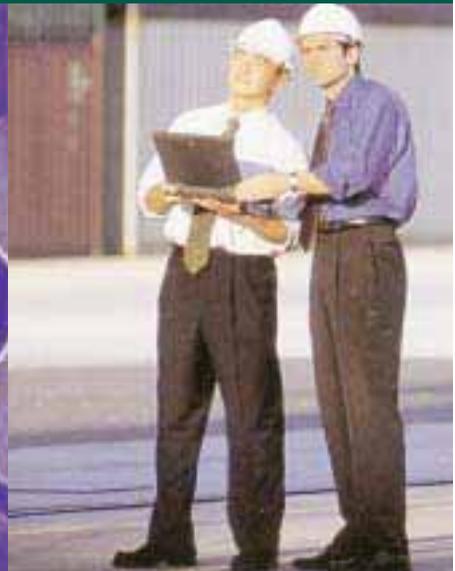
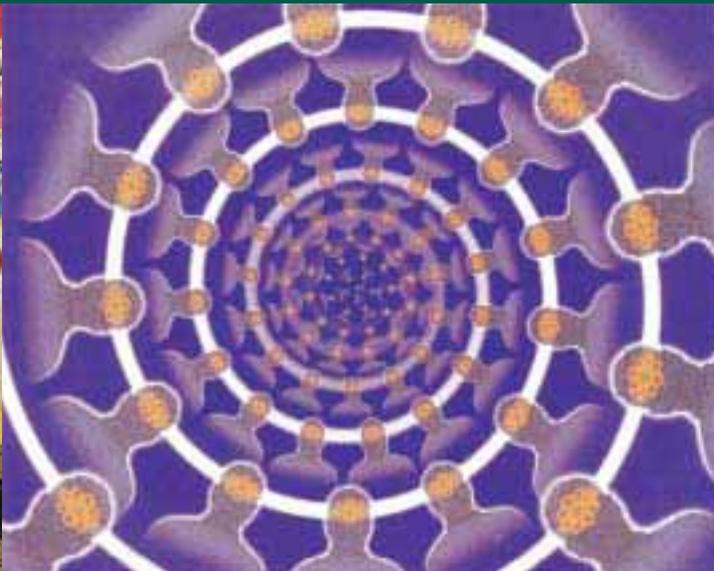
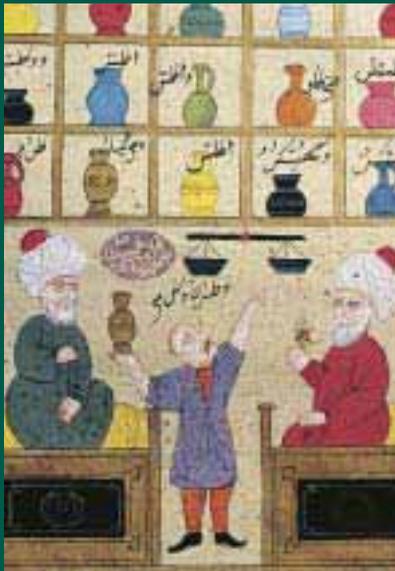




SCIENTIFIC TRAINING AND RADICAL ISLAM
A REPORT
BY THE CENTRE FOR ISLAMIC PLURALISM
2008



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OBEY YOUR COUNTRY'S LAWS!

Marje Sistani urges Muslims in West

By Mohamed Ali

MONTREAL, Canada: Iraq's Al-Marje Al-Alaa Ali Sistani sent a message to Muslims in Western nations, urging them to obey the laws of the countries in which they live.

The fatwa was delivered at a Montreal news conference of prominent Shia Muslims on behalf of Ayatullah Sayyed Ali As-Sistani.

"Muslims have undertaken to obey the laws of the country of their residence and thus they must be faithful to that undertaking," the statement read.

It condemned all acts of violence and encouraged imams to keep a watchful eye on what's going on inside their mosques.



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Scientific Training and Radical Islam

Understanding and Healing the Divided Mind

A REPORT

March 2008

Centre for Islamic Pluralism

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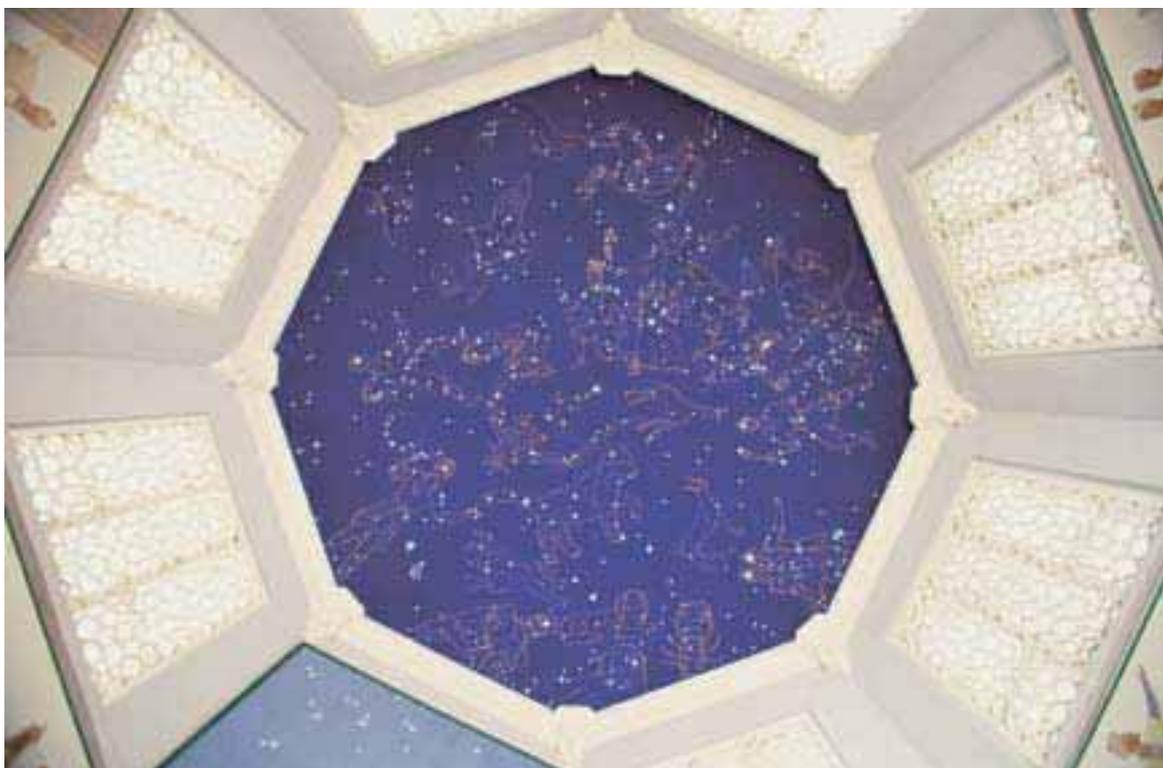
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'[T]he doctor has a big say and great weight in influencing his patients and in righteously guiding their orientation. Besides, he should be actively involved in propagating true Islam among Muslims and non-Muslims. Almost all Christian missionaries depend on medical doctors when approaching alien masses, taking advantage of the humanistic service doctors render to poor diseased people. In a country like this where we live, the best missionary service to be rendered by a medical doctor is to behave at the time in accordance with his Islamic teachings, to declare his conviction, and to feel proud of it. Then he serves as a good model that would convince others and gain their hearts.'

