characteristics of legislators, including their party membership (KMT, DPP, NPP), constituency category (district or PR) and incumbency (incumbent or challenger). With the three variables, there were supposed to be $3 \times 2 \times 2 = 12$ groups of legislators for the classification results. However, since the NPP had neither an incumbent district nor PR legislators, their constituency categories and incumbency variables were missing. The results of classifying the 95 legislators according to their political characteristics into these 10 groups are shown in Table 1. Since one-fourth of the legislators were supposed to be taken as our sample, the original number in each group divided by four would serve as our answer. One person was taken for each group that contained fewer than four people. For example, the KMT had 14 incumbent district legislators, and as $14/4 = 3.5$, four were selected at random. In the same fashion, one was selected out of the three incumbent PR legislators from the KMT. Finally, the names of the 25 legislators selected are shown in gray in Table 1.

Appendix B. Coding Procedures

This study began coding the content of the posts collected from the fan pages of these 25 legislators. To speed up the coding work, three coders assisted in the process. This study divided the fan page posts into six categories according to the classification of Chu and Chen (2013). The concepts and definitions of these six types of posts are shown in Table 2. **Daily Information** refers to the sharing of the daily lives of legislators on their fan pages, including greetings, the sharing of life experiences, official business schedules, concern and care for voters and blessings during holidays and festivals. **Personal Image** refers to posts where legislators cultivate their image, such as highlighting their experience in a certain field, promoting their concern for

vulnerable groups and support for fairness and justice, emphasizing their personality traits and expressing their respect for traditional virtues and values. **Endorsement** denotes posts in which legislators emphasize support from specific politicians, social elites, groups or institutions and experts in various fields. **Mobilization** is the type of post where legislators mobilize their supporters to participate in volunteering, fund-raising, campaigns and other activities through. **Attacking** refers to posts in which legislators criticize the government, political parties, policies, officials, politicians and politics. **Political Information** concerns either information on various political issues or the opinions of the legislators on policies, politics, governmental affairs, the statements of other politicians and political activities and events. For each type of post, the researcher provided four to five examples as reference to give the three coders a better understanding of the classification of each category. Due to the limitations on the length of this paper, the coding examples are not included. Readers are free to inquire the author for the examples if needed.

After explaining the coding work, the three coders then underwent training from the researcher. In addition to providing a coding book as a basis, the researcher also gave practical examples for each type of post as a reference to increase the coders' ability to discern the different types of content. During the training process, the coders were free to discuss the classification criteria with the researcher if they had doubts about the classification of the messages. After completing the training, an inter-coder reliability test was conducted among the three coders. This study randomly selected three legislators out of the 25 (Tsai Shih-ying, Hsu Shu-hua & Tuan Yi-kang) and additionally selected 100 posts at random for the three coders to perform coding at the same time. Finally, the inter-coder reliability rate between the three coders was 0.86 for Tsai Shih-ying's fan page posts, 0.88 for Hsu Shu-hua's and 0.84 for Tuan Yi-kang's. As a result, the average inter-coder reliability rate in this study was 0.86, which is higher than the standard coefficient of 0.85 (Kassarjian, 1997).

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