



Assessing Indian Nuclear Attitudes

A Visiting Fellow Working Paper

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Abstract

India's nuclear journey, which began in the 1950s, has matured, both in terms of its energy and nuclear weapons programs. Despite a gamut of nuclear-related studies devoted to the Indian case, the focus has remained limited to the nuclear evolution, India's nuclear energy and weapons programs, and nuclear policies. Despite being the world's largest democracy, there is limited scholarship exploring the connection between Indian public opinion and nuclear issues. Given this context, this paper underscores the need to comprehensively study Indian public attitudes on nuclear issues in India. This is substantiated by the fact that India is undergoing a transformation marked by an upward economic trajectory, growing literacy rates, increasing nuclear dependency, and a more politically engaged and vocal youth.

The paper begins by conceptualizing the different publics relevant to the subject before proceeding to a review of the existing literature on the topic. It also maps broader changes that are taking place in the country that are likely to affect public attitudes towards nuclear issues in the coming decades. The paper covers the extant public surveys and polls which seek to unravel Indian attitudes on a range of nuclear issues. Subsequently, it identifies the gaps in current methodologies and points to a possible way forward that would result in a more nuanced, well-informed understanding of how the Indian public perceives nuclear issues.

Introduction

India has been an overt nuclear power with a nuclear weapon program since 1998. In the intervening years, much scholarship has been devoted to the evolution of its nuclear doctrine and arsenal. In contrast, public engagement with nuclear politics in India—the world's largest democracy—has received considerably less attention from scholars. Specifically, there are very few studies that examine the Indian public's attitudes on nuclear issues, except for a few studies on nuclear narratives¹ and the cultural aspects of nuclear development.²

The lack of literature on this subject has reinforced a cynical view among scholars: citizens are peripheral players in nuclear decisionmaking. This perspective, dominant among think-tank scholars and academics, has discouraged greater research into understanding the correlation between public attitudes and nuclear decisionmaking. Even before attempting to unravel the possible connections, several questions come to mind. How should one define the 'public' in India? What does the Indian public think about nuclear issues? Who are the influencers of Indian public attitudes on this topic? Have previous studies measured Indian public attitudes in the best possible way? What are the best methods for discerning public attitudes?

The aim of this paper is to highlight the need to study the Indian public's attitude on nuclear issues and present an overview of the extant work on this subject. The paper is divided into

¹ Priyanjali Malik, *India's Nuclear Debate: Exceptionalism and the Bomb* (London: Routledge, 2010).

² Itty Abraham, *South Asian Cultures of the Bomb: Atomic Publics and the State in India and Pakistan* (Indiana: Indiana University Press, 2009).

four parts. The first provides a brief conceptualization of ‘publics’ that are relevant when gauging popular attitudes on nuclear issues. The second part underscores the need to study Indian perspectives on this subject. The third section covers the major studies that have measured Indian public attitudes on nuclear issues and the gaps in their scope and methodologies. Finally, the paper offers some ideas for improving our ability to study public attitudes on nuclear issues in India.

Understanding the Publics

Before delving into the subject of public attitudes, it is pertinent to briefly conceptualize the term ‘public.’ The distinctions highlighted by Gabriel Almond prove to be a valuable tool in understanding this term. Almond defines three classes of publics: the ‘general public,’ the ‘attentive public,’ and the ‘policy and opinion elite.’³

The general public refers to the majority of the population that does not seem to have an active interest in politics in general or specialized areas such as foreign policy. This public has a short attention span, which makes it difficult for them to become perpetually interested in any particular issue. However, the general lack of interest should not be regarded a dearth of opinion as the general public tends to hold latent attitudes rather than well-entrenched viewpoints. Latent attitudes are “dormant attitudes that can be activated by appropriate stimulus.”⁴ It is worth noting that political parties in democracies cannot ignore latent opinions because politicians often mobilize or manage latent opinions during campaigns and elections.

The second category in Almond’s schema is the attentive public, a subset of the population interested in larger political issues. Individuals in this class tend to be educated and avid consumers of news, all of which correlates to a general awareness of current events and a higher level of political engagement.

Another type of public—the policy and opinion elite—is a small group comprising extremely important and influential people, such as economists, government officials, academics, and journalists, among others. These people are involved in the process of policy formulation and articulate these policies for the attentive publics.⁵

Indian Publics and Nuclear Issues

The various types of publics remain relevant when understanding Indian attitudes on nuclear issues. Traditionally, the general public did not consider nuclear issues worthy of its attention, except when stimulated by a specific event, such as the debate surrounding the indefinite extension of the Nuclear Non-Proliferation Treaty (NPT) in the mid-1990s or India’s nuclear tests in 1998. They viewed issues such as economics, development, and access to basic amenities as worthy of greater attention. Although the nuclear issue seems connected to its concern for electricity, the general public has largely not connected electricity generation with nuclear issues. The Indian public’s limited interests in nuclear

³ Gabriel Almond, *Gabriel Almond's Opinion Publics*, <http://desart.us/courses/1010/publics.html>.

⁴ John Gray Geer, *Public Opinion and Polling Around the World: A Historical Encyclopedia* (Santana Barbara, California: ABC-CLIO, 2004), 418.

⁵ Ruud Koopmans and Paul Statham, eds., *The Making of a European Public Sphere: Media Discourse and Political Contention, Communication, Society and Politics* (Cambridge: Cambridge University Press, 2010).

issues aligns with similarly low perceptions of foreign policy—subordinate to other issues, such as basic amenities of water, housing, and electricity.

Traditionally, the public debates on nuclear issues in India have remained confined to the attentive public.⁶ Priyanjali Malik expands on the group of ‘attentive India,’ which is largely confined to the educated, English-speaking middle and upper classes residing in urban areas. The group has for long formed an “urban elite [class], whose political compass points to New Delhi.”⁷

By and large, there are some assumptions about Indian public attitudes on nuclear issues related to energy and weapons. As per the conventional wisdom, when it comes to nuclear power, the public as a whole is largely supportive. However, this support is lacking in communities where nuclear power plants (NPP) are located,⁸ with negative sentiments remaining localized to the vicinity.⁹ Further, anti-nuclear public sentiment in India is not considerable enough to be sustained for long periods, hence the limited influence on politics and decisionmaking.¹⁰

Overall, the public is considered supportive of the Indian nuclear weapons program. It is viewed as a symbol of the country’s technological progress, self-confidence, and international prestige.¹¹ Prime Minister Vajpayee captured this emotion by changing the traditional Indian patriotic slogan ‘*Jai Jawan, Jai Kisaan*’ (Hail the soldier, hail the farmer) to ‘*Jai Jawan, Jai Kisaan, Jai Vigyaan*’ (Hail the soldier, hail the farmer, hail science and technology) after India completed the 1998 nuclear tests.¹² It is also assumed that Indian publics see the nuclear weapons as political weapons, which will not be used for warfighting. The literature review revisits these assumptions and covers the various surveys connected to the issues.

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⁶ Priyanjali Malik, *India’s Nuclear Debate: Exceptionalism and the Bomb* (London: Routledge, 2010), 7.

⁷ Ibid.

⁸ Sitakanta Mishra, “Social Acceptance of Nuclear Power in India,” *Air Power* 7(3), July-September 2012, https://www.academia.edu/2004382/Social_Acceptance_of_Nuclear_Power_in_India.

⁹ R. Rajaraman, “Public Perception of Nuclear Radiation: Its Importance for Nuclear energy, RDD terrorism and Nuclear Disarmament,” *Federation of Scientists*, <http://www.federationofscientists.org/PlanetaryEmergencies/Seminars/45th/Rajaramanpercent20publication.doc>.

¹⁰ Srirupa Roy, “The Politics of Death: The Anti-Nuclear Imaginary in India,” in Itty Abraham, ed., *South Asian Cultures of the Bomb: Atomic Power and Nuclear Publics: Culture, state, and society in India and Pakistan* (New Delhi: Orient Blackswan, 2010), 114.

¹¹ “Sign of self-confidence, say experts,” *The Hindustan Times*, May 12, 1998. Also see “India Crosses ‘Nuclear Rubicon’ - Will Arms Race Follow,” *U.S. Information Agency*, <http://fas.org/news/india/1998/05/wwwhma14.html>.

¹² UNI, “‘Jai jawan, jai kisan aur jai vigyan,’ Vajpayee coins new slogan,” *Rediff*, May 20, 1998, <http://www.rediff.com/news/1998/may/20bomb8.htm>.

Most scholars working on nuclear issues are in general conformity with the above assumptions.¹³ According to most experts, a radical shift is not expected even if more widespread studies are conducted to gauge public attitudes.¹⁴ Interestingly, many tend to presume that the Indian public opinion on the subject has remained the same even after the post-1991 economic liberalization era, which has been accompanied by greater awareness among the masses of geopolitical issues, including nuclear weapons and energy.

However, the evolving political landscape in India is likely to affect general Indian thinking on nuclear issues.¹⁵ If these changes are missed by nuclear experts, it will be difficult to offer a comprehensive prognosis on this issue. Thus, it is important to assess public attitudes in order to see what affect they have on decisionmaking and whether that link is becoming stronger or weaker over time. The following section discusses contemporary public opinion on nuclear issues in relation to the changing political and economic environment in India.

The Need to Assess Indian Public Attitudes on Nuclear Issues

This section discusses several important reasons that it has become increasingly important to assess the Indian public's attitudes and opinions on nuclear issues. The factors include: 1) India's growing nuclear dependency, 2) greater regional political voices, 3) new influencers of public attitudes, and 4) greater public political participation.

India's Growing Nuclear Dependency

With a growing economy and bulging population, India has enormous energy requirements. Since 2000, India's energy needs have nearly doubled and are likely to become a great contributor to the estimated rise in global energy demand.¹⁶ With increased industrialization and a wave of urbanization, an estimated 315 million people are likely to move to urban centers in the next 25 years.¹⁷ This urbanization will likely result in a rising middle class with more disposable income to purchase energy-intensive goods, which will further drive energy demand.

Coal currently comprises more than two-thirds of India's current electricity mix.¹⁸ However, the reserves are limited, and the fossil fuels (particularly coal) will be unable to meet the future demands of the country. Furthermore, in line with India's climate pledge, it has declared an ambitious plan to reduce carbon emission intensity by 33-35 percent by 2030.¹⁹

¹³ See Sitakanta Mishra, "Social Acceptance of Nuclear Power in India," *Air Power*, 7(3), July-September 2012, https://www.academia.edu/2004382/Social_Acceptance_of_Nuclear_Power_in_India; R. Rajaraman, "Public Perception of Nuclear Radiation: Its Importance for Nuclear energy, RDD terrorism and Nuclear Disarmament," *Federation of Scientists*, <http://www.federationofscientists.org/PlanetaryEmergencies/Seminars/45th/Rajaramanpercent20publication.doc>; and Gurmeet Kanwal, "India's Nuclear Doctrine: Need for a Review," December 5, 2014, *Center for Strategic and International Studies*, <https://www.csis.org/analysis/india-percentE2-percent80percent99s-nuclear-doctrine-need-review>.