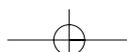
– **Mahmoud Abu Saud**, 'The Role of a Muslim Doctor,'
in Shahid Athar's *Islamic Medicine*

'The revolutions of the 20th century gave rise to a new militarism... a new kind of army... it was not fighting for an existing social order. [It] condemned the cowardice, sensuality, and other vices of many comrades... the hope for a return of the golden days remained its secret consolation... At all times and among all nations, a crafty and strong personality has recognized the simple secret of rule by violence... He is a torn personality; long reaches of his soul are insignificant, coloured by no noteworthy qualities of intellect or will; but there are corners supercharged with strength. It is this association of inferiority and strength that makes this personality so strange and fascinating... Two separate worlds are fighting: a rising world of order, still with tender membranes and limbs, easily hurt, growing and solidifying among infinite perils – and a world of disintegration and tumult, struggling with wild outbursts against its own ruin.'

– **Konrad Heiden**, *Der Fuehrer*



Constellations adorn the ceiling of the Ulugh Beg Observatory in Samarkand, Uzbekistan.



PREATORY NOTE

Scientific Training and Radical Islam: Understanding and Healing the Divided Mind was made possible by an anonymous donor, whose great generosity helped finance a study of radical Islam and the humanistic professions by a research team assembled by the Centre for Islamic Pluralism (CIP).

As it happened, the first draft of this report was concluded and circulated to CIP supporters and correspondents on 29-30 June 2007, when Britain was shocked by a terror conspiracy by Muslim doctors, directed against Glasgow airport and the streets of London. The topic of our study was suddenly, if unfortunately, newsworthy. In the aftermath of the Glasgow-London incidents, *The Spectator* of London published a major commentary by CIP officers¹, and *The Daily Telegraph* of London cited CIP as follows²: 'The rise of the radical professional classes is attracting the attention of... organisations such as the London and Washington-based Centre for Islamic Pluralism. Its directors, Stephen Schwartz and Irfan Al-Alawi, write that the West has misunderstood the threat of radical Islam: "...it is less a product of misery and the sense of extreme oppression than of the thwarted aspirations of the Muslim middle-classes". While Western doctors are baffled that their Muslim counterparts are suspected to have abandoned the desire to preserve life and engage in an attempt at mass-murder, Schwartz and Al-Alawi point to the belief that Islam and science are inextricably linked and "a fundamentalist view of religion will lead to a revival of Muslim science, such as existed in the Islamic golden age..." '

CIP's contribution to the debate over involvement of Muslim physicians in terrorism gained an audience throughout the English-speaking world. In the following eight months, we have edited and amplified the report for public release.

Other events, such as the effort by the Islamic Republic of Iran to gain nuclear weapons, have further dramatized the role of medical and other scientific professionals in radical Islam.

The first major publication by CIP, *Scientific Training and Radical Islam*, comprises historical cases of individuals and mass movements, collected from Pakistan and the Pakistani community in the United Kingdom and United States, plus Egypt and Iran. The study has been

reviewed by a member of the Harvard Medical School faculty. CIP is here publishing the complete text, with issuance in Arabic, Persian, Turkish and Indonesian to follow.

The researchers are:

- **Stephen Schwartz**, Principal Investigator, founded the Centre for Islamic Pluralism (CIP), of which he is Executive Director, as a tax-exempt charity in 2005. He is the author of the bestselling *The Two Faces of Islam*, which pioneered examination of Saudi-backed Wahhabism before the Western public, and the forthcoming *The Other Islam: Sufism and the Road to Global Harmony*.
- **Dr Irfan Al-Alawi** is CIP International Director, a British Barrister-at-Law and an outstanding expert on Islamic law and cultural heritage.
- **Jalal Zuberi**, M.D. is CIP US Southeast Director and pediatrics program director at the Morehouse School of Medicine.
- **Khaleel Mohammed**, Ph.D is CIP US Western Director and a professor of religion at San Diego State University.
- **Kamal Hasani** is an Iranian reformist intellectual, a sociologist, and a veteran of the Khomeini Revolution and the Iraq-Iran war.
- **Anne Hagood** is an independent scholar and former project coordinator for the Egyptian Centre for Women's Rights in Cairo.
- **Daut Dauti** is a CIP European researcher, a leading Balkan journalist and an expert on customary law in Islamic societies. He also served as a Fellow at the Kettering Foundation in Dayton, OH, USA.

For comment on the methodology employed in preparing this study, see 1.2 A Note on Methodology.

Prof. Kemal Silay

President, Centre for Islamic Pluralism – March 2008

1. Stephen Schwartz and Irfan Al-Alawi, 'For the Islamist doctor, terror is healing,' *The Spectator* [London], 4 July 2007.
 2. Andrew Pierce, 'The Textbook terrorists,' *The Daily Telegraph* [London], 7 July 2007.
-

REVIEWER'S NOTE

Stephen Schwartz and his colleagues at the Centre for Islamic Pluralism have produced an impressive study of the problematic connections of scientific and medical professionals to radical Islam. They provide a helpful review of the complicity of the Muslim Brotherhood, Al-Qaida, and Hamas in the recruitment of physicians and scientists to the radical cause. They correctly identify Wahhabi funding of extremism as an essential support for this phenomenon, and offer practical suggestions to help diminish its influence. They also dispose of the fallacy that poverty is a natural antecedent of extremist thought.

Religious doctrine and medical ethics are seen to be more thoroughly entwined within Islamic cultures than has been our experience in the West. Medical professionals may take advantage of their respected place in society to advance radical thought. Study of extremist movements widely separated in time and space demonstrates essential commonalities both within and outside Muslim communities. There are valuable insights into the psychology of radical Islamist professionals.

