Science and Technology

MAZYAR LOTFALIAN

Understanding Muslim **Technoscientific Identities**

With Islamic resurgence, there has been an increased concern that science and technology are not value-free agents that can be appropriated and expropriated without inducing social and cultural violence. There is a complex relationship between culture, religion and society on the one side, and science and technology on the other, that is far from being value free. The way people understand and adopt this relationship between culture, science, and technology, can be termed 'technoscientific identities'. This relationship has seldom been explored in the Islamic world.

It can be argued that the resurgence of Islam and the changes in the identity of secular states in the Islamic world have opened up new spaces for the transformation of technoscientific identities, creating a 'metalinguistic landscape', a landscape of global scope. There are different modalities of discourse that are interacting, each making a linguistic landscape. Ideas and concepts, whether technological or discursive, are formed in these landscapes and affect one another.

Technoscience and Islam in debate

In the late 1800s, the Islamic reform movement Salafia, facing the onslaught of Western scientific and institutional discursive practices, sought to prevent the perceived marginalization of Muslim tradition. Al-Afghani argued that science in the West is the continuation of the medieval Islamic science and therefore Muslims can adopt it while remaining Muslim and following their traditions. In this interpretation, science and the effect of European planning were understood as inherently and potentially Islamic. Science and discursive planning, such as Timothy Mitchell explores in his account of the effects of European colonial powers on the urban structures and life in Cairo,* were understood not in the context of the modern epoch as a set of interrelated episteme, but rather as a disjointed body of objects that might even bear Islamic roots. This moment was marked by intellectual debates on the relevance of Western science (such as Darwinian evolution or Galileo's astronomy) to Islam and the creation of new imaginaries through the work of cultural translation (e.g., theatre and cinema, or the formation of the 'new curious individual' as a knowledge seeker). These debates came to an end around the 1920s, when secular states adopted a hegemonic view of science as universal, value and culture free. Consequently, Islam and other local cultural traditions were increasingly rendered irrelevant.

The debates over the identity of technoscience have been re-opened in this turn of the century. Now, however, a new condition frames the relationship between technoscience and the Islamic world. This condition can be illustrated in the following way: first, with the resurgence of Islam, which is a source of cultural and political identity formation, the structure of state and of scientific and educational institutions is undergoing some changes and/or challenges. Second, there is a new emerging discursive view, based on both Islamic metaphysical foundations and historical developments of the West, that sees the West as an epoch, a set of interrelated episteme. Third, references to Islamic metaphysical foundations have become de-localized, travelling through transnational movements of people and technological devices such as the Internet. And fourth, Muslim experiences of modernity/post-modernity are multileveled, trans-local, and interactive.

Competing discourses

The quest of Muslims in the late 20th century is to find appropriate cultural and institutional models for implementing science and technology. Islamic countries today are far different from the time when Europeans arrived in Egypt, for instance, and 'found' it 'unplanned' and 'undisciplined', as they set out to subject Egypt to new disciplined spaces in order for them to be understood according to new rules of scientific methods. The late 20th-century Islamic world is a construct of hybrid norms and forms: on the one hand, scientific discourses from the West define life and its natural milieu through instrumental reason. On the other hand, Islamic discourses challenge this adoption of Western epistemology based on instrumental reason. The condition of technoscience, therefore, consists of competing discourses about how science and technology should be implemented, taught, and practised.

'Science studies' as an interdisciplinary approach to the study of science and technology is scarce in the contemporary Islamic world. In this project I am attempting to delineate the relationship between science, language, religion, culture, and society. The complex relationship among these categories is what I refer to as technoscientific identities. The problem about which is being theorized here has to do with understanding the fluid scene where many levels of discourses, institutions, and individuals are interacting. Current work on the philosophy of language is an important contribution to the study of Muslim technoscience. The relationship of language, culture and science can be understood as a set of linguistic enactments that construct institutional, epistemological, and cultural bases for science and technology.

