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ENGINEERS AND TERRORISM

Issue: In a recent article in the *European Journal of Sociology*, two European academics, Diego Gambetta of Oxford University and Steffen Hertog of “Sciences Po” in Paris, have noted the over-representation of engineers among Islamist radicals and terrorists.

In an admittedly small international survey of known members of violent Islamist groups, 69 per cent had some form of university education. And out of that percentage, 44 per cent were engineers, or had studied some form of mathematics or “hard” science. In Western countries, Islamist extremists tended to be less educated than their counterparts in the Islamic world, but engineers were still over-represented. In non-violent Islamist movements, engineers were far less dominant. And among non-Islamist (i.e. non-Muslim) extremists, the authors found few engineers among left-wing groups, although they did seem to have a presence in the radical right wing.

Comment: A number of public radicalization studies, including those originating from the RCMP, have noted the historical preponderance of highly educated professionals in Islamist terrorist plots targeting the West: Osama Bin Laden and Khalid Sheikh Mohammed are engineers; Ayman al Zawahiri is a physician; the Glasgow bombers were all medical professionals; many of the 9/11 hijackers were engineers and other scientific professionals.

Professionals as revolutionaries and terrorists are a notable historical trend as well: George Habash and Che Guevara were physicians; Ulrike Meinhoff of the Red Army Faction was a prominent journalist; Vladimir Lenin, Leon Trotsky and most of the Bolshevik inner circle were all highly educated, and so on.

The authors of this most recent study offer a number of reasons for the preponderance of engineers among Islamist radicals and terrorists.

One explanation is rooted in the tremendous prestige enjoyed by engineers and physicians in Muslim countries. Young Muslim men, particularly from the lower and middle classes, are drawn to engineering and medical schools as a means of gaining both a respected profession and social mobility in highly stratified cultures. However, economic stagnation, cronyism and repression across the Muslim world limit opportunity for young graduates. Translated into a social context, these limitations serve to create an entire class of young, resentful, highly educated and underemployed men who are motivated to seek revenge against the forces — the West, “apostate regimes” — that they imagine are responsible for their plight.

Another explanation is related to the “... corporatist ... mechanistic...” engineering mindset, which, according to the authors, has little tolerance for ambiguity and favors technical and highly logical approaches to problem solving. This mindset is drawn to narrow, fundamentalist ideologies which eschew philosophical or moral gray areas and favour violent solutions to problems.



To this mix of attributes, we can probably add a fascination with the concrete, technological achievements of modern western society, with little understanding of, and often active disdain for, its cultural underpinnings.

While there is some merit to the authors' argument, it only goes so far. Far from being corporatist and mechanistic, many engineers are in fact highly imaginative and creative: engineering provides an outlet for imagination and creativity, with the added bonus of solid professional standing and recognition (and the long tradition — from Maimonides through Anton Chekhov to Vincent Lam — of doctors as philosophers and story-tellers belies their supposed corporatist mindset). Nor are engineers necessarily uncomfortable with ambiguity, moral or otherwise. Any serious study of structures (physical, chemical or electronic) requires understanding of tolerances and the necessity for trade-offs and compromise (e.g. power versus weight of an engine; strength versus durability of a building material).

The real explanation here probably has less to do with any particular engineering mindset, and much more to do with specific attributes and skills. Engineers are useful people. They are trained to deal with the physical world and with complex technology, and to conceptualize, develop and execute complex plans to exacting standards. And to complete the rigorous requirements of an engineering degree they must be both highly intelligent and mature. A trained engineer is an asset to any terrorist group. So the issue is not that engineers necessarily have a pre-disposition to terrorism, but that terrorists seek out engineers as recruits.

From an RCMP perspective, making a concrete link between — say — Muslim engineers and terrorism could put us on dangerous ground in terms of profiling. Beyond this, the link may well be fallacious. Perhaps more important, given our concerns around radicalization of the young and the vulnerable, is to focus also on the role played in terrorist conspiracies by well-educated, mature, successful individuals.

Young people may make good and loyal terrorist foot soldiers. But older, well-educated, thinking people, like engineers, like physicians, have the emotional and intellectual wherewithal to assume important leadership and conceptual roles within terrorist organizations. A motivated group of teenagers like the Toronto 18 can do a lot of damage. But it takes an engineer, like KSM, or a doctoral candidate in urban planning, like Mohammed Atta, not only to conceptualize, but to actualize, flying heavy passenger aircraft into the World Trade Centre and the Pentagon.



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