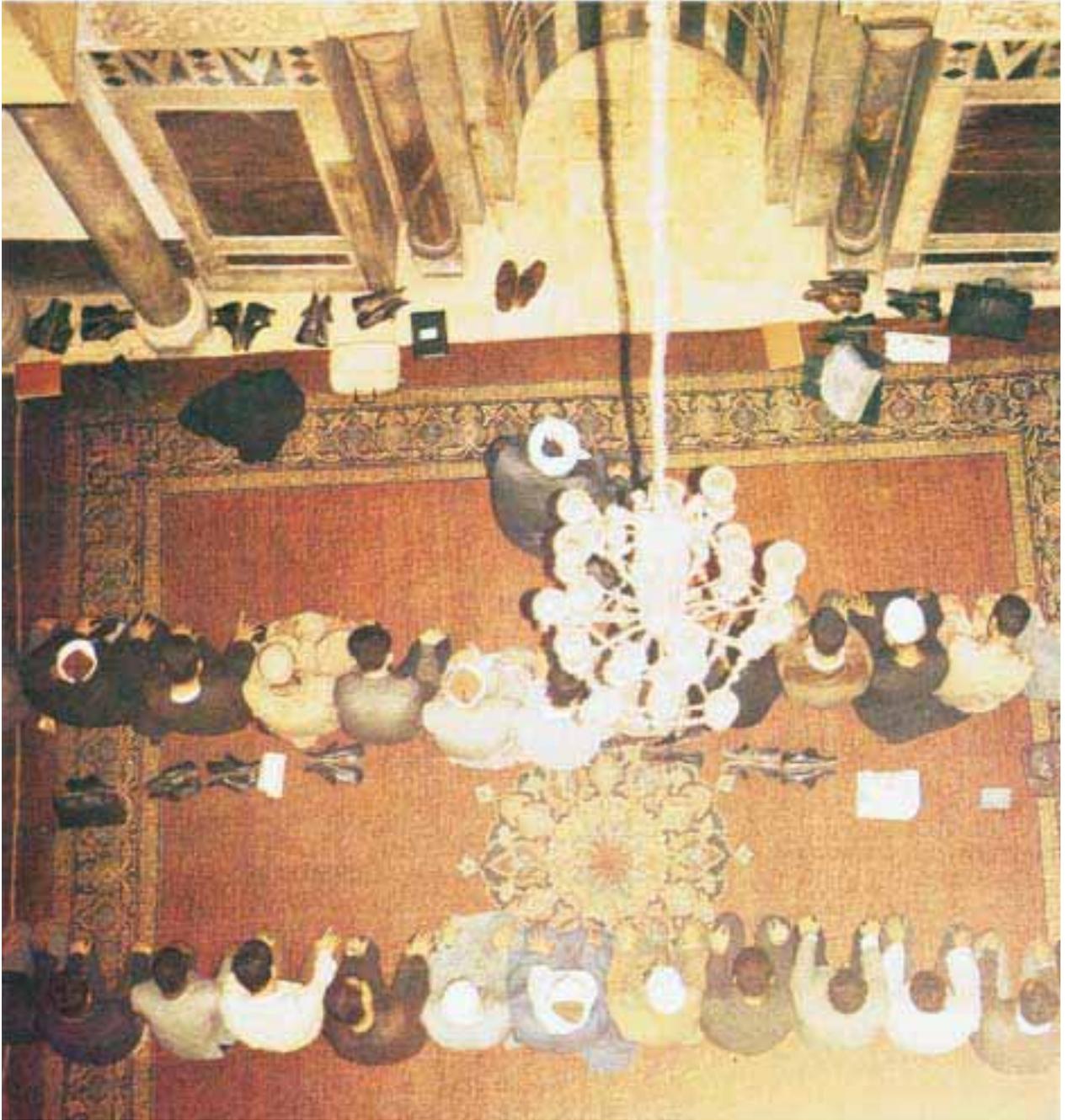
This work is a most timely and valuable contribution to illumination of the current murkiness of the origins of modern radical Islamism. The recommendations for enlistment of the broad majority of moderate Muslims in the struggle deserve the most careful and serious consideration of policy makers.

William Anderson, MD, MPH,

Department of Psychiatry

Harvard Medical School

Boston, MA, USA



Prayers in Al-Azhar Mosque, Cairo © Alistair Duncan, MEA

Scientific Training and Radical Islam

1. INTRODUCTION

The involvement of Muslim physicians in the Glasgow airport and London terror conspiracy of June 29-30, 2007, forced both non-Muslims and moderate Muslims to question how those trained to heal could embrace terrorism. The doctors active in the attempt to blow up a passenger terminal at the Glasgow airport and detonate car bombs in London did not represent an isolated phenomenon.

The origin and training of the perpetrators of the London-Glasgow events were variously reported. Bilal Abdulla and Kafeel Ahmed, both aged 27, drove in a Jeep Cherokee filled with explosive and incendiary materials directly into the Glasgow airport facility. According to *The Daily Telegraph*, they had been trained in Iraq. UK police also interrogated Sabeel Ahmed, 26, brother of Kafeel, and Mohammed Asha, 26, a Jordanian. In Australia, authorities confiscated computers and related evidence from two hospitals in their investigation of links to the airports case. Also in Australia, Mohammed Haneef, 27, a cousin of the Glasgow attackers, was arrested as he attempted to fly to Pakistan

Glasgow Airport bomber: Dr Kafeel Ahmed



Dr Bilal Abdulla



with a one-way ticket (he was later released). The Australians stated that some of the conspirators had formerly been employed in the UK National Health Service (NHS), the governmental medical system.

Bilal Abdulla was described as an adherent of Wahhabism, the ultra-fundamentalist state form of Islam in Saudi Arabia and inspirer of Al-Qaida. On 9 July 2007 the leading Saudi daily *Al-Hayat (Life)* republished claims from Indian media that the London-Glasgow suspects had been residents of the Saudi kingdom for eleven years when they were children, and had returned to India as teenagers.³

In an interview with the German weekly *Der Spiegel*, a recent 'expert' on terrorism, US political science professor Louise Richardson, was asked, 'Is there a connection between the medical profession and terrorism?' She said, 'We're so surprised when it's a doctor – someone who's devoted to caring for people rather than killing people. It seems so incongruous... I think it was more a case of this being a very good cover. There are about 240,000 doctors registered with the National Health Service... of whom 90,000 are foreign born. It's actually very easy to practice in Britain as a foreign

born doctor... The one really troubling aspect of this is access to radiological materials – clearly hospitals are one of the places where one could gain this access. To that extent doctors could be particularly useful, if there were plans to build a radiological device.⁴

Professor Richardson's statements mainly consisted of critical remarks on the US-led intervention in Iraq, and were characteristic of Western expertise developed in what appears a total absence of knowledge of radical Islam. Many Muslim doctors have adopted the extremist doctrines espoused by the Muslim Brotherhood, Saudi Wahhabis, and Pakistani jihadists. Groups such as Al-Muhajiroun, a group banned but still active in Britain and famous for celebrating the terror attacks of 11 September 2001, recruit medical students. Tabligh-i-Jamaat, an Islamist movement prominent in Great Britain among Muslims of South Asian origin, also welcomes Muslim medical students. Medical professionals represent an elite in Muslim societies. They have moral and social standing that can influence others to stray from observance of traditional, mainstream, and spiritual Islam into radical ideology.

The judicial process that followed the 2007 London-Glasgow events revealed more biographical details about the participants that reinforced knowledge of their Islamist outlook while also filling out the profile of radicalised professionals. Kafeel Ahmed, driver of the Glasgow airport attack vehicle, had been severely burned and died in hospital. He was an aeronautical engineer; the partnership of Bilal Abdulla and Kafeel Ahmed exemplified the nexus of radical Islamists with medical and engineering training perceived in the original proposal for our study.⁵

In October 2007, Bilal Abdulla, formerly employed at the Royal Alexandra Hospital in Paisley, near Glasgow, and

Mohammed Asha, who worked at the University Hospital of North Staffordshire, in Newcastle-under-Lyme in west central England, were charged with conspiracy to cause explosions. Sabeel Ahmed, formerly serving at Halton Hospital in Runcorn, north-west England, was charged with possession of information that could have prevented a terrorist act. The trial of the three doctors is expected to begin late in 2008.

1.2 A Note on Methodology

This report represents a distillation of field research in addition to reading of major source materials in the Arabic, Farsi, Urdu and English languages by a team of researchers. All members of the team are experienced in the observation of Islamist movements throughout the world, and the inquiry was focused on Muslim countries as well as the Muslim diaspora in the United Kingdom and the US. Five of the seven investigators are born Muslims. This is not, however, a mere review of existing literature or superficial attempt at external analysis; rather, it represents a statement of a fresh and elaborated perspective from within the ranks of the Muslims, offered for further meditation. This is not a collection of papers, but a collective statement, directed as much to Muslims as to Westerners. But nor is it a statement in which a single voice prevails. We have allowed a certain latitude for tonal differences, to illustrate the diversity of the problem and to highlight that our investigation of it remains in its exploratory stage.