Linguistic enactments are discursive and performative articulations of ideas that float between individuals and institutions. These articulations, in turn, are indexical of some events, including: the demise of medieval Islamic science and the effort to explain its historical and cultural roots; the reform movement of the late 19th century to revive Islam and reconcile it with modernity and the attendant emergence of the epochal understanding of the West; and, most recently, what one might call the demise of the secular state and the role of Islam as a political force for the reconfiguration of the state in the global context. These events have played deconstructive roles in recent reconfiguration of Muslim technoscientific identities. However, the articulation of these events into institutional settings must be understood in the larger discursive field of many competing modalities. There is a global context for the latter where multi-mediations, actors/institutions/technologies, frame the dynamics of change. This is what is referred to here as the metalinguistic landscape.

Malaysian experiences

To illustrate the ways in which technoscientific identities are shifting, Malaysian experiences of institution building can be considered. The resurgence of Islam in Malaysia since the 1970s has aimed to recast the socio-political structure of the country. The result has been the creation of many intellectual, academic, and non-governmental interest groups and agencies that suggest new policies to, or criticize, the Malaysian government. In 1984, Islam was introduced into the national curriculum of primary and secondary education. Almost ten years later, in the 1996 Educational Act, yet a different direction was forged when the government allowed for the privatization of the universities, thus ending the enforcement of a national unified curriculum and yielding the creation of a variety of private schools. Foreign universities could now establish themselves in Malaysia and Malaysian universities could open branches in the region.

The effect of these changes in socio-political structure, e.g., the global Islamist movement and changes in the state, is evidenced in the establishment of transnational universities and institutes, such as the International Institute of Islamic Thought (IIIT), based in the US, the International Islamic University (IIU), and Institute of Islamic Thought and Civilization (ISTAC). The resurgence of Islam in Malaysia, by drawing on Islamic metaphysical and cultural norms, has become a mobilizing force for social change, affecting Malaysia's technoscientific identities. Debates that are indexical of larger global concerns of Islam, such as the epochal understanding of the West, have been localized and have been translated into particular institutional discursive frames.

In addition, there is the appropriation and expropriation of technoscience as instrumental reason. Whereas the appropriation of the latter from the West has typically been associated with the emergence of the secular state, in the present condition this is happening in different ways. An interesting case is the joint project between Malaysia and the Massachusetts Institute of Technology (MIT) to open a university of science and technology, in that in the initial planning, the desire was to include the actual physical layout of MIT. The idea behind importing the MIT model as an institution formed through Western epistemology based on instrumental reason, reflects the view of Western science as embodied in the cultural, social and spatial ways in which it is practised. The hegemony of neo-liberal political economy allows this appropriation to take place in a manner similar to that of the earlier part of the 20th century. However, what has changed is the landscape in which competing programmes co-exist, namely, the Islamic institutions that have been emerging alongside Islamic resurgence. The apparent lack of understanding of the designers of this initiative, as well as other political events such as the crisis over Anwar Ibrahim, point to the complexity of this current landscape of competing discourses.

These institutional discourses are situated in global/local modalities. For example, Islamization can be seen in the local institutionalized forms of affirmative action and education curriculum as well as in the global project of Islamization. Other instances include the rise of inter-regional educational activities. These modalities become scenes of constant dialogue between these different articulations of foundational ideas, discourses, and programmes, interacting and affecting one another in the metalinguistic landscape.

The deconstructive role that the resurgence of Islam has played needs to be theorized in this performative landscape in order to be able to draw reconstructive programmes. What can the recent debates over technoscientific identities in Malaysia teach us? In this context of different modalities that cut across and also constitute the landscape of technoscientific identities, the Islamic challenge is aimed at the hegemonic discourses of technoscience. The remaking of technoscientific identity is not programmatic. Rather it is a performative act of meaning making, through dialogue among emerging views, a process of revealing what will be the future of Muslim technoscientific identities. ✦

Note

* T. Mitchell, (1988), *Colonizing Egypt*. Cambridge: Cambridge University Press.

Mazyar Lotfalian has a PhD in anthropology and is a visiting scholar at the Massachusetts Institute of Technology (MIT), Program in Science Technology and Society, USA. E-mail: mazyar@mit.edu