The process of modernization in Malaysia is closely shaped by developmental models of industrialized nations both in the West and in the East, such as Japan. According to Max Weber, this process of modernization is largely a process of societal rationalization signified by the rise and domination of means-ends purposive rationality over value rationality. In this paper, the author argues that Malaysia is trying to chart a different path of modernization that seeks to arrest the tide of one-sided purposive means-ends rationalization, or “instrumental rationalization” as explicated by Habermas in his analysis of the “crisis” of modernity in the West (Habermas, 1984). In the case of Malaysia, the author contends, modernity is not “unfinished”, as propounded by Habermas (1997) in his response to postmodern critique of reason and rationality, but “undetermined”. The form and shape of modernity in Malaysia is still being negotiated although it is very much a struggle between a secular model chiefly defined by the West and an “Islamic” model of which its nature and content itself is still heavily contested. The preeminent role of Islam in this “contest of Malaysian modernity” rests on the fact that Islamic identity is a national identity in Malaysia and Islamic legitimacy is central to political legitimacy. One area in which the concept of modernity plays out is modern science. According to Drori, et al. (2003), modern science, like religion, is considered to be laden with its own beliefs, values, rituals, and most importantly, a cosmology that is as comprehensive as that provided by any religion. In present Western societies, scientific cosmology is said to have substantially replaced religious worldviews. The scientific cosmology – dubbed “sacred canopy” – is perceived to possess a cultural authority that challenges, displaces, and substitutes traditional and religious authorities. As a result, it is unsurprising that some quarters of Malay Muslim intellectuals in Malaysia harbour strong misgivings towards the teaching of modern science in its current form, which delinks modern science, or modernity in general, from religion (Mohd Hazim, 2004). In this paper, the contradiction between the promotion of modern science in Malaysia on one hand, and the critique of it on the other, is argued as occurring at different levels of modern science. It speaks to the partial acceptance of epistemological basis of modern science and the rejection of its ontological tenet by certain segments of Malay Muslims in Malaysia. This allows for the fervent promotion of modern science without ceding to its implicit secular demand. The Islamization of knowledge, as an example of participation in this contestation of Malaysian modernity, can be perceived as an effort in response to intense rationalization and secularization. Whether this is tantamount to what Bassam Tibi (2009) designates as a quest for “semi-modernity” by Muslim societies is analyzed. In addition, in this paper, parallelism and divergence between Islamic and Western-postmodern critiques of Western modernity is also examined.