Notes: Introduction

3. From a CIP Saudi media monitor

4. Interview by Cameron Abadi, *Spiegel Online*, 10 July 2007, at

www.spiegel.de/international/world/0,1518,493601,00.html.

5. *The New York Times*, 9 July 2007.

2. DEFINING THE PROBLEM – LESSONS TO BE LEARNED

There is much evidence of the special role played by radicalized professionals – mainly doctors and engineers – in the rise of present-day Muslim extremism. The phenomenon first came to the attention of the world mainly with the infiltration and capture of Egyptian medical, engineering, legal, and related guilds by the *Ikhwan ul-Muslimun* or Muslim Brotherhood (MB), a fundamentalist⁶ mass movement founded in 1928. The MB is a *takfirist* trend or *jama'at ul-takfir*.

That is, like the Wāhhabi sect of Saudi Arabia and the jihadist *Jama'ati* movement in Pakistan, it is a Sunni Muslim phenomenon, declaring that Muslims who do not follow MB doctrines are living in a state of ignorance, or *jahiliyya*, comparable to that suffered by the Arabs before the prophecy of Muhammad. This is tantamount to an accusation of unbelief and expulsion from the body of Islam for apostasy, directed against the overwhelming majority of more than a billion mainstream, moderate, and traditional Sunni Muslims. *Takfirist* movements represent the most extreme interpretation of the Islamic faith recently recorded. In the Sunni past, accusations of unbelief were rare and discouraged as a cause of social disorder, although Sunnis have habitually called Shia Muslims unbelievers, and individual Sunni exponents episodically accused Sufis or spiritual Muslims of unbelief.

Based on their attitude of exclusion directed toward other Muslims, the MB and similar *takfirist* trends develop a collective exaltation in their self-definition as the only 'Muslims who believe in our religion,' to quote the notorious Ayman Al-Zawahiri. Dr Al-Zawahiri's name will appear repeatedly here: he is an Egyptian medical doctor and teenaged recruit to the MB milieu who became the second-in-command of Al-Qaida, the terrorist network financed by the Saudi-born Osama Bin Laden.

As a personality, Dr Al-Zawahiri is probably the most prominent exemplar today of the involvement in brutal terrorism of professionals with humanistic and scientific training – being a physician from a family of doctors and pharmacists. To the Westerner, and particularly to Western medical and scientific personnel, who are taught to guard human life and to base their researches and healing on reason, the violence and contempt for life exhibited by Dr Al-Zawahiri and Islamist doctors like those in the Glasgow-London case is both frightening and puzzling. How, it is asked, can a person trained to heal, according to a scientific discipline, surrender to such hatred and unreason? As for engineers, while therapeutic values may be absent from their training, the profession has typically been associated with improvement of society, rather than human destruction. By examining the ideologies of the Egyptian

Dr. Ayman Al-Zawahiri: Cairo schoolboy



© AFP/HO/A-Hayat



Medical student



© AFP/Getty

Defendant in the 1982 Anwar Sadat assassination plot



© Getty



Ayman Al-Zawahiri and Bin Laden, Afghanistan, 1998

Muslim Brotherhood and Iranian radicals, along with specific cases from the jihadist milieux in Pakistan, Afghanistan, Bangladesh, and the Pakistani diaspora in the United Kingdom and the US, as well as Iran this report intends to provide preliminary answers to this question.

In summary form, the analytical lessons derived from this study may focus on the intersection of differing, but similar phenomena.

- Throughout much of the Islamic world, science and religion are viewed as bound together in a manner that is perceived as having disappeared from the West. For Western doctors, medicine may draw on religious ethics; for Muslim doctors, it draws also on the Islamic view of the universe. Western medical education is increasingly centred on technology that is often unavailable in Muslim countries except to the most prosperous elites, as in the kingdom of Saudi Arabia and other Gulf states.
- In the Egyptian case, Muslim Brotherhood literature such as the works of Sayyid Qutb (1906-66) propagate the view that science and Islam are inextricable from one another, and that a revival of Muslim science will result from the dominance of a fundamentalist view of religion. This has led to a deliberate radical strategy of targeting professionals.



Cairo, 1982: defendants in the Anwar Al-Sadat assassination plot

- Iran has undergone a complete ideological transformation, beginning with the redefinition of Shia Muslim theology and continuing through two decades in which the engineering profession was viewed as the vessel of progress. In Iranian Islamic radicalism, engineers, having gained a considerable measure of power, are even more important than their Egyptian counterparts.
- The Pakistani panorama shows that medical and engineering personnel may be radicalized by the outlook that unifies science and religion, as well as by the disparity between medical training in the West and the Muslim world. Such factors may, however, be reinforced by specific political and other events, including relief projects and recruitment to the anti-Indian *jiha*d in Kashmir. Anecdotal information also suggests that Pakistani doctors working in the West – a large constituency – may define their identity in ideological terms, as much or more than by their profession.

There is, then, no single explanation for the radicalization of Muslim scientific personnel; the problem is multifaceted.

Nevertheless, the overall phenomenon is not historically limited to the Islamic world. Dr Al-Zawahiri may be compared, in the Islamist environment, with a medical

anthropologist, Dr Mark Zborowski (1908-90), the most infamous Soviet secret police assassin working outside Russia during the Stalin era. Similarly, the Argentine-born revolutionary Dr Ernesto 'Che' Guevara, was certified as a physician, had affirmed the Hippocratic oath, and yet coldly ordered the execution of political dissenters in the zones under his control as a rebel commander in the Cuban insurrection of the 1950s. Dr Al-Zawahiri further resembles such repellent figures, also medically-trained, as Dr Josef Mengele, the German concentration-camp doctor, and Dr Radovan Karadzic, a psychiatrist who became notorious as a terror leader in the Balkan wars of the 1990s.

As the conclusion of the study states, Islamist terrorism represents a 21st century development that in many ways resembles its main antecedent, leftist terrorism. But with the transformation of regular wars, such as were seen in the first half of the 20th century, into irregular wars or 'low-intensity operations,' the role of medical personnel in armed conflicts has changed. In the past, and still, as noted in this study, in war zones, doctors have concentrated on application of the healing arts. But with the spread of 'the armed intellectual' as a social type – described in his pioneering biography of Hitler⁷ by the German anti-totalitarian leftist Konrad Heiden – doctors like Zborowski, Mengele, Guevara, Karadzic and Al-Zawahiri are transformed into agents of bloodshed, rather than its alleviators.

Dr Zborowski was clearly atypical of medical anthropologists; Guevara epitomized neither Argentine nor pre-revolutionary Cuban doctors. But Dr Al-Zawahiri comes to us as the representative of a wide social stratum and a large ideological milieu similar to those of the German concentration camp bureaucrat Dr Mengele or the Yugoslav Communist functionary Dr Karadzic. Professionally, Dr Al-Zawahiri graduated from the Ain Shams University Medical School in

Cairo. Other notable Ain Shams graduates and students⁸ include

- Muslim Brotherhood President Mohammed Mahdi Akef;
- Dr Muhammad Rabi Al-Zawahiri, Ayman's father and a leading Muslim Brotherhood enthusiast, pharmacologist and professor at Ain Shams Medical School;
- Dr 'Abu Hafiza,' Moroccan psychiatrist, Al-Qaida master planner, commander of the Moroccan cell that provided logistics for the attacks of 11 September 2001, and recruiter for Al-Qaida terror in Iraq;
- Dr Abd Al-Aziz Al-Rantissi, late Hamas leader, pediatrician;
- Dr Mahmoud Al-Zahar, Hamas co-founder and leader, surgeon and lecturer at the Islamic University in Gaza;
- Dr Fathi Abd' Al-Aziz Shiqaqi, late founder of Palestinian Islamic Jihad and physician.

The Muslim Brotherhood specifically targeted the Egyptian doctors' and engineers' 'syndicates' – professional guilds with some of the attributes of a trade union – for penetration. One researcher sympathetic to the MB, Amani Kandil, said MB's decision to focus on the professions was motivated by recognition that the guilds of doctors and engineers were institutions where the process of social change in Egypt had been concentrated during the two decades at the end of the 20th century.⁹

In this analytical scheme, based on social and economic factors, professional guilds underwent vast expansion in Egypt beginning in the mid-1970s, based on an extreme rise in university enrollments. Greater investment in higher education was a principle for the regime of Gamal Abdal Nasser, the Arab nationalist dictator who seized power with MB support in 1952. But the successors of Nasser, including current president Hosni Mubarak, could not manage the process of economic development needed

to provide opportunities for full employment of university graduates in medicine, engineering, law, and journalism – the main guilds. The overproduction of graduates and their unemployment thereby fostered social disaffection and radicalism among Egyptian professionals.¹⁰

A sociological, class-driven theory of Egyptian professionals in their encounter with radical Islam may easily be transposed to Pakistan, although it cannot account for radicalization of professionals in Saudi Arabia and Iran, where underemployment of qualified personnel is a minor issue. Furthermore, such an essentially-determinist view of radical Islamist activity ignores the instrumental role of extremist ideology *per se* in the recruitment and formation of the radical strata in the professions. A radical orientation is not limited to those with economic grievances, and many who attain the benefits of a well-paid career become or remain affiliated with extremist movements. Investigators of the Islamist radical experience among people with humanistic and scientific training must therefore examine the content of radical teachings and the processes of recruitment and indoctrination, no less than the social environment in which the phenomenon is found.

It has been the frequent mistake of media and other commentators on Islamist radicalism, and social radicalism in general, to identify it exclusively with the poor and disfranchised. Although marginalized and economically-disadvantaged social layers may provide 'political cattle' for street demonstrations supporting radical preachers and agitators, history has shown something different, since the phase dominated by the extreme left began in late 19th century Europe. Namely, radical activists are as, or are more often drawn from the rising classes, impelled to expanded expectations by intellectual, academic, political and economic success. Militant labour movements were

more often made up of well-paid and secure employees than members of the unemployed and other underclasses.

Similarly, today Islamist movements are more characterized by the presence of professionals and other 'privileged' strata than by 'the Muslim street.' In Muslim lands such as Pakistan and Egypt, the ordinary peasant or labourer is chiefly concerned with supporting a family and gaining economic stability; it is after such attainments are secure that the Muslim may turn to radical religion. In such a narrative, which we consider more accurate than that commonly employed in the West, radical Islam is less a product of misery and the sense of oppression than of the frustrated aspirations of the Arab and other Muslim middle classes, members of which are deliberately targeted by Islamist activists.

Notes: Defining the Problem - Lessons to be Learned

6. Fundamentalism or fundamentalist is defined here as a trend that intentionally diverges from the majority in a religion, motivated by belief that the fundamental principles on which the religion was founded have become corrupt and that a purification of the religion is needed.

7. Heiden, Konrad, *Der Fuehrer*, Boston, Houghton Mifflin, 1944.

8. Statistics reproduced in article by D. Schlüssel, www.debbieschlussel.com, May 17, 2007.

9. Amani Kandil's research has been published in Arabic. It is cited in Al-Awadi, Hesham, *In Pursuit of Legitimacy, The Muslim Brothers and Mubarak, 1982-2000*, London, Tauris, 2004.

10. Al-Awadi, *ibid*

North-West Frontier Province, Pakistan: camp school



© Anthony Hyman



© Christa Hook, Osprey Publishing Ltd

Muslim troops were fortunate in having far better medical backup than their Crusader opponents. Doctors or surgeons were highly respected professionals whose services were also in demand from the Crusader enemy. In fact, the revival of medical science in Western Europe, mostly in Italy and Spain, owed more to what these countries learned from their Muslim neighbours across the Mediterranean than to any discovery of forgotten Roman or Greek medical knowledge. (Christa Hook, Osprey Publishing)

3. THE INTERSECTION OF MEDICINE AND ISLAMIST EXTREMISM

'It is a problem in Canada that Muslim leaders have not traditionally been chosen for their Islamic knowledge but for their stature in society – a medical doctor, a computer scientist.' Khaleel Mohammed, Ph.D, Ottawa Citizen, 6 February 2007.

The image of the medical doctor in almost every country in the world is that of a caring person observing the Hippocratic oath, which commands the salvation of life as the supreme ethical value. In Islam, from the earliest days, the concept of medical work as a service to humanity gained many non-

Muslims recognition reserved for the most outstanding citizenry. To cite a key example: the man known to Arabs as Al-Hakim Ibn Maimun Al-Qurtubi Al-Yisraili (the Doctor Ibn Maimun from Cordoba, the Israelite), a Jew known to the West as Maimonides, was employed as a physician by Al-Fadhil, the vizier of Salah'ud'din Al-Ayyubi [Saladin], the Muslim who reconquered Jerusalem in 1187, as well as by Salah'ud'din himself.

Qur'an and Islamic oral traditions recount the medical miracles of Jesus, and within the Islamic *umma*, the use of inscribed Quranic verses and of amulets to cure a variety of ailments is well-known and deeply-rooted. Pocket handbooks for faith healing

are printed from Bosnia-Herzegovina in southeast Europe to Indonesia.

A typical such booklet, *Kur'an Kao Lijek (Qur'an As Healing)*, is widely circulated in such societies as Turkey and Bosnia-Herzegovina, which although thoroughly secular in their educational institutions and governance, support an Islam that is mainly rural-based and conservative. *Kur'an Kao Lijek* recommends that a sick person write the opening *Surah* or book of *Qur'an*, *al-Fatiha*, on a piece of paper, dip it in water, and drink the water.¹¹

For another typical and ubiquitous example, small booklets correlating the 99 Islamic names of God with different specific complaints and ailments are sold wherever Muslims are found, all over the world. In one such, *99 Names of Allah*, printed in India, we read the following: 'Al-Hayy, The Everlasting: Anyone desiring sound health should recite this name 3,000 times daily. If a sick person writes this name in a bowl with musk and rose water and then washes such inscription with water and drinks the water, he will soon be cured from his illness, Insha'allah [God willing]. Alternatively, if such water is given to a person who is ill, he will be cured, Insha'allah.'¹²

The 13th century Syrian fundamentalist Muslim theologian, Ibn Qayyim Al-Jawziyya, composed a work of faith healing that remains extremely popular among Muslims today: *Al-Tibb Al-Nabawi (The Medicine of the Prophet Muhammad)*. In this volume, Al-Jawziyya offers several supplications (*duas*, or spiritual recitations and requests) along with suggestions for treating sicknesses. It might be observed that a fundamentalist work supporting a simplistic view of 'prophetic medicine' would predictably contribute to the appeal of radical religious interpretations in Muslim societies, just as faith healing serves as a notable support for Christian fundamentalist evangelism and for the Jewish pietistic

communities of *Chasidim*.

