

SCIENCE, TECHNOLOGY & SOCIETY (STS) APPROACH TO THE NEW SECURITY STUDIES

A Multi-Disciplinary Approach to Understand the New Security Order

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The Digital era where individuals depend on the information technology for commute, work, shopping, education, etc., appears to have come very near to realize the speculations of Donna Haraway, Jacques Ellul, and Langdon Winner (to name a few) regarding the technological determinism of the society. The extreme side of determinism finds people like Elon Musk, moving completely against the unregulated AI development, and the other side has the likes of Jack Ma, promoting the development of AI without state intervention (New China TV, 2019). Technological advancements and people's inherent subjugation to the technological artifacts bring down the very foundations of the 20th-century political order – liberty, equality, justice as opined by Ellul in his *'the technological society,'* based on the industrial society. While Ellul's theory of technological society is an excerpt from sociology, Robert Cox's model of historic bloc establishes that such technological societies will impact the national political system and further, the world order (Cox, 1981). The causal analysis between technology and state policy are often found in the scholarship of security studies. Even though there are debates around the taxonomy of security studies and International relations, general understanding puts them in the same discipline. For the discussion here, let's consider Buzan's definition of security as it does not confine itself to the statutory framework –

“Security is taken to be the about the pursuit of freedom from threat and the ability of the states and societies to maintain their independent identity and their functional integrity against the forces of change which they see as hostile.” (Buzan, 1991, p. 432)

Even though Barry Buzan is considered to be the structural realist within the Copenhagen school, a new understanding of security within the latter has accepted the emerging actors (non-state) (Stritzel, 2007). Even the speech act framework of securitization which based completely on the neo-realist presumptions of the state being the main actor in the international relations, would fare better in the analysis if it takes the structuration approach akin to Giddens (Stritzel, 2007). This shows the increase in the agency status of non-state actors and also the technology itself. All these frameworks and theoretical models were designed to tackle the security issues of the industrial era. The Digital era has surpassed the boundary restrictions of technology developments and material outcome (missile/Nuclear weapons) based control regimes. Much before the 2006 breakthrough of AI and anticipatory research centers on Nanotechnology, Amitav Malik in 2004 had established that the future security trend is anchored on information,

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biology, Nano, and energy technologies. The dual-use technologies of today (most of them are) blurs the boundary between strategic technology and common-use technology. This analyzes new security order to be multi-disciplinary with much consideration given to Science, Technology & Society discipline. The challenges faced by security analysts fare horizontally across all the sectors. Here is a brief on the overt changes being brought by the emerging technologies.

EMERGING TECHNOLOGIES AND THE CHANGE IN SECURITY ORDER:

The emerging technologies first found their usage in the civilian world and then push themselves into the military application, which is reverse to that of earlier developments (Malik, 2004). With the dual-use applications of technologies like Artificial Intelligence, Nano-technologies, Genomics, the old securitization model where the state identifies the problematic issue, becomes difficult. Who securitizes for what, when the development of technology and its application is not in the hands of the state? Besides, State security may no longer share the sense of national security because the usage of surveillance systems without public consent univocally infringes the rights like freedom of speech, equality, right to privacy of an individual which are already discussed to be the fundamentals of the new political systems (Ulmer & Zeba, 2020). Today, even the non-state actors have substantial control over the public perception aided by the AI algorithms urging the state-centric security analysis to under-go quick and necessary changes.

The universal model of securitization is also not possible because of the varied functional relational attributes (Gramsci's historic blocs, or Robert Cox's historical structures) of the different societies with the respective political structure. For example, the approaches to surveillance differ by states. Within the United States, the state of California has completely banned the use of facial recognition systems by the state departments for 3 years (Cyril, 2020). In India, the Supreme Court holds that the right to privacy is a fundamental right and is also extended to public spaces (Sikri, 2018). However, the new 2019 data protection law legalizes the usage of facial recognition systems. On the other extreme, China has its surveillance systems embedded in its constitution. It is also found in the historical political culture and evident from the Song dynasty (Mishra, 2018).

Further, codes on AI regulation are being drafted by the public policy teams of the Big Five, Google, Amazon, Facebook, Apple, while reducing elected legislature to select from the given options or make necessary changes? The state no longer enjoys the total trusteeship of Rousseau's domestic social contract today. There is a fundamental shift in society and its functioning. It needs new securitization models that would go much beyond the categorizing of Barry Buzan.

Some also report the rise of a new Cold war between Russia and the West on the AI realm (Jones, 2017), some speculate the same between China and the US (Bindra, 2019). The multipolar world, given by Mortan Kaplan also appears to have changed its systemic

arrangement of the states. Non-state actors such as digital companies, innovation-driven firms are taking over the mantle of re-constructing the social construct and of course, the global economy.

SECURITY STUDIES AND THE NEW PERSPECTIVE

Security studies is an implicit sub-division of International Relations scholarship focusing on the threats induced to the existing social order. Traditional security includes military conflicts with the state as the principal actor. While non-traditional security does not emphasize on the state as the principal actor and securitizes the non-military issues. Another term introduced by UNDP in 2004, is human security. Even though it recognized all the neglected securitizations, it lacked a speculative inclusion, digital securitization.

Barry Buzan when speculated a change in the 21st-century security order, contemplated that security could be divided into five categories. Political, military, economic, societal, and environment. It appears that he missed out on the scholarships from Alvin Toffler and Langdon Winner who hypothesized that, in the near future, the state's power would be measured by the knowledge it holds. Buzan's structural analysis of the security order provides us a framework of system theory - to understand the current instability caused in the periphery, but it is not sufficient to address the emerging uncertainties caused by the rapidly developing technologies like Nano-technology, genomics, Artificial Intelligence. This uncertainty is more attached to the core and semi-periphery (to put it in the structural notation of the world order).

The United States Homeland Security report particularly recommends an increase in the investments in the development of breakthrough technologies and protect them institutionally (2018 Analytic Exchange Program, 2018). NITI Aayog, a government think tank of India espouses that AI changes the contours of Economy, military, education, and society bringing the controls of change to the algorithm developers rather than the elected representatives (Niti Aayog, 2018). These are the very same sectors Buzan has identified as the 21st-century security issues. It is just 20 years into this century and the major securitization has shifted to an external anchor - knowledge. The other sectors are built on the latter.

Can state unilaterally call dibs on the type of technology to be developed and to acquire? The episode of project Maven which was withdrawn by Google due to the pressure from its employees says otherwise (2018 Analytic Exchange Program, 2018). On the contrary, Indian police forces using facial recognition software without any rules and regulations over data it collects, its uses, and any judicial acceptance of such systems is also a cause of concern. This poses the question of who securitizes what? This is a non-traditional security issue but, is such segmentation is still valid?

As opined earlier, the inclusion of STS into security studies is much needed to understand and analyze the new technology security order where securitization anchors on knowledge production and retention. Apart from the traditional notions of security issues, knowledge

production should be considered as the priority. Approaches like Actor-Network Theory (ANT), Large Technical Systems (LTS), Luhmann's Systems theory, Sheila Jasanoff's conception of 'co-production of technology and security,' Collier and Lakoff's approach 'critical infrastructure as security issues,' Bijker's *Social Construction of Technology (SCOT)* would become the new fundamentals of security studies (Binder, 2016). Each approach has its challenges and should be better used contextually and based on the agenda. It is highly recommended that security studies expand its scope and dwell into new approaches to counter the new norms of security such as 'human security.' It is hoped that, soon security studies will become a combination of STS and International Relations (IR).

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