¹⁴ Moeed Yusuf, Interview by the author, Washington, D.C., January 28, 2016.

¹⁵ John H. Gill, Interview by the author, Washington, D.C., January 19, 2016.

¹⁶ "India Energy Outlook," *Directorate of Global Energy Economics*, 2015, http://www.worldenergyoutlook.org/media/weowebbsite/2015/IndiaEnergyOutlook_WEO2015.pdf.

¹⁷ "Why Energy Will Determine India's Future," April 8, 2016, *STRATFOR*, <https://www.stratfor.com/analysis/why-energy-will-determine-indias-future>.

¹⁸ "Nuclear Power in India," *World Nuclear Association Website*, 2016, <http://www.world-nuclear.org/information-library/country-profiles/countries-g-n/india.aspx>.

¹⁹ Charles Frank, "India: Potential for Even Greater Emissions Reductions," *Brookings Institution*, 2013, <https://www.brookings.edu/wp-content/uploads/2016/07/india-frank.pdf>.

This implies that India will have to reduce its dependence on fossil fuels and, in turn, increase its reliance on other sources of energy, including nuclear power.

As of 2013, nuclear power comprised only one percent of India's energy mix.²⁰ However, the combined need to cater to growing energy needs and simultaneously decrease carbon emissions has resulted in greater investment and dependence on the nuclear sector. India has an ambitious plan to generate 14.6 GWe of nuclear energy by 2024 and 63 GWe by 2032. With these boosts in production, it intends to increase nuclear energy to 25 percent of its power generation.²¹

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It is in this context that one can anticipate immense progress in the nuclear sector—and indeed New Delhi is already moving in this direction. In April 2015, for instance, the Indian government 'in principle' approved ten sites in nine states for setting up new NPPs as shown in the map below.²² Even if India is unable to achieve its ambitious target, one is still likely to see more NPPs, compared to existing numbers.

²⁰ "India," U.S. Energy Information Administration, 2016, <https://www.eia.gov/beta/international/analysis.cfm?iso=IND>.

²¹ Eleanor Bash, "Role of European Cleantech Companies and Institutes in Translating India's Renewable Dreams," *PhD Proposal*, 2015, <http://www.forum-ekonomiczne.pl/wp-content/uploads/2016/02/Presentation.pdf>.

²² PTI, "Government Approves New Sites for Setting up Nuclear Power Projects," *The Economic Times*, April 29, 2015, http://articles.economictimes.indiatimes.com/2015-04-29/news/61652581_1_nuclear-power-projects-kalpakkam-10-sites.

Figure 1: Planned Nuclear Power Plants in India

Source: “Nuclear Power in India,” World Nuclear Association, September 2016, <http://www.world-nuclear.org/information-library/country-profiles/countries-g-n/india.aspx>.

With more NPPs potentially coming online in different geographical locations, the question of public acceptance becomes increasingly important, more so in a large democracy such as India. The Planning Commission of India’s Low Carbon Strategies for Inclusive Growth report reflects this public concern about nuclear safety.²³ The report noted that in the current context, there is “considerable public concern about the safety, economics, and waste disposal aspects of nuclear power program.”²⁴ It then highlights that one of the determining factors of the intended expansion of nuclear power will be the public acceptance of the technology.

Greater Regional Political Voices

India’s democracy is maturing, which is evident by the emergence of greater voices on domestic and international issues. There is a shift towards greater “regionalization of politics,” which has resulted in more complex political coalitions, which have given regional parties more influence on issues relating to foreign policy.

²³ Government of India, *The Final Report of the Expert Group on Low Carbon Strategies for Inclusive Growth*, 2014, http://planningcommission.nic.in/reports/genrep/rep_carbon2005.pdf.

²⁴ Ibid.

Traditionally, subjects such as nuclear issues, foreign policy, and environmental policy do not feature as salient topics for voters, especially in national elections.²⁵ More pressing problems such as corruption or price rises largely dominate national campaigns. However, this does not mean that public opinion can be ignored on other issues, especially at the regional level.

Nuclear issues have become campaigning points and have begun dominating local and regional elections in areas near NPPs. For example, protests have emerged in Kudankulam against the construction of Russian-supplied nuclear reactors. The power plant, under construction for more than two decades, has witnessed opposition from local citizens, non-governmental organizations, influential individuals, and even local Christian churches.²⁶ It became a major election issue in 2011, even though it was limited to three southern districts of Tamil Nadu, i.e. Kanyakumari, Nagercoil, and Tirunelveli.²⁷ During the 2014 national elections, Idinthakarai, the epicenter of Kudankulam protest, unanimously attempted to disallow any political party in the village for election campaigning.²⁸ These trends point towards the link between nuclear opinions and public attitude on elections, albeit at the local level.

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Interestingly, a new political party with an anti-nuclear agenda has emerged in Tamil Nadu. SP Udayakumar, the prominent leader of the anti-Kudankulam nuclear power plant protest, launched his party named Pachai Tamizhagam' (Green Tamil Nadu).²⁹ In the future, opposition to NPPs may noticeably increase as more plants come under construction in various parts of the country.

Over the years, greater intervention of regional parties in India's foreign policy has had a noticeable impact on the central government's foreign policy decisions. Regional political parties, which remain sensitive about their state's public opinion on issues, have pressured central governments, especially when they are in a coalition government at the national level. Some of the relevant cases include the role of Tamil regional parties in influencing India's Sri Lanka policy. For example, the Tamil regional party Dravida Munnetra Kazhagam (DMK) arguably influenced India's vote against Sri Lanka in 2012 and 2013 at the UN Human Rights Council (UNHCR) because of Indian Tamils strong protests against the Sri Lankan government's treatment of the Tamil minority in that country.³⁰

²⁵ Devesh Kapur, "Public Opinion and Indian Foreign Policy," *India Review*, 8(3), 286–305, 2015.

²⁶ Vembu, "Church Role in Kudankulam Protests Merits Wider Probe," *Firstpost*, February 29, 2012, <http://www.firstpost.com/politics/church-role-in-kudankulam-protests-merits-wider-probe-228719.html>.

²⁷ Joe Scaria, "Anti-Nuclear Team Hopeful of Newly Elected Local Bodies' Support," *The Economic Times*, October 27, 2011, http://articles.economictimes.indiatimes.com/2011-10-27/news/30328343_1_local-body-nuclear-plant-kudankulam-nuclear-power-project.

²⁸ B. Kolappan, "Parties Face Campaign Ban in Idinthakarai," *The Hindu*, March 17, 2014, <http://www.thehindu.com/news/national/tamil-nadu/parties-face-campaign-ban-in-idinthakarai/article5793234.ece>.

²⁹ Pheba Mathew, "Say Hi to Tamil Nadu's Newest Political Party, and They Have One Main Agenda - Environment," *The News Minute*, January 18, 2016, http://www.thenewsminute.com/article/say-hi-tamil-nadu-percentE2_percent80_percent99s-newest-political-party-and-they-have-one-main-agenda-environment-37850.

³⁰ Devesh Kapur, "Public Opinion," in *Handbook of Indian Foreign Policy*, David M. Malone, C. Raja Mohan, and Srinath Raghavan, eds. (Oxford: Oxford University Press, 2015), 307.

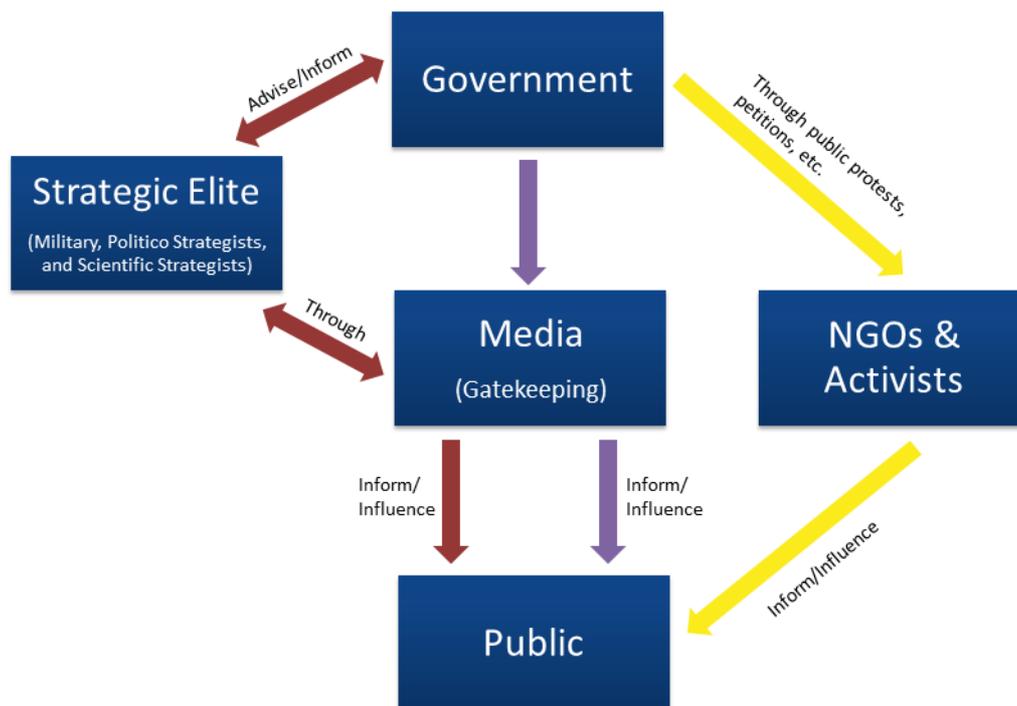
A second instance is the interjection of the leader of ruling party in West Bengal in a prospective India-Bangladesh treaty to share the waters of the Teesta river, which flows from India to Bangladesh.³¹ The Trinamool Congress Government, headed by Mamta Banerjee, vetoed the move, mindful of public opinion in the state. It has been argued that when higher volume of water (when compared to the current share) is provided to the “lower riparian country (Bangladesh), it would cause problems in the northern region of West Bengal, especially during the drier months.”³²

Much like foreign policy, it is likely local and regional parties will become more influential on nuclear issues, especially as construction begins on new plants with foreign collaborations. Evidently, the viewpoints of the state government and their population may become an important factor for the policymakers at the center.

New Influencers of Public Attitudes

There are some notable changes in the type of actors that have had an influence on decisionmakers. Figure 2 below provides an overview of the actors that were relevant to the nuclear issue in India since its independence to the pre-liberalization period.

Figure 2: Past Influencers of Public Attitudes



³¹ Sheela Bhat, “How Mamata almost forced PM to cancel B'desh trip,” *Rediff*, September 4, 2011, <http://www.rediff.com/news/slide-show/slide-show-1-how-mamata-almost-forced-pm-to-cancel-bdesh-trip/20110904.htm#1>. Also see Rupak Bhattacharjee, “Domestic politics delays signing of the Teesta deal,” *BD News*, July 1, 2015, <http://opinion.bdnews24.com/2015/07/01/domestic-politics-delays-signing-of-the-teesta-deal/>.

³² Ram Kumar Jha, “India-Bangladesh politics over Teesta river water sharing,” *South Asia Monitor*, June 27, 2015, <http://southasiamonitor.org/detail.php?type=n&nid=12448>.

This figure illustrates that the nuclear discourse was largely handed down by the government/decisionmakers in the past. The government-regulated media and the negligible presence of external actors in the decisionmaking process further ensured the status quo. Some fundamental media portals such as *Doordarshan* and *All India Radio* were regulated by the government in the pre-1991 era, and information disseminated to the public was heavily filtered in accordance with the government's line of thought, thus leading to a one-way communication process between the government and its people.³³

So-called strategic elites have dominated India's nuclear discourse for decades. The term "strategic elites" is used to "denote those individuals who dominate India's nuclear discourse," including military, political, and scientific strategists.³⁴ Karsten Frey in his book, *India's Nuclear Bomb and National Security*, explains this in detail.³⁵ Frey argues that three factors—lack of institutions, volatility of public opinion, and the passivity of decisionmakers—have allowed the strategic elites to dominate India's strategic discourse.

He adds that the most important decisions were usually taken by the Indian prime minister, at times with key advice from a small group of advisers. Additionally, foreign policy issues (or subjects such as nuclear technology) rarely saw public engagement as the general "polity [was] inward looking" and the nuclear establishment was largely impregnable. This meant that public opinion was "highly volatile and affective."³⁶ Lastly, the "passive stance on nuclear issues" among the policymakers meant that the strategic elites could utilize the vacuum in the public sphere and practice "communicative power" in addition to the "administrative power" they already enjoyed.³⁷ This implied that the strategic elites played a role in influencing the decisionmakers' thinking on nuclear matters through their organizational positions (administrative power) and also influenced public opinion by publishing extensively in popular newspapers. Some of the prominent personalities include General K. Sundarji, former Indian Army Chief; K. Subrahmanyam, an influential voice on India's strategic and security thinking; and Air Commodore Jasjit Singh, another prominent thinker on nuclear affairs.³⁸ Indeed, the views of these personalities helped shape the thinking of a young nuclear India.

However, much has changed in the post-liberalization era. The media boom (with greater privatization) has led to greater interest on strategic issues, which were earlier considered the privilege of the policymakers and elites. This is also made possible by the approximately 113 round-the-clock news channels (inclusive of regional, national and international reach) that are continuously involved in "political and economic debates."³⁹ This remains in stark contrast with just one 24/7 news channel as recently as 1998.⁴⁰ The addition of new actors

³³ Priyanjali Malik, *India's Nuclear Debate: Exceptionalism and the Bomb* (London: Routledge, 2010), 108.

³⁴ *Ibid.*, 28.

³⁵ Karsten Frey, *India's Nuclear Bomb and National Security* (New York: Routledge, 2007), 30.

³⁶ *Ibid.*, 28.

³⁷ *Ibid.*, 30.

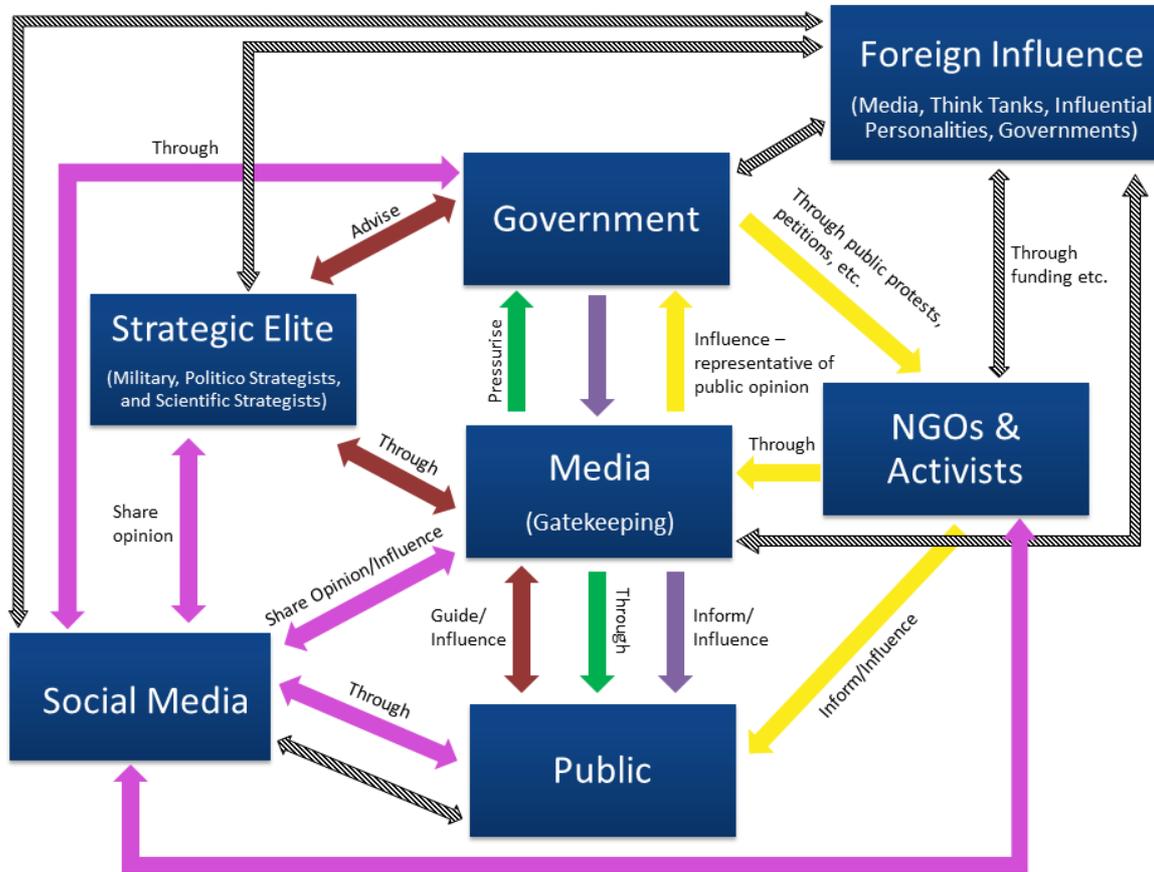
³⁸ Rajesh Rajagopalan, "India's Nuclear Policy," in NIDS National Symposium on Security Affairs, *Major Powers' nuclear policies and International Order in the 21st Century* (Tokyo: National Institute for Defense Studies, 2010), 96, http://www.nids.go.jp/english/event/symposium/pdf/2009/e_06.pdf.

³⁹ Ashok Malik and Rory Medcalf, "India's New World: Civil Society in the Making of Foreign Policy," *LOWY Institute for International Policy*, May 2011, http://www.asiapacificbcw.org/resources/Malik_percent20and_percent20Medcalf_percent20India's_percent20new_percent20world_web.pdf.

⁴⁰ Jostein Gripsrud (ed.), *Relocating Television: Television in the Digital Context* (New York: Routledge, 2010), 91.

and their influences on India’s national issues, which also impacts the nuclear discourse, are shown in Figure 3. In addition to the new influencers, another major change is the presence of a two-way communication between decisionmakers and the other relevant players.

Figure 3: Current Influencers of Public Attitudes



The proliferation of news channels brought about greater freedom to question the government narrative, as the media was no longer controlled by the government. This means that the media is not only more communicative with its audiences but remains an important medium that shapes public opinion. This is aptly noted by Malik and Medcalf, who take the case of Indian news channels and note, “India’s television-propelled middle-class opinion... will continue to shape discourse that will harangue governments, demand instant action and [witness] escalated rhetoric.”⁴¹ They add that the televised news media is “democratising not just India’s domestic political debate, but also its global attitudes and the sources of its foreign policy.”⁴² While the authors establish this connection with regard to domestic and foreign policy issues, the same also applies to nuclear matters.

Despite this change, it is prudent to note the caveat that greater news coverage does not necessarily imply that the public is well informed on nuclear issues. Even today, the debates on nuclear issues are neither frequent nor nuanced in terms of their content. This can also be

⁴¹ Ashok Malik and Rory Medcalf, “India’s New World: Civil Society in the Making of Foreign Policy,” *LOWY Institute for International Policy*, May 2011, http://www.asiapacificbcw.org/resources/Malik_percent20and_percent20Medcalf._percent20India's_percent20new_percent20world_web.pdf.

⁴² Ibid.

attributed to the content of new channels (with some exceptions), which have been criticized for “promoting tabloid television.”⁴³

Even though Indian society has evolved out of the government-controlled broadcast media, the discourse is still “calibrated by new intellectual mechanisms—think tanks, civil society institutions, academia, and so on.”⁴⁴ This largely holds true in terms of the nuclear discourse. However, the contemporary strategic elites tend to be more sensitive to public opinion, despite continuing to inform and shape the attitudes to a certain extent.

Another recent addition to the traditional structure of communication is the social media. Social media (Twitter, Facebook, YouTube, Wikipedia, Snapchat, etc.) acts as an alternate source of information in addition to the traditional news media. The Internet revolution in India has resulted in a mammoth rise in the number of Internet users, which “holds the promise of enhancing democracy and changing traditional one-way process of political communications.”⁴⁵

Social media connects various influencers in society such as the strategic elites, government, foreign media and users, and national and international NGOs. As of April 2015, there were as many as 143 million social-media users in urban and rural India—and the numbers are only rising.⁴⁶ Social media has emerged as a convenient medium for people to express their opinion and even vent their frustrations instantly. It is not only employed by government agencies and news portals but also by individual citizens who may not have a sophisticated argument on every issue, but certainly have an opinion, latent or otherwise. The diversification of information sources and different shades of opinions will definitely impact the way an Indian perceives, thinks, and acts in the coming decades. It will not only affect every day issues, but also so-called esoteric subjects, such as Indian foreign policy and nuclear issues.

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⁴³ Ashok Malik and Rory Medcalf, “India’s New World: Civil Society in the Making of Foreign Policy,” *LOWY Institute for International Policy*, May 2011, http://www.asiapacificbcw.org/resources/Malik_percent20and_percent20Medcalf_percent20India's_percent20new_percent20world_web.pdf. Also see Rohit Chopra, “Indian media in a global age,” *Livemint*, March 18, 2016, <http://www.livemint.com/Leisure/rrjyopFJnobLPGPE4OvWTK/Indian-media-in-a-global-age.html>

⁴⁴ Ashok Malik and Rory Medcalf, “India’s New World: Civil Society in the Making of Foreign Policy,” *LOWY Institute for International Policy*, May 2011, http://www.asiapacificbcw.org/resources/Malik_percent20and_percent20Medcalf_percent20India's_percent20new_percent20world_web.pdf.

⁴⁵ Tanja Oblak and Katja Eljan, “Slovenian online campaigning during the 2004 European Parliament election: struggling between self-promotion and mobilization,” in Randolph Kluver, Nicholas Jankowski, Kristen Foot, and Steven Schneider (eds.), *The Internet and National Elections: A Comparative Study of Web Campaigning* (New York: Routledge, 1995), 60.

⁴⁶ “Growth in social media usage: Rural India beats urban India,” *Times of India*, June 18, 2015, <http://timesofindia.indiatimes.com/tech/tech-news/Growth-in-social-media-usage-Rural-India-beats-urban-India/articleshow/47718401.cms>.

Even the foreign influence in India has increased, owing to greater connectedness of economies and easier access to information because of Internet connectivity. One sees unparalleled foreign collaborations in the education sectors, think tanks, research groups, etc.⁴⁷ All these influences are not taking place in a vacuum and will definitely have an effect on how various issues are perceived.

Greater Public Participation

In India, the combined factors of a growing economy, increased literacy and exposure levels, proliferation of media houses, social media, and domestic political changes are resulting in a vocal public opinion being formed on multiple issues. Despite this, there is considerable lack of awareness among the general public on technical and scientific issues like nuclear matters. Devesh Kapur notes that the limited knowledge and disconnect between the publics does not mean that there is “lack of an opinion on the part of the general public, which... does appear to maintain a set of values and principles that enable it to pass judgement.”⁴⁸

It is also important to note that the youth, with greater education levels and exposure to various types of information (even if it is incorrect, biased, or misleading), is becoming an important electoral base for political parties, especially considering 51.8 percent of India’s population is below 35 years of age.⁴⁹ With improved levels of literacy and resultant interest on national issues, the higher echelons will have to become more sensitive about this demographic’s opinions. Public attitudes will indeed play a role in shaping India’s nuclear policies. Cut-throat political competition also means that “swing voters [would] matter more for electoral success.”⁵⁰ Therefore, if some issues “matter more for the swing voter, then [their] public opinion... could become a more potent electoral issue.”⁵¹

All of aforementioned factors highlight the trend that policymakers cannot ignore the voice of a more vocal Indian public. In a nutshell, a growing number of Indians have access to information regarding a variety of issues, including nuclear policy. If this trend continues, it is likely that decisionmakers, accustomed to relative autonomy, will face new pressures from the voters, including on nuclear matters.

Literature Review

This section is divided into the four themes: 1) India’s nuclear weapons program; 2) regional threats; 3) India’s no-first-use policy; and 4) and nuclear energy. This segment includes the various extant studies, surveys, and polls that contribute to a greater understanding of how the Indian public perceives nuclear matters.

⁴⁷ “The growing tribe of think tanks in India,” *Livemint*, April 13 2016, <http://www.livemint.com/Opinion/ZWWNGHbZJl2eczrNwAF2sN/The-growing-tribe-of-think-tanks-in-India.html>.

⁴⁸ Devesh Kapur, “Public Opinion,” in David M. Malone, C. Raja Mohan, Srinath Raghavan (eds), *Handbook of Indian Foreign Policy* (Oxford: Oxford University Press, 2015), 299.

⁴⁹ Asit Ranjan Mishra, Anuja, Suneera Tandon, Gyan Verma, “Census profiles the young Indian voter, spender,” *Livemint*, September 7, 2016, <http://www.livemint.com/Politics/B1tnK7YhZZUYb56bLJL9kK/Census-profiles-the-young-Indian-voter-spender.html>.

⁵⁰ Devesh Kapur, “Public Opinion,” in David M. Malone, C. Raja Mohan, Srinath Raghavan, eds., *Handbook of Indian Foreign Policy* (Oxford: Oxford University Press, 2015), 300.

⁵¹ *Ibid.*

India's Nuclear Weapons Program

One can best describe the Indian debate on nuclear issues from its independence until the 1990s as a “long quietude punctuated by semi-official, desultory discussion about India’s role as a self-appointment crusader for nuclear disarmament.”⁵² During the Nehru period, there were rare instances of public debate on nuclear issues, as most of the nuclear issues were under Nehru’s leadership with input from close associates. However, there were periods that saw “meaningful” debates in the newspaper editorials, especially after the Chinese nuclear explosion test at Lop Nur in October 1964.⁵³ Debates revolved around the question of whether India should work towards a nuclear weapon or not. It is interesting to note that the majority of the views reflected in the editorials were supportive of the pursuit of the nuclear bomb.⁵⁴ Thus, China’s nuclear explosion advanced the Indian debate on nuclear issues.

In these initial decades, very few surveys or polls were conducted to gauge public thought on any nuclear issue, let alone specifics such as nuclear weapons. This trend resonated with the general absence of nuclear debate in the country. One of the few studies included a survey that was conducted in October 1968 (six years before India conducted a “peaceful nuclear explosion” and four years after Lop Nur explosion) in metropolitan hubs, specifically, Delhi, Calcutta, Bombay (Mumbai), and Madras (Chennai). The survey sought views whether India should opt for an independent nuclear weapons capability or not. Results showed that 79 percent of respondents supported an independent nuclear weapons capability for India.⁵⁵

Similar support for the nuclear bomb was evident in a 1971 poll organized by the Indian Institute of Public Opinion, New Delhi, wherein 63 percent of the respondents supported India’s quest for nuclear weapons.⁵⁶ It is worth noting that this poll coincided with the India-Pakistan 1971 war, which resulted in the creation of Bangladesh. An interesting trend was noticed when the pollster added a new angle to the question. An interesting point, however, was that the support for the nuclear bomb suffered when further conditions were included. For example, respondents were asked whether they would still support the nuclear bomb, even if it meant that funds for economic development would suffer. With this question, support for the bomb decreased drastically to only 38 percent.

Until 1998, India’s nuclear policy were formulated by the Indian prime minister, although the disarmament debate was periodically managed by the Ministry of External Affairs.⁵⁷ Despite this, the nuclear debate gradually increased throughout the 1990s, with a focus on subjects revolving around international non-proliferation regimes such as the NPT and CTBT. Even though nuclear debate in India became more dynamic than before, these discussions remained somewhat limited to the strategic elites.

Given the increasing relevance of strategic elites on nuclear issues during the 1990s, a detailed survey was conducted in 1994 (four years before Pokhran II) by David Cortright and Amitabh Mattoo. The project was supported by the Joan B. Kroc Institute for International

⁵² Priyanjali Malik, *India's Nuclear Debate: Exceptionalism and the Bomb* (London: Routledge, 2010), 32.

⁵³ *Ibid*, 53.

⁵⁴ Priyanjali Malik, *India's Nuclear Debate: Exceptionalism and the Bomb* (London: Routledge, 2010), 53-54.

⁵⁵ Mohammed Badrul Alam, *India's Nuclear Policy* (New Delhi: Mittal Publishers, 1988), 28.

⁵⁶ Indian Institute of Public Opinion, *Monthly Public Opinion Surveys* 17, no. 3, December 1971.

⁵⁷ Priyanjali Malik, *India's Nuclear Debate: Exceptionalism and the Bomb* (London: Routledge, 2010), 33-34.

Peace Studies.⁵⁸ The survey focused on the strategic elites on nuclear issues. 1,000 interviews were organized in seven Indian cities, namely Delhi, Bombay, Calcutta, Madras, Bangalore, Lucknow, and Hyderabad.

The results revealed that a majority (57 percent) of the Indian elites supported India's policy of nuclear ambiguity, followed by 33 percent who were supportive of overt nuclearization. Only 8 percent, supported the idea of renouncing the nuclear weapons program altogether. On the question of nuclear renunciation, a substantial 94 percent of the Indian elites offered "total or partial support for an international ban on nuclear weapons." "Among the supporters of official policy in India," 58 percent were in favor of giving up nuclear weapons if the international community were to adopt a time-bound plan for global nuclear disarmament."⁵⁹

Although the previously-mentioned study focused on the elite segment, in 1995, the news magazine *India Today* conducted a less formal poll which "was unscientific, involving person-in-the-street interviews with 2,000 adults of varying backgrounds."⁶⁰ The respondents hailed from nine major Indian cities, specifically Bombay, Delhi, Calcutta, Madras, Bangalore, Hyderabad, Lucknow, Ahmedabad, and Patna. Approximately two-thirds of those polled (62 percent) approved of New Delhi testing a nuclear bomb to establish its nuclear weapons capability. Furthermore, pollsters asked if nuclear weapons testing was desirable even if India were slapped with economic sanctions from the United States and Japan. Results showed that even with economic sanctions, 54 percent were supportive of the decision to go nuclear.

It is interesting to note that the addition of a new variable or new information to the question (i.e. economic sanctions) led to an 8 percent decline in support, which reflects the important lesson that responses depend on the way a question is framed in the survey/questionnaire. Looking further at the polling results, more than half (71 percent) of respondents cited "protection against possible nuclear attacks from China and Pakistan" as a "very important reason" for developing nuclear weapons capability.⁶¹ The general perception of mistrust of Pakistan was confirmed in these polls, with 44 percent believing that "only Pakistan" would use nuclear weapons during an Indo-Pakistan war; simply 8 percent felt that "only India" would use nuclear weapons during an Indo-Pakistan war.⁶²

The Indian public's support for the nuclear bomb was confirmed in another opinion poll, which was held by the Indian Market Research Bureau (IMRB). The poll was conducted on May 12, 1998, "less than 24 hours after the tests."⁶³ The polls were conducted in Mumbai, Delhi, Calcutta, Chennai, Bangalore, and Hyderabad. The results showed an unprecedented 91 percent of the respondents approving India's nuclear test (7 percent disapproved while 2 percent offered no opinion). The respondents were also supportive (82 percent) of India

⁵⁸ Samina Ahmed, David Cortright, and Amitabh Mattoo, "Public Opinion and Nuclear Options for South Asia," *Asian Survey*, 38(8), 1998.

⁵⁹ Ibid.

⁶⁰ "Yes to the Bomb," *India Today*, June 15, 1995, <http://indiatoday.intoday.in/story/views-of-citizens-of-urban-india-on-various-issues-pertaining-to-the-nuclear-policy-of-country/1/290257.html>.

⁶¹ Ibid.

⁶² Ibid.

⁶³ "Overwhelming majority supports N-tests," *The Times of India*, May 13, 1998, <http://www.hindunet.org/hvk/articles/0598/0039.html>.

building a nuclear arsenal, and 76 percent believed that India would pursue that path. When asked if India should sign the CTBT, only 39 percent expressed support.⁶⁴

The pollsters probed further on how the public felt after the nuclear test. A question was asked about how the respondents felt about the government and as an Indian citizen. In response, 63 percent agreed they felt happier about the BJP-led government after the tests, while 41 percent believed that BJP-led government did the “nuclear tests ONLY to increase its popularity.”⁶⁵ The responses show the nuclear tests had augmented the Indian public’s prestige, with 91 percent agreeing that they felt a “sense of pride,” and 76 percent stating that they felt more secure and safe after the tests.⁶⁶ Despite such unprecedented support, it is important to note that the BJP-led government still lost the 2004 elections, with economic concerns as the deciding factor.⁶⁷

Recent survey research suggests the public may be conflicted over competing foreign policy goals. In 2013, the Indian agency GfK Mode organised a survey as a part of a collaborative study by the Lowy Institute for International Policy and the Australia India Institute.⁶⁸ Unlike most surveys or polls, 1,233 multi-lingual interviews were conducted face-to-face in the respondents’ homes in several Indian cities. The survey focused “on the attitudes of Indian citizens towards their future in the world,” with some questions related to nuclear issues. The result once again showed an immense support for India’s nuclear weapons program.⁶⁹ 79 percent of respondents believed that nuclear weapons were important for India to achieve its goals. However, when questioned about “what Indian foreign policy should be trying to achieve,” a vast majority (92 percent) also considered “helping to prevent the spread of nuclear weapons” as important, out of which 63 percent considered it “very important.”⁷⁰ Indian support for prevention of the spread of nuclear weapons as an important foreign policy objective is worth noting, though no studies have explored this aspect in detail. Needless to

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⁶⁴ “Overwhelming majority supports N-tests,” *The Times of India*, May 13, 1998, <http://www.hindunet.org/hvk/articles/0598/0039.html>.

⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ Deepa M. Ollapally and Rajesh Rajagopalan, “India: The Nuclear Debate of a Rising Power” in Mike M. Mochizuki and Deepa M. Ollapally, *Nuclear Debates in Asia: The Role of Geopolitics and Domestic Processes* (Lanham: Rowman & Littlefield, 2016), 67.

⁶⁸ Rory Medcalf, “Lowy Institute India Poll 2013,” *Lowy Institute for International Policy*, 2013, http://www.asiapacificbcw.org/resources/Malik_percent20and_percent20Medcalf_percent20India's_percent20new_percent20world_web.pdf.

⁶⁹ Ibid.

⁷⁰ Ibid.

say, a comprehensive exploration would contribute to a better understanding on Indian attitude on nuclear issues.

In addition to these surveys and polls, Frey performed a notable quantitative analysis on media content related to the nuclear bomb in India in order to showcase the “general outlook of the nuclear weapons discourse among India’s strategic elite.”⁷¹ Frey states that India’s strategic nuclear debate traditionally centered on English-language newspapers, as the strategic elites preferred to use this medium and published extensively.⁷² He considers this an important factor for choosing newspaper content as the unit of analysis for his study. Frey reviewed 705 nuclear-oriented editorials and opinion pieces in five major English daily newspapers of India—*The Hindu*, *The Hindustan Times*, *The Indian Express*, *The Times of India*, and *The Statesman*. The timeline of the articles reviewed ranged from the year 1986 to 2005. The samples of opinion content reflected the general nuclear attitude of strategic elites.⁷³

Frey’s discourse analysis points towards some noteworthy trends. The analysis affirmed that strategic elites were generally supportive of possessing the Bomb, which was evident by the articles and editorials they published in various newspapers. However, certain issues more than others increased Indians’ propensity to favor the nuclear weapons program. Specifically reviewing the crucial years when India gave up its nuclear ambiguity, the study looks at 11 variables, which are listed in the table below.

Table 1: Attitude towards the Bomb (Issue-Wise)

Rank	Variable	Value
1	Threats from China	0.81
2	India's Nuclear Doctrine	0.69
3	India's Status	0.69
4	US American Non-Proliferation Initiatives	0.64
5	Debate on NPT (Extension)	0.62
6	Debate on CTBT	0.59
7	General and Regional Security Threats	0.42
8	Science and Engineering / Nuclear R&D / Self-Reliance	0.36
9	Institutional Framework	0.32
10	Threats from Pakistan	0.2
11	Domestic Policy Arena	0.22
	Average	0.45

Scale: from -1 (anti-bomb) to +1 (pro bomb)

Source: Karsten Frey, India’s Nuclear Bomb and National Security.

As noted on the table, experts had a strong tilt towards the viewpoint that India’s nuclear quest was important to stand up to the Chinese threat. Similarly, different issues such as India’s status and nonproliferation initiatives were recognized as factors affecting India’s decision to go nuclear.

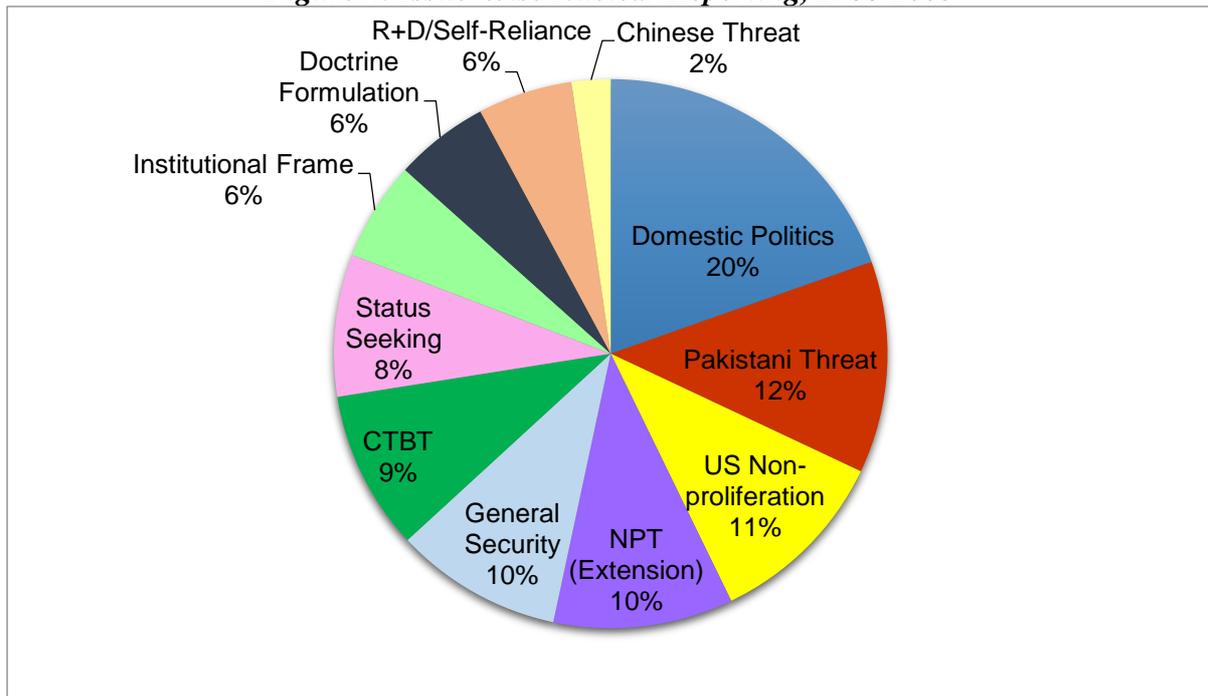
⁷¹ Karsten Frey, *India’s Nuclear Bomb and National Security* (New York: Routledge, 2007), 45.

⁷² *Ibid*, 3.

⁷³ For greater clarity, the stipulated sample includes only opinion pieces and editorials published in newspaper, as opposed to general newspaper coverage of the nuclear issues.

Looking at another sample set, i.e. the analysis of newspaper articles from 1986 to 2005,⁷⁴ a different picture emerges, especially when compared to elite attitudes on the subject. Frey reviewed the issue-based nuclear reporting and divided it into multiple variables (as shown in the pie chart below). In contrast to only the editorials, the analysis of general media coverage showed that only a small percentage of nuclear reporting was devoted to the Chinese threat. Issues covered more extensively included domestic politics (19.57 percent), the threat from Pakistan (12.48 percent), and Western non-proliferation efforts (10.78 percent).⁷⁵

Figure 4: Issue-Wise Nuclear Reporting, 1986-2005



Source: Karsten Frey, India's Nuclear Bomb and National Security.

When grouping variables related to international nuclear order (which many Indians perceive as a U.S.-dominated order), the percentage adds up to 38 percent (CTBT, Status Seeking, U.S. Non-proliferation, NPT Extension) which is much higher than the variables of regional security (30.1 percent) and domestic factors (30.6 percent).⁷⁶

These analyses show that the way a set of data has been analyzed impacts the final results. Evidently, the results were moderately different when *only* the editorials were analyzed and when the nuclear-related reports were added to the sample. These two different results on the same issue show that there are nuances in India's nuclear discourse with varying attitudes on the subject.

⁷⁴ This sample includes the broader newspaper coverage in addition to the opinion pieces that strategic elites published.

⁷⁵ Karsten Frey, *India's Nuclear Bomb and National Security* (New York: Routledge, 2007), 43.

⁷⁶ *Ibid.*

Regional Threats

After looking at some studies on Indian attitudes on their nuclear weapons, this section looks at surveys and studies revealing Indian viewpoints on regional threats (related to nuclear weapons). The results of the 1994 survey that Cortright and Mattoo conducted are illustrative.

Digging deeper into elite attitudes towards nuclear threats in the region, the 1994 survey examined justifications for India's nuclearization. Among the respondents who were supportive of India's quest for a nuclear bomb, 52 percent cited threats from other nuclear powers. Of these 52 percent, 48 percent considered a Pakistani nuclear test as a strong justification for India going nuclear, followed by 17 percent who cited the Chinese threat as a significant reason.⁷⁷ This reveals an interesting point: although India's official position highlighted threat perceptions from China as a fundamental reason for conducting Pokhran II in May 1998, elites did not wholly share this threat perception.

Regional perceptions were also covered in the Lowy Institute study. In regard to the China factor, 83 percent of the respondents viewed China as a threat to Indian security.⁷⁸ Out of these 83 percent, a majority (60 percent) called it a "major threat" while a minority (9 percent) did not consider it a threat.⁷⁹ The results showed a difference of opinion between respondents from northern India and southern India, thus indicating the nuances of opinions within the country. In northern India, 93 percent of respondents labelled China as a threat with 81 percent calling the power a major threat.⁸⁰ In southern India, 77 percent viewed China as a threat, but only 31 percent deemed it a major threat.⁸¹ Interestingly, those who said China was a threat cited its possession of nuclear weapons as their justification.

The Pew Research Center conducted another notable public opinion survey in Winter 2013-2014.⁸² The results were more representative because they were based on 2,464 face-to-face interviews (18 years and older) conducted in multiple Indian regional languages, including Hindi, Tamil, Bengali, Telugu, Odia, Marathi, Kannada, and Gujarati. The pollsters covered "15 of 17 populous states (Kerala and Assam were excluded)" and India's capital, New Delhi, thus reaching almost 91 percent of the adult Indian population.⁸³

Although the survey sought opinions on domestic, regional, and international issues, some parts are relevant for this study, especially on the topic of Iranian and North Korean nuclear programs. As manifested in the results, Indian anxiety regarding their nuclear programs is not very high. A minority (34 percent) of the respondents conveyed concern regarding Tehran's nuclear-oriented developments and a similar percentage (33 percent) expressed no opinion on the topic.⁸⁴ The results were not very different with regard to Pyongyang's nuclear efforts.

⁷⁷ Samina Ahmed, David Cortright, and Amitabh Mattoo, "Public Opinion and Nuclear Options for South Asia," *Asian Survey*, 38(8), 727-744, 1998.

⁷⁸ Rory Medcalf, "Lowy Institute India Poll 2013," *Lowy Institute for International Policy*, 2013, <http://www.lowyinstitute.org/publications/india-poll-2013>, 15.

⁷⁹ *Ibid.*

⁸⁰ *Ibid.*

⁸¹ *Ibid.*

⁸² "Indians reflect on their country and the world," *Pew Research Center*, 2013-2014, <http://www.pewglobal.org/2014/03/31/india-survey-methods/>.

⁸³ *Ibid.*

⁸⁴ *Ibid.*

Only 30 percent of the respondents believed that North Korea's nuclear program was a major threat, and 32 percent shared no view on it.⁸⁵

India's No-First-Use Policy

The studies we have covered so far present a snapshot of how Indians view their nuclear weapons program and regional threats. Despite having some idea about opinions on the nuclear bomb and other nuclear powers, there is hardly any work done to examine viewpoints on the actual usage of an India's nuclear weapons. Scott Sagan and Benjamin Valentino have started to address this gap by mapping out public attitudes towards nuclear weapons use. Employing the survey experiment methodology, the project solicited answers on "specific scenarios in which... the Indian public would support the use of nuclear weapons."⁸⁶

The conventional wisdom is that the Indian public views nuclear weapons as political instruments that are not meant for warfighting. This viewpoint is largely embedded in strategic elite circles that assert India's nuclear weapons are intended solely for deterrence.⁸⁷ Based on conversations with policymakers and researchers in India, it appears many of them believe the informed public shares their perspective, thus reaffirming India's faith in a NFU policy. Therefore, the Sagan and Valentino study would help confirm or dispel these assumptions about Indian publics and India's NFU policy.

As a part of the project, an English-language Internet poll comprising 1,000 respondents was conducted in December 2015.⁸⁸ As many as 90 percent of those polled agreed with the statement that "India should not use nuclear weapons unless it is attacked first with nuclear weapons by another country."⁸⁹ This result confirmed the general perception that a vast majority of the Indian public agrees with the country's NFU policy. However, participants' responses changed dramatically when they were presented with specific, real-world crisis scenarios, raising the possibility that Indian publics' commitment to NFU is not as strong as widely presumed.

The respondents were presented with a hypothetical scenario in which Lashkar-e-Taiba (LeT), a terrorist group with purported ties to the Pakistani establishment, was reportedly building a nuclear bomb in a bunker in Lahore using stolen nuclear explosive material. Given this situation, participants were told that the Indian prime minister had two options. The first option was to launch one nuclear-tipped missile against the underground bunker, which would have an almost 90 percent certainty of destroying the target but would leave 1,000 Pakistani civilians dead. The second option was to wage a conventional operation against the target with the same (90 percent) probability of target destruction and the same number of Pakistani deaths. Given these options, 53 percent of the respondents chose the option of using nuclear weapons. The main reason cited for this decision was "to send a strong message to

⁸⁵ Ibid.

⁸⁶ Scott D. Sagan, "Public Opinion, Commitment Traps, and Nuclear Weapons Policy," *Center on Contemporary Conflict*, November 2015, <http://calhoun.nps.edu/handle/10945/47776>.

⁸⁷ Gurmeet Kanwal, "India's Nuclear Doctrine: Need for a Review," December 5, 2014, *Center for Strategic and International Studies*, <https://www.csis.org/analysis/india-percentE2-percent80-percent99s-nuclear-doctrine-need-review>.

⁸⁸ Scott D. Sagan, "Public Opinion, Commitment Traps, and Nuclear Weapons Policy," *Center on Contemporary Conflict*, November 2015, <http://calhoun.nps.edu/handle/10945/47776>.

⁸⁹ Benjamin A. Valentino, Scott D. Sagan, "Atomic attraction," *The Indian Express*, June 3, 2016, <http://indianexpress.com/article/opinion/columns/barack-obama-hiroshima-speech-india-nuclear-weapon-terrorism-atomic-attraction-2831348/>.

LeT and other potential enemies of India that we will not permit them to build weapons of mass destruction.”⁹⁰ When the scenario was altered yet again, the responses were even more in line with nuclear use. After the effectiveness of a conventional strike was reduced to 45 percent while the effectiveness of nuclear strike was maintained at 90 percent, 72 percent of respondents actually opted for the option of a nuclear strike.⁹¹

A different set of respondents were presented with the same scenario, but the numbers of Pakistani civilian casualties were increased to 50,000 as opposed to 1,000 (conventional strike effectiveness remained at 45 percent and nuclear strike at 90 percent).⁹² Even with a high number of civilian casualties, more than half (51 percent) still desired a nuclear strike.⁹³

These results indicate that in case Indian leaders opted for a nuclear first-strike, public opinion is likely to have an enabling effect, rather than a constraining effect. However, it is important to note that his polling result is not fully representative of the Indian population. The polls were conducted in English in New Delhi, thus reflecting only a segment of elite opinion. Although the original plan was to get responses through door to door polls in more cities (Delhi, Jaipur, Chennai, and Mumbai) and villages with the surveys translated in many Indian languages,⁹⁴ “technical problems,” such as “translation difficulties and technical challenges of interviewing door to door in remote villages,” made this polling infeasible.⁹⁵ Even if not fully representative, however, these results highlight the potential limitations of the popularity of NFU among the broader Indian public.

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The same project also studies American attitudes on the same issue. The results shows that American publics were willing to use nuclear weapons based on their military utility.⁹⁶ Press, Sagan, and Valentino analysed the results using three broad theoretical perspectives and concluded that Americans’ become more willing to employ nuclear weapons when “nuclear weapons provide advantages over conventional weapons in destroying critical targets.”⁹⁷ A similar trend can also be seen in the results of the Indian context with the currently available

⁹⁰ Ibid.

⁹¹ Benjamin A. Valentino, Scott D. Sagan, “Atomic attraction,” *The Indian Express*, June 3, 2016, <http://indianexpress.com/article/opinion/columns/barack-obama-hiroshima-speech-india-nuclear-weapon-terrorism-atomic-attraction-2831348/>.

⁹² Ibid.

⁹³ Ibid.

⁹⁴ Scott D. Sagan, “Public Opinion, Commitment Traps, and Nuclear Weapons Policy,” *Center on Contemporary Conflict*, November 2015, <http://calhoun.nps.edu/handle/10945/47776>.

⁹⁵ Ibid.

⁹⁶ Daryl G. Press, Scott D. Sagan, and Benjamin A. Valentino, “Atomic Aversion: Experimental Evidence on Taboos, Traditions, and the Non-Use of Nuclear Weapons,” *American Political Science Review*, 107, 188-206, 2013.

⁹⁷ Ibid.

results, although a more detailed study on this aspect would be desirable to establish greater certainty.

Nuclear Energy

The debate on nuclear energy is more public in nature when compared to other nuclear issues. This means that the debate is not just restricted to the strategic elites but extends beyond them. The extant polls and surveys on this topic reveal some aspects on the public attitudes on nuclear energy, which are at times contradictory in nature. Public attitudes towards nuclear power is an important factor for the future of nuclear industry.

As seen in Indian news coverage and debates, there are periods that have been dominated by anti-nuclear protests hailing from places where NPPs are scheduled for construction or are already under construction. Going by such instances, one is likely to interpret that there is a seemingly vocal anti-nuclear energy segment in India. Looking at the reasons for the anti-nuclear segment, it is argued that several factors generate negative viewpoints among the people who have to live with NPPs in their vicinity. Primarily, some sections of the public largely view nuclear issues through the eyes of local political parties and the media, which at times may provide decidedly negative coverage on nuclear energy technology.⁹⁸ Additionally, anti-nuclear sentiments may also stem from prevailing “public distrust of centrally controlled large organisations in India.”⁹⁹

Looking at the various anti-nuclear protests in some parts of rural India, one would notice that public opposition to NPPs usually originate from the “threats to the livelihood of local populations such as fishing community and farmers and less from safety and environmental concerns.”¹⁰⁰ Although, in the post-Fukushima years, concerns regarding safety and environmental damage have become more relevant.

Going by these analyses, one might conclude that there is a large anti-nuclear public opinion in India. However, polls and surveys reveal a different story. For instance, after the Fukushima incident, the United Kingdom’s Ipsos MORI Survey conducted an opinion poll in 24 countries to understand the general opinion on nuclear power. They held almost 1,000-plus interviews of people aged 18-64 in May 2011, via the Ipsos Online Panel system.¹⁰¹ People polled in India cited huge support (61 percent) for nuclear power, while a majority of respondents in other countries (except the United States and Poland) opposed the technology.¹⁰²

Going by these analyses, one might conclude that there is a large anti-nuclear public opinion in India. However, polls and surveys reveal a different story.

⁹⁸ Sitakanta Mishra, “Social Acceptance of Nuclear Power in India, *Air Power*,” 7(3), July-September 2012, https://www.academia.edu/2004382/Social_Acceptance_of_Nuclear_Power_in_India.

⁹⁹ Ibid, 65.

¹⁰⁰ Deepa M. Ollapally and Rajesh Rajagopalan, “India: The Nuclear Debate of a Rising Power” in Mike M. Mochizuki and Deepa M. Ollapally, *Nuclear Debates in Asia: The Role of Geopolitics and Domestic Processes* (Lanham: Rowman & Littlefield, 2016), 67.

¹⁰¹ “Strong Global Opposition towards Nuclear Power,” June 2011, *Ipsos Mori*, <https://www.ipsos-mori.com/researchpublications/researcharchive/2817/>.

¹⁰² Ibid.

Apart from this study, an International Atomic Energy Agency (IAEA)-sponsored opinion survey was conducted by Globescan Inc. in 2005 in 18 countries.¹⁰³ In India, almost 1,000 face-to-face interviews were conducted by the pollsters in major metropolitan cities (Chennai, Delhi, Kolkata and Mumbai), thus representing 5 percent of the total population.¹⁰⁴ The survey intended to gauge opinion on NPPs in the country and note the awareness levels about IAEA's inspection and issues related to nuclear security. The final results were similar to the outcome of the Ipsos MORI Survey. Unlike most countries, the support for nuclear power in three countries—India, South Korea, and the United States—was amongst the highest. 43 percent of Indian respondents were willing to adopt greater dependency on nuclear power to satiate their energy needs and deal with climate change, and 33 percent of Indian respondents supported the idea of building new NPPs in the country. In a question regarding peaceful uses of nuclear technology, Indian respondents were most (36 percent) supportive of utilising it to treat human diseases followed by 22 percent of the respondents who saw merit in using the technology for the production of electricity.¹⁰⁵

Another relevant survey is the 2013 Lowy Institute and Australia India Institute's study.¹⁰⁶ When the respondents were asked about "possible threats to India's security," almost 80-85 percent considered energy shortages (in conjunction with water, food) and environmental issues (such as climate change) as "big threats."¹⁰⁷ Such a concern about energy shortages could allude to a potential reason for the support for India's nuclear energy program.

Admittedly, there are not many rigorous studies that unearth the nuances of what and how the Indian publics think about nuclear energy. It is also desirable to have more studies that explain the trend of anti-nuclear protests in conjunction with broader support for nuclear energy. One explanation may be that citizens located closer to NPPs are more concerned about nuclear safety issues while citizens located further away from nuclear facilities are less concerned about nuclear safety. However, this is just a hypothesis and needs further support. If one looks at publics living near NPPs in other countries such as the United Kingdom,¹⁰⁸ some studies or personal interviews show that people are generally not uncomfortable with living close to NPPs. Although the Indian context is surely different than the UK context, it does indicate that one cannot take the linkage between proximity to a NPP and the strength of opposition for granted.

Gaps in the Current Approach to Public Attitudes

A review of the studies covered so far reveal some methodological challenges when studying the Indian public attitudes. First, India is a highly diverse country, not just in terms of ethnicities, but also in terms of language, economic status, political engagement, religion, regional traditions, and customs. It is impossible for a sample size of 1,000 or even 5,000

¹⁰³ "Global Public Opinion on Nuclear Issues and the IAEA: Final Report from 18 Countries," *GlobeScan*, 2005, <http://large.stanford.edu/courses/2015/ph241/llanos1/docs/globescan.pdf>.

¹⁰⁴ "Global Public Opinion on Nuclear Issues and the IAEA: Final Report from 18 Countries," *GlobeScan*, 2005, <http://large.stanford.edu/courses/2015/ph241/llanos1/docs/globescan.pdf>.

¹⁰⁵ *Ibid.*

¹⁰⁶ Rory Medcalf, "Lowy Institute India Poll 2013," *Lowy Institute for International Policy*, 2013, http://www.asiapacificbcw.org/resources/Malik_percent20and_percent20Medcalf_percent20India's_percent20new_percent20world_web.pdf.

¹⁰⁷ *Ibid.*

¹⁰⁸ "Living near a nuclear power station," *BBC News*, January 23, 2006, http://news.bbc.co.uk/2/hi/uk_news/magazine/4633024.stm.

(unless extremely heterogeneous) to represent the extremely diverse country of 1.21 billion people.¹⁰⁹

Another commonality across these surveys and polls is the focus on metropolitan cities. All of them, with the exception of the Lowy India Poll and Pew Research Survey, were conducted in major metropolitan centers of India. Urban centers cover a very small proportion of India and are mostly comprised of individuals belonging to the attentive public. Moreover, most of the existing and planned NPPs are not located in populated areas, but in rural areas that are seldom represented in studies. The attentive public, therefore, may be more likely to support nuclear facilities because they are unlikely to be built near their areas of residence. If a NPP is ever planned in a metropolitan area, it would be important to gauge the attentive public's reaction. On the one hand, the attentive public may be more likely to support nuclear power because they may have more information about nuclear safety and be less likely to hold superstitious views about nuclear technology. On the other hand, opposition to NPPs are often attributed to greater awareness levels, which would imply that the attentive public might be concerned about nuclear accidents, no matter how rare. The responses cannot be predicated with much confidence without an in-depth study to determine attitudes on these subjects. However, the contradictions in these arguments suggest that the focus on metropolitan cities is problematic, especially when attempting to understand broader public attitudes vis-à-vis nuclear energy.

An under-representation of the rural population is likely to lead to a misleading narrative on the nuclear energy discourse. To illustrate, most of the current studies assert a general support among Indian respondents regarding NPPs. It is important to highlight that there have been numerous reports of protests from the locals in some places when a new NPP is scheduled to be set up in their surroundings. Considering that most of the Indian people polled largely supported nuclear power, it is a contradiction to see anti-nuclear protests in places such as Jaitapur (Maharashtra)¹¹⁰ and Kudankulam (Tamil Nadu).¹¹¹

An under-representation of the rural population is likely to lead to a misleading narrative on the nuclear energy discourse.

Furthermore, most of the polls and surveys are conducted online, which further reduces the accuracy of representation. Statistically, only approximately 20 percent of the Indian population has access to the Internet.¹¹² People living in rural areas, with limited Internet connectivity or publics with lower incomes and/or education levels, or older populations are unrepresented in the Internet-based surveys. Furthermore, another limitation of web-based

¹⁰⁹ "India's Population at 1.21 Billion; Hindus 79.8 percent, Muslims 14.2 percent," *Business Standard*, August 26, 2015, http://www.business-standard.com/article/current-affairs/india-s-population-at-1-21-billion-hindus-79-8-muslims-14-2-115082600038_1.html.

¹¹⁰ "Still in Limbo: Jaitapur Will See Massive Anti-Nuclear Protests despite Indo-French Push on Reactor Project," *Firstpost*, January 27, 2016, <http://www.firstpost.com/world/still-in-limbo-jaitapur-will-see-massive-anti-nuclear-protests-despite-indo-french-push-on-reactor-project-2600044.html>.

¹¹¹ "Anti-Kudankulam Activists to Raise Protest to next Level," *The Hindu*, October 20, 2013, <http://www.thehindu.com/news/national/tamil-nadu/antikudankulam-activists-to-raise-protest-to-next-level/article5032106.ece>.

¹¹² "Do You Know How Many Indians Have Access to Internet?" *India Today*, March 23, 2015, <http://indiatoday.intoday.in/story/internet-access-india-facebook-twitter-social-media-smartphone/1/425323.html>.

opinion polls is that a respondent does not possess the option of clarifying a particular question in case of any confusion.

More importantly, the studies on Indian public attitudes on nuclear issues tend to focus either on nuclear weapons or nuclear power. Rarely has an attempt been made to look at the gradations in Indian public attitudes on all nuclear issues (views on power, weapons, fuel cycle, nuclear waste disposal, NFU, etc.) in one study. Although this might appear to be an ambitious plan, it could provide further details on issues that have perhaps never come to the fore, thus offering an all-inclusive overview of Indian public attitudes on nuclear matters.

Furthermore, it is important to note that errors may crop up in survey/polling methodologies owing to the framing of questions and/or the interviewer's biases. For example, in a 1986 British Gallup poll, respondents were asked whether British nuclear weapons made them feel "safe." 40 percent agreed, 50 percent disagreed, and 10 percent expressed no definite opinion. However, when another pollster changed the wording to "safer," as opposed to "safe," the results changed.¹¹³ With the addition of the word "safer," 50 percent agreed and only 35 percent stated that that nuclear weapons "made them feel less safe."¹¹⁴ As underscored by this example, framing objective questions for opinions polls is difficult, especially in an Indian context, which would require polls conducted in multiple languages. It may also be possible that a question may subtly or overtly reflect the biases of the interviewer, which will have an impact on the final results.¹¹⁵

A way to fill these gaps is to adopt more rigorous approaches to understand the Indian public's attitude on nuclear issues. As mentioned previously, Frey tried a new method and focused on quantitative analysis. This method was relatively better and brought to light some aspects which were impossible to cover in polls/surveys. However, the approach was still unable to capture the varied shades of public attitudes in India. As accepted by the author himself, quantitative analysis of new media content "fail(s) to detect the often subliminal discourse on the rather intangible motives of national pride, prestige, and status seeking that lie behind the ostensible issues."¹¹⁶ In view of the above identified pitfalls and potential problems in the current literature, it is recommended to adopt more rigorous methods and approaches to understand the public's thinking on nuclear issues in India.

The Way Forward

Much of what has been covered in this paper looks at the need to undertake more studies on Indian public attitudes vis-à-vis nuclear issues. This section briefly presents the possible way forward to understand nuclear matters holistically, infused with gradations of opinions and factors behind them.

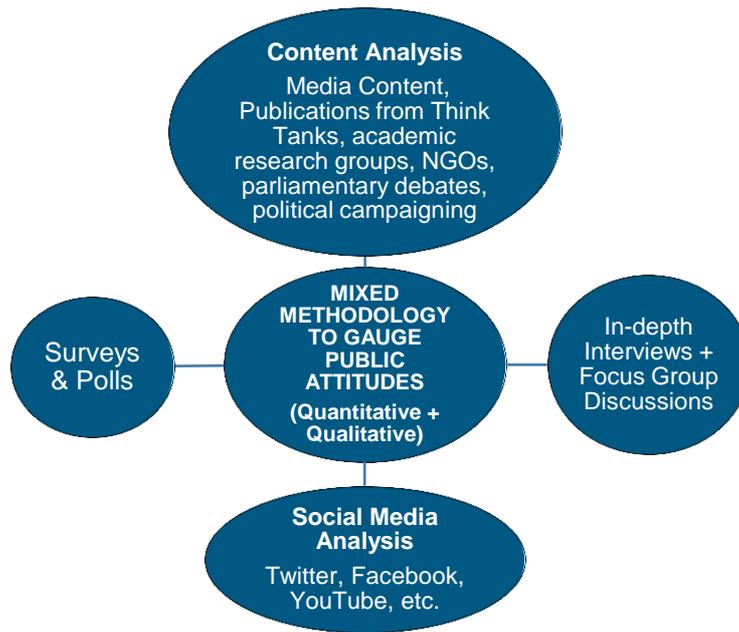
There is no perfect way forward, but it is worth combining the various approaches with a view to utilize their advantages. Thus, it could be useful to adopt a multi-methodology research approach (Figure 5) using quantitative and qualitative methods to gain greater insights into Indian public attitudes.

¹¹³ "Britain heads for Nuclear War at Polls," *The New York Times*, October 5, 1986, <http://www.nytimes.com/1986/10/05/weekinreview/britain-heads-for-nuclear-war-at-polls.html>.

¹¹⁴ Ibid.

¹¹⁵ S. Borrelli, B. Lockerbie, and R.G. Niemi, "Why the Democrat-Republican partisanship gap varies from poll to poll," *Public Opinion Quarterly* 51 (1), 115-119, 1987.

¹¹⁶ Karsten Frey, *India's Nuclear Bomb and National Security* (New York: Routledge, 2007), 46.

Figure 5: Mixed Methodology to Gauge Public Attitudes

Primarily, to ‘explain’ and ‘understand’ the nuclear-related attitudes, one has to begin with opinion polls and surveys that include geographical areas beyond metropolitan hubs in India. The surveys and polls also need to be held in multiple languages, with special attention to the wording of the questions posed to the respondents.

In addition to the quantitative analysis based on surveys and polls, it is recommended to also carry out qualitative analysis through in-depth interviews, focus groups discussions, etc. Qualitative analysis can fill the gaps in quantitative methodology, to a certain extent. Frey in his study accentuates this need when he argues that the “qualitative approach... gives meaning to these correlations and contributes to the understanding of the political processes and phenomena.”¹¹⁷ The focus on non-numerical data, i.e. which cannot be observed quantitatively such as people’s ideas, observations,¹¹⁸ values, and opinions will facilitate a deeper understanding and bring out the subtleties of various public attitudes.

Responses received through in-depth interviews (which continue for several hours and are conducted more than once) will bring out the complexities of people’s thinking and attitudes towards the issue in addition to the potential reasons behind them. It is important to mention, especially in the Indian context, that it is cumbersome to conduct in-depth interviews of a large sample size, when compared to the ones used for quantitative analysis. However, one has to be meticulous about using a smaller sample size, with a special intent to include respondents from various regions, languages, and religions in India.

Similarly, focus groups offer an advantage that is missing in other methodologies. Focus groups comprise a group of respondents (10-12 at most) and a moderator, who asks open-ended questions.¹¹⁹ Responses are sought to these questions, and the participants can agree or disagree while presenting their views. This is different from surveys and polls, wherein

¹¹⁷ Karsten Frey, *India’s Nuclear Bomb and National Security* (New York: Routledge, 2007), 46.

¹¹⁸ Save the Children, “6 Methods of Data Collection and Analysis,” *The Open University*, www.open.edu/openlearnworks/mod/resource/view.php?id=52658.

¹¹⁹ Chris MacKechnie, “How to Develop Questions for a Focus Group,” *Chron*, <http://smallbusiness.chron.com/develop-questions-focus-group-1248.html>.

respondents are asked questions individually so that their views are not influenced by other respondents. However, the dynamics of the social world work differently. In the real world, people interact with each other, and their opinions change based on their surroundings or their peers.¹²⁰ This implies that answers that are solicited on an individual level may not always hold ground when the respondent discusses the issue with others. Therefore, public opinion in its real sense can be best assessed when the respondents are not acting as individuals but as part of the public. Also, the main retardation factor of qualitative research—the inability to project results or assess them statistically—can be dealt with quantitative research, which needs to be conducted simultaneously. Even in this case, the interviews and discussions should be conducted in urban and rural centres alike, with open sessions in cities with nuclear reactors (operating and planned).

In conjunction with the various approaches, it would be valuable to also include content analysis. Content analysis can be described as “a general set of techniques for analyzing collections of communications,” which involve “discerning meaning about attitudes, symbols, cultures, and institutions from which inferences are ultimately drawn.”¹²¹ Content analysis, especially for public attitudes on nuclear issues, could be effective as it would facilitate the unpacking of the public’s complex viewpoints while also providing an insight into cultural, historical, institutional, psychological, or sociological aspects, which may shape public perceptions. Broadly, the contents covered might include media content, social-media content, think-tank publications, academic or non-profit research groups, parliamentary speech and debates, and political campaigning.

Media content is a significant aspect when studying public attitudes. The news media (such as television network news, newspapers, and magazines) is the most relevant in this regard as it influences the domestic or foreign policy agendas, especially in a democracy.¹²² The manner in which an issue is packaged and portrayed to the consumers speaks a lot about the agendas of different groups. Many researchers have established that media plays a role in political agenda setting, largely based on what issues are covered and how they are reported to the masses.¹²³

It would be important to focus content analysis on the news media. As asserted by Nancy Saraisky, media coverage not only reflects but also creates public opinion.¹²⁴ News-media content is useful because it is an important influencer for national issues, including nuclear ones. This is confirmed by commentators who state that the way news media and journalists cover nuclear energy has relevance for public opinion.¹²⁵

¹²⁰ Torri Leigh Bridge, “Learning through discussion: using focus groups in health Education,” LaGrange College Master of Education, <http://lagrange.campusguides.com/c.php?g=435896&p=2971608>, 2011.

¹²¹ Nancy Green Saraisky, “Analyzing Public Discourse: Using Media Content Analysis to Understand the Policy Process,” *Current Issues in Comparative Education*, 18(1), 26-41, 2015, <http://www.tc.columbia.edu/cice/current-issue/Green-Saraisky-CICE-18.pdf>, p. 27.

¹²² Philip M. Seib, *Headline diplomacy: How news coverage affects foreign policy* (Westport, CT: Praeger, 1997), 64.

¹²³ See Maxwell McCombs and Donald L. Shaw, “The agenda setting function of mass media,” *Public Opinion Quarterly*, 36(2), 1974; William A. Gamson and Andre Modigliani, “Media discourse and public opinion on nuclear power: a constructionist approach,” *American Journal of Sociology*, 95(1), 1989.

¹²⁴ Nancy Green Saraisky, “Analyzing Public Discourse: Using Media Content Analysis to Understand the Policy Process,” *Current Issues in Comparative Education*, 18(1), 26-41, 2015, <http://www.tc.columbia.edu/cice/current-issue/Green-Saraisky-CICE-18.pdf>.

¹²⁵ Kathrina Maramba, “Why the Future of Nuclear Energy May Depend on Media Coverage,” *Big Think*, <http://bigthink.com/age-of-engagement/why-the-future-of-nuclear-energy-may-depend-on-media-coverage>.

The Indian media has played a role in in shaping public opinion as well as influencing or enabling the government's decisions on nuclear-related issues. For example, in 1996, when New Delhi was under pressure to sign the CTBT agreement, there was strong political divide on the issue because the CTBT was being connected to the NPT and was viewed as discriminatory within the country. However, backing out of the CTBT was difficult especially given that India had co-sponsored a resolution on the CTBT (in 1993) and advocated banning nuclear tests for long. Given this situation, there were debates in the print media, most notably in the *Times of India* newspaper, which gave maximum coverage to the issue and "editorially called for India rejecting CTBT in the form in which it was then being proposed."¹²⁶ It stated categorically through its editorial pieces that India has to be accepted as a nuclear weapons power before becoming a signatory to the CTBT. This stance was eventually India's position on this issue.¹²⁷

The link between public opinion, media, and decisionmakers can also be appreciated through interviews of important government officials. Most important cabinet members of Jawaharlal Nehru's Congress government (namely Swaran Singh, M. C Chagla, Dinesh Singh, Y. S. Chavan, and Pranab Mukherjee) accepted in interviews that public opinion was important for them, and they relied on news editorials and coverages as "indirect sources of public opinion."¹²⁸ V.K. Krishna Menon, the Indian defense minister during the 1962 war and a close ally of Jawaharlal Nehru particularly noted that "newspaper editorials sometimes played a negative role with regard to the making of foreign policy."¹²⁹

Having highlighted the link between media content, public opinion and the decisionmakers, it is recommended to undertake a content analysis study similar to the one done by Frey, but with a broader scope. Frey's content analysis is limited to quantitative analysis of English newspapers. However, English-language newspapers' reach in India is relatively limited when compared to Hindi and other regional languages. Hence, it would be worthwhile to undertake a quantitative and qualitative analysis of print and broadcast media of English, Hindi, and other major vernacular languages such a Bengali, Telugu, Marathi, Tamil, and Urdu.

As stated previously, social media is a new influencer and also a platform to gauge public thinking on various issues. Its importance became undeniable after it helped galvanise political voices during the Iranian protests in 2009¹³⁰ and the Arab Spring in 2011.¹³¹ Therefore, social media analysis has become increasingly valuable to assess public opinion or attitudes in a country or region. The RAND Corporation has been working on mastering this approach and employs its "automated content analysis program known as Linguistic Inquiry

¹²⁶ Sanjaya Baru, "The Growing Influence of Business and Media on Indian Foreign Policy," *ISAS Insights*, February 2015, <https://www.files.ethz.ch/isn/96448/50.pdf>.

¹²⁷ Ibid.

¹²⁸ Jayantanuja Bandyopadhyaya, *The Making of India's Foreign Policy* (New Delhi: Allied Publishers, 2003), 130.

¹²⁹ Michael Brecher, 1968, "India and World Politics: Krishna Menon's View of the World," in Jayantanuja Bandyopadhyaya, *The Making of India's Foreign Policy* (New Delhi: Allied Publishers, 2003), 130.

¹³⁰ Lev Grossman, "Iran Protests: Twitter, the Medium of the Movement," *Time*, June 17, 2009, <http://content.time.com/time/world/article/0,8599,1905125,00.html>. Also see Somayeh Moghanizadeh, "The role of social media in Iran's Green Movement," *University of Gothenburg*, 2013, https://gupea.ub.gu.se/bitstream/2077/34206/1/gupea_2077_34206_1.pdf.

¹³¹ Aditi Malhotra, "Social Media: The New Tool of Revolution," *Scholar Warrior Journal*, 74-81, Spring 2011, http://www.claws.in/images/journals_doc/Spring_percent202011-percent20Final_percent20Issue.87-94.pdf. Also see Catherine O'Donnell, "New study quantifies use of social media in Arab Spring," *UW Today*, <http://www.washington.edu/news/2011/09/12/new-study-quantifies-use-of-social-media-in-arab-spring/>.

and Word Count 2007,” which reviews numerous posts in a short time and offers an overview of the views expressed.¹³² It is therefore recommended to analyze the social media posts of Indian users, especially during the time of a specific event, such as the Fukushima disaster, in order to collect raw data, views, and moods of Indian users. Interestingly, a lot of Indian social media users also belong to non-metropolitan cities, thus providing a more diverse base of users. According to a report, between 2014-2015, there has been 100 percent increase in terms of social media usage in rural India.¹³³ It is relatively easier to conduct on-line polls which can also provide results in a quicker time-frame.

Conclusion

As initially highlighted in this paper, there has been a scarcity of studies which look at Indian public attitudes on nuclear issues. This study identifies this literature gap. Primarily, the paper looks at the various publics in India (masses and attentive publics) and briefly showcases how their opinions/attitudes impact the strategic decisions. For a considerable period since independence, the discourse on nuclear issues in India has remained restricted to the strategic elites. It is increasingly important to understand that the trends in India are shifting towards a country with a more participatory and vocal citizenry, even if the strategic elites continue to hold a strong position.

The paper also highlights that swelling energy needs in India and global pressure to minimise carbon emissions have compelled India to rely on nuclear technology. This, in conjunction with a more educated and aware middle class, young demography, and greater political participation implies that the public attitudes on nuclear issues will become more important than before. In addition, regional parties and local pressure groups are more inclined to oppose nuclear energy if they see an anti-nuclear streak among the voters.

Despite these trends, there is a lack of rigorous and comprehensive studies, polls, or surveys addressing Indian public attitudes on the stipulated issue. Even when looking at the extant literature, one would realise that the frequency, sample size and user base of surveys have been restricted in scope, outcome and geographical spread. Thus, modifications in research strategies and polling methodologies along with a focus on qualitative and content analysis methods are needed to obtain a more holistic and accurate picture of public attitudes.

Overall, this study intends to present a way forward to inform the larger question: do public attitudes in India on nuclear issues have an influence (enabling or constraining) on decisionmakers? Before efforts are directed towards understanding this link, it is indispensable to understand the Indian public attitudes on nuclear issues, and this study has outlined methods of better addressing this information gap. The future of India’s nuclear journey may not be determined by public attitudes, but will surely be influenced by what the common person thinks. It is the need of the hour to begin understanding these nuances and trends within the world’s largest democracy.

¹³² “Can Social Media Help Analyze Public Opinion?” *RAND Corporation*, 2012, http://www.rand.org/pubs/research_briefs/RB9685/index1.html.

¹³³ “Growth in social media usage: Rural India beats urban India,” *Times of India*, June 18, 2015, <http://timesofindia.indiatimes.com/tech/tech-news/Growth-in-social-media-usage-Rural-India-beats-urban-India/articleshow/47718401.cms>.

Assessing Indian Nuclear Attitudes

A Visiting Fellow Working Paper



STIMSON