In all of the medieval states, whether Christian or Muslim, the medical doctor shared royal subsidies with the jurists and counsellors to the rulers. Indeed, scholars in early Islam were required to learn about medicine. This focus on the healing sciences made *Qanun fil Tibb (The Canon of Healing)* by the 10th century Persian Muslim Ibn Sina (Avicenna) the basic medical manual employed in Europe for centuries. The *Al-Hawi (Summary)* by the 9th century Persian Al-Razi also had immense influence in Europe, where Al-Razi was further believed to be an alchemist, as was the case with other outstanding medieval physicians as well as mystics both in Christendom and the dominions of Islam. (In a parallel example, the 13th century Catalan Franciscan, reformer, and pioneering physician, Arnau de Vilanova, associated with the distinguished Salerno medical school in which Christian, Muslim, and Jewish doctors served as instructors, was falsely reputed to be an alchemist.) It might be argued that the concept of saving a life or dealing with sickness is the closest one may come, in the Islamic outlook, to replicating a divine duty without claiming divinity; for in the same way that, according to believers, God gives life and preserves it, so too does the physician, more than any other ordinary being, albeit in an inferior way.

Modern medicine has brought with it much improvement, as well as many questions regarding the adoption of new procedures and other issues. Respect for the physician has also established protocols, in peace and in war, that should make a doctor safe from the treatment normally dealt to a perceived foe, even if he is captured in the ranks of an enemy army. Among such protocols is the general rule that ambulances are to be protected from attack. In the Palestinian conflict with Israel, however, as in other recent combat involving irregular and

regular forces (in political wars in Central America during the 1980s, as well as in the Balkan Wars of the 1990s), there have been frequent allegations of the misuse of ambulances and hospitals as cover for military activity, as well as their deliberate targeting. Such claims are by no means new; they appeared throughout 20th century inter-state and civil wars. Yet the politicization of the medical profession is increasingly reflected in the alleged outright use of medical services as a cover for violent activities.

The advance of medicine and medical technology also brings the personal ambitions of doctors into question. Long-standing popular-culture myths about doctors eager to operate surgically, and who then create circumstances to justify surgery, are nearly-universal. Among many Muslims, the concept of 'the Prophet's medicine' is one that as much as possible, avoids surgery. This appeals to the populace, which may be too poor to pay the huge sums of money that doctors in Muslim countries may demand for medical treatment. It then becomes easy for clerics and other religious figures who claim to have healing skills to gain credibility with the rural and urban poor.

Such traditions are extraordinarily persistent; in the Muslim Balkans, a local *hojja* or 'man of religion' may be credited with powers of fortune-telling, psychological therapy, and romantic advice, as well as faith healing. Sufism or spiritual Islam is also widely viewed, throughout the Muslim world, as a form of Islamic psychotherapy. Finally, in some Muslim societies a visible bond exists between faith healing and customary law – not Islamic *sharia*, but pre-Islamic tribal or communal law. In both faith healing and customary law, power – and abuse of power – remains in the hands of local community leaders; in the words of Daut Dauti, 'younger generations were encouraged to value the deeds and sayings of [folk] elders as if they

were their own.'¹³

We must, however, turn from the general attitude toward medicine among Muslims to a specific, urgent problem: the involvement of medical personnel in disaster relief operations controlled by radical Islamist organizations. Muslims are commanded to give charity to succour their coreligionists who have suffered natural disasters, war, and other dislocations. After a 7.6 Richter scale earthquake¹⁴ in Pakistani Kashmir on 8 October 2005, Pakistani Islamist organizations helped to provide homeless victims with hot food, clothes, and other supplies. At least seventeen Islamist organizations banned by President Pervez Musharraf's government undertook relief and reconstruction work in the aftermath of the earthquake. *The Daily Telegraph* reported that 'Islamic groups are widely regarded as having provided the most efficient aid operations in some areas after the Pakistan earthquake struck in Kashmir and the North West Frontier Province.'¹⁵ These Islamist and jihadist organizations also aided refugee camp management, running thirty-seven out of the seventy-three organized camps in and around the regional capital of Muzaffarabad, and Islamists had a presence in every affected Pakistani district of Azad Jammu and Kashmir (AJK) in the Neelum and Jehlum valleys, including Muzaffarabad, Bagh, Hattian, Dhir Kot, Rawalakot, Haveli and Athmuqam.¹⁶

In their response to the earthquake, jihadist and other Islamist 'humanitarian' organizations drew on their existing infrastructure in Kashmir, their knowledge of the local terrain and their close cooperation with the Pakistani army, which provided logistical support and other facilities, including helicopters, to enable the jihadists to continue their work.

Kashmir represented an area particularly susceptible to such activities since it has been the scene of a long-running violent *jihad* against India. Islamists around

the world, who themselves may have little or nothing to do with Pakistan, India, or their ethnic communities abroad, have repeatedly used Kashmir as a cover for other jihadist enterprises and even as a base for a shadow, backup network of Al-Qaida. The ultra-radical Sunni Lashkar-e-Taiba (LET), or 'Army of the Righteous,' which operates in Pakistan and Kashmir, has achieved deep infiltration of Pakistani Sunni communities in the US and UK. The outcome of this campaign has been multiple: sympathizers and associates of LET formed the core of the 'North Virginia *jihad* network' which was broken up by the US authorities beginning in 2003.¹⁷ But more important, humanitarian donations collected by LET for relief in the aftermath of the 2005 Kashmir earthquake were diverted to the use of the conspirators in the 2006 Heathrow airport terrorist plot.¹⁸ LET has sought to cover its ideological mobilization and terrorist training by operating through a charity group, Jama'at ud-Da'wa or 'Community of Missionaries.'¹⁹ In the Pakistani government, many officials either did not know what to do about these issues, or were involved in corruption, siphoning off aid or taking bribes to give out supplies.

The diversion of money from medical aid charities occurs in the United States as well. The U.S Treasury Department's Office of Terrorism and Financial Development has designated the Holy Land Foundation for Relief and Development, which often solicited funds for medical relief, to be a provider of 'millions of dollars in financial and logistical support to Hamas.'²⁰ The Treasury Department also designated the Global Relief Foundation, headquartered in Bridgeview, IL, USA, as a terror supporter because of its role in raising money for Al-Qaida.²¹

In Egypt, the impoverished government cannot keep up with the demand for medical services, and only one type of organization fills this need. The Muslim Brotherhood (MB) has infiltrated and

effectively 'annexed' the physicians' guild, known as the Egyptian Medical Syndicate, which serves as the country's official professional association for doctors.²² The MB's ultraradical splinters, the *Gama'a Al-Islamiya* (Islamic Group) and Egyptian Islamic Jihad (EIJ), usually known only as *Al-Jihad*, gained a high profile among the poor by providing health care in exchange for opportunities to recruit neighbourhood youth in extremist ideology. Ayman Al-Zawahiri is a product of EIJ; the road from his conception of 'Islamic free clinics' to Al-Qaida was not long. (It should be noted here that, by contrast, the Indonesian Muslim organization Nahdatul Ulama [NU], a Sufi and traditionalist body with 40 million members, operates large and successful networks of schools, hospitals, and community rehabilitation projects without recourse to Islamist ideology.)

Islamist radicalism has mainly developed in 'third-world' countries. It is true that fifteen of the nineteen hijackers on September 11, 2001 came from Saudi Arabia, and that functionally and economically, the Saudi kingdom is not considered a poor country (for example, the US Agency for International Development has no operations there on grounds of lack of need). Nor is Iran known for a post-colonial or deeply-impooverished status. Still, oil revenue is not the only criterion for deeming a country to have escaped the third world. One must examine the general national outlook and standard of living, to the degree such things are measurable.

In third world countries, lack of adequate medical technology and services maintains a general environment of poor health. The only person who can really serve the community is often perceived to be the medical doctor. Islamists have been quick to understand this dynamic, as a means to manipulate the masses. Paralleling his future companion Dr Al-Zawahiri and the *Gama'a* services, Osama Bin Laden used his personal



Dr. Ernesto 'Che' Guevara

wealth to build schools and hospitals in the Sudan. In doing so, he gained credibility as a benefactor and provider of healing services.

The use of medicine as a means of social control, it would appear from other empirical studies, is well-established. The Soviet authorities throughout the history of their empire, and the Latin American radical left of the 1960s and '70s, focused heavily on medicine, sending students to the USSR and Cuba to become doctors. As noted, 'Che' Guevara, the renowned guerrilla leader, was himself a medical doctor. Fidel Castro's regime continues to produce and train doctors to serve for free in poor communities... so that energy-deprived Cuba receives oil at a reduced price from

Venezuela, in exchange for providing doctors.

Such doctors charge minimal fees, or none, in comparison with the American professional, or American-trained practitioner. Castro has even extended to the pseudo-Muslim Nation of Islam (NOI), which has its own history of faith healing and a prescribed health regimen, an invitation to send young African-American men to Cuba to be trained for free.

Two phenomena intersect in the areas of the Muslim world in which extremists are recruited: doctors are seen as altruistic, and they are often the most educated members of society. Both characteristics are desirable in all societies, and one recalls the almost inevitable answer of children, in many countries, on their hope for a career choice. To people of third world countries, many of whom cannot make head or tail of a computer motherboard or directly understand the genius of a mechanically engineered product, the fact that a medical practitioner can bring life or save it, along with training in human external and internal physiology, bespeak medicine as a profession for the truly intelligent. To be a doctor is to be an educated person, and to be a doctor is to have access to wealth — the goal of almost every third world child. One finds that in many third world countries, children do not want to grow up to become fire-fighters or aircraft pilots... but rather, perceiving endemic illness and similar abominable conditions, whether because of natural catastrophe or government incompetence, they want to become doctors.

Under past Islamic regimes, scholars of *Qur'an* or Islamic legal traditions could run afoul of the authorities, and almost every Muslim historiographer relates stories of the many *qadis* [jurists] and imams that were killed or otherwise harassed by autocrats. Doctors, by contrast, could camouflage their intellectual experimentation by the license of medical need. One of the most popular

medieval Islamic erotic treatises is *Al-Rawd Al-'Atir fi Nuzhati'l khatir* (*The Perfumed Garden of Sensual Delight*). This book of sexual lore was not composed by a jurist, but rather by Muhammad ibn Muhammad Al-Nafzawi, a 15th century putative physician. What one might learn from the book is that a doctor has license to say or do almost anything, whereas a jurist is bound by orthopraxy or the rules of the clergy. Lawyers are seen in almost every society as predatory, and engineers only have esteem in developed areas. This once more leaves only one profession worthy of respect in poor Muslim countries: the doctor.

A doctor, for all his medical knowledge, may not be cynical in matters of religion if his education is paid for by an Islamist organization. For such an individual, the least he could do would be to follow the professed tenets of his coreligionists who helped him, or at least help another Islamist doctor in some activity against the doctor's enemies.

In jihadist combat zones, the actual fighters are only loved and trusted by the faction on whose behalf they conduct their activities. A doctor, however, liked or not, offers a service that transcends such rivalries and related hostilities. The doctor can move around in any area, and in many cases, as have been shown in reports from the Afghan war against Russia, doctors are often prime facilitators of action against a perceived enemy, moving with scant need for security as they are welcome in most communities almost without question.

Islamist doctors additionally have studied chemistry and perhaps pharmacology, and possess the requisite competence to carry out fairly advanced chemical procedures. They may also be used to purchase supplies, including volatile chemicals, as well as drugs, etc.

Doctors may also be useful in gaining access to leading jihadist and anti-jihadist figures. This has been observed repeatedly in such countries as Afghanistan. The human

desire for preservation of one's own life is overwhelming, even in suicide terror networks, and safe conduct will often be given to an enemy doctor if it is felt that there is good in it. An astute doctor can thus gain access to almost anybody, given the proper training and approaches.

In all of the countries of Islamist violence, the frontline perpetrators are often seen as disfranchised illiterates who respond to the appeal of craftier bigots. This was a major theme of the 1994 Egyptian satirical film, *Al-Irhabi* (The Terrorist). For Islamist organizations, what better way to penetrate a village than to send a much needed doctor? What other profession is so opposed to anything to do with taking life... and what better way to disguise oneself, than in the garb of one's apparent opposite?

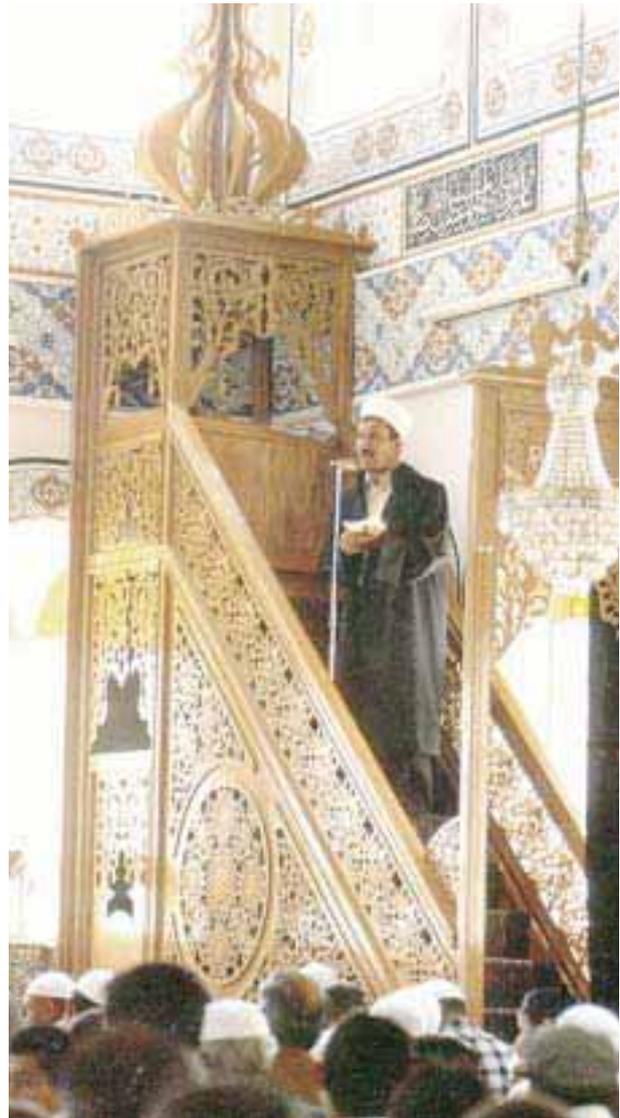
In further considering the recruitment of medical doctors to radical Islam, it must not to be forgotten that doctors are typically among the first to see the effects of atrocities inflicted by tyrannical regimes in Muslim countries. The armaments of modern countries are designed to cause maximum injury... and their effects are horrible to behold. When such weaponry is used by a Muslim regime allied to the West, a physician who comes into contact with the victims can only be appalled at the severity of the injuries, the brutality of decapitated bodies, etc. In most humans, the basic reaction will be to hate the perpetrators of such violence, and in a culture where everything may be conveniently blamed on the 'other' —real or imagined— this creates a fertile soil for the transformation of a caring physician into a terrorist agent.

To repeat, in most Muslim states, the public budget is so impoverished that governments cannot minister to the needs of the populace. The Islamist organizations, with their major financial resources, provide an alternative. This has become evident in Egypt, Gaza and the West Bank, Pakistan, Somalia,

Yemen and wartime Iraq. In addition, provision of scholarships for study by rich patrons is a traditional practice in the Arab world, originating in pre-Islamic times, when entry into a tribe was sponsored by someone who took care of the entrant's needs. This *mawla* or 'guide' relationship (*mullah* is a variant of the term), in Islam, became transformed into charity for students. With physicians in great need, Islamist organizations will build hospitals and provide scholarships to train doctors amenable to Islamist propaganda. But to also repeat, in Indonesia, Islamic but non-ideological, i.e. 'Islamic but not Islamist' movements, provide the same services, without a goal of social domination.

Few doctors involved in radical Islamist activity obtained their primary medical education from Western institutions. The explanation for this seems rather obvious: Western-trained doctors are adept in the use of new medical technologies and familiar with treatment of diseases found primarily in the developed world. Doctors trained in Egypt, Syria, etc., focus on the diseases specific to their geographical region, and are restricted to the use of technology available there. With immense rural populations, and an absence of clinics with new equipment, doctors from such areas cannot but differ from their Western counterparts. They still make local calls in rural areas and adapt to whatever can be used as makeshift equipment. They circulate among people with little need for a Western-trained doctor who, without the nearby pharmacy and laboratory for testing samples, may be unable to offer diagnosis of a disease.

In his book *Islamic Medicine*²³, Shahid Athar, M.D., an endocrinologist and clinical associate professor at the Indiana University School of Medicine, provides some background on the environment in which the physician can be transformed into a radical Islamist. He points out the belief in a strong



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connection between health and religiosity among Muslims, citing from *Qur'an*, 'O humankind! There has come to you a direction from your Lord and a healing for the (disease) in your hearts.'²⁴ As we explain, that a doctor would be committed to religion, even to an extreme form of it, seems less inconsistent to Muslims than it would to Westerners.

In the *Islamic Code of Medical Ethics*, published by the International Organization of Islamic Medicine in 1981, it is stated: 'The Physician should be in possession of a threshold-knowledge of jurisprudence, worship and essentials of Fiqh [Islamic religious law], enabling him to give counsel to

patients seeking his guidance about health and body conditions, with a bearing on the rites of worship...'²⁵

This conception encourages the poor, especially in rural areas where literacy must be assumed to be lacking, to view the physician as a religious scholar, in addition to being a healer and a person with an advanced education. Where the religious functionary, an imam or other cleric, may be seen as a faith healer, the surgeon may be seen as an imam. This too, although stated in a modern document on ethics, seems traditional in Islam, since in the Muslim countries, one of the words for 'doctor' is '*hakim*' — indicating a person blessed with wisdom. Such habits may even be found in American cities.

As Mahmoud Abu Saud has observed in his chapter 'The Role of a Muslim Doctor' in Athar's *Islamic Medicine*: '[T]he doctor has a big say and great weight in influencing his

patients and in righteously guiding their orientation. Besides, he should be actively involved in propagating true Islam among Muslims and non-Muslims. Almost all Christian missionaries depend on medical doctors when approaching alien masses, taking advantage of the humanistic service doctors render to poor diseased people. In a country like this where we live, the best missionary service to be rendered by a medical doctor is to behave at the time in accordance with his Islamic teachings, to declare his conviction, and to feel proud of it. Then he serves as a good model that would convince others and gain their hearts.'²⁶

To emphasize: the role, esteem, and example of the doctor in society, is such that the profession offers prime candidates to influence people toward a particular viewpoint or religious interpretation. This is even easier in places where the doctor is also

Samarkand, Uzbekistan: Shir Dor Medresa, monument to the Lion Imam Ali, Registan Square, Samarkand.



perceived as a scholar, among masses that may be functionally illiterate.

A yet more interesting point in the citation from Mahmoud Abu Saud may be that of counteraction to Christian missionary activity. Radical Islamist organizations are aware that Christian denominations establish medical services in non-Christian areas, and now oppose this practice with their own ministry to the health needs of the targeted community, while seeking to win their hearts. In another chapter of Athar's *Islamic Medicine*, titled 'Application of *Tibb-i-Nabi* to Modern Medical Practice,' Hakim Moinuddin Chishti [Robert Thomson], a naturopath who converted to Islam and took the title *Hakim* to indicate his ambitions in medicine, while also appropriating the name of a famous 12th century Indian Sufi, offers a series of arguments, including:

- In traditional Muslim cultures, the *hojja* or the imam is the most frequently visited person in the pathway of health. A recent study in Afghanistan showed that for each visit to a modern pharmacy or medical doctor, the patient visited a *mullah* ten times.
- Ordinarily, Western doctors reject out of hand any religious basis for treatment, and the use of herbs is considered in the realm of the folk or fraudulent treatment.

Given the first point, if a doctor establishes himself as an observant Muslim, it is obvious that he will likely be consulted more often than a colleague not perceived as such. The *hojja* or *mullah*, imam and the religious-observant doctor will be the first resort of the patient; Islamist organizations are aware of this, and consider the assignment of doctors to a region, or the indoctrination of medical students, either by moral suasion or coercion, as a priority.

The second point calls attention to a recurrent motif: the need to adapt to the materials that are available. In impoverished countries, Western-trained doctors are apt to

prescribe Western medications, and may alienate the *hojja* or imam who typically also serves as a sort of consultant on medical cases. Training in most Islamic universities, where a doctor is schooled in herbal treatments, and where the reliance on prayer serves as effective therapy, produces professionals who can be very effective as radical ideologues.

Notes: The Intersections of Medicine and Islamist Extremism

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4. ISLAM AND BIOETHICS

There is no intrinsic reason why the Muslim practice of medicine should be different from that of the West. Islamic bioethics does not differ profoundly from Western bioethics. Muslim scientists and doctors translated Greek medical works into Arabic. Muslim doctors inherited the Hippocratic Oath along with other elements of Greek medicine.²⁷ In 1981, though, the International Organization of Islamic Medicine, an institution set up in Kuwait with the aim of formalizing Islamic medical doctrine, issued an *Islamic Code of Medical Ethics*. This text includes an 'Oath of the Doctor,' which augmented the Hippocratic Oath with reference to the omnipotence of God, as well as the duty of the Muslim physician to observe Islamic standards of modesty in dealing with patients, and to live as a Muslim publicly as well as privately.²⁸

The Islamic Code of Medical Ethics addresses certain issues debated by Western bioethicists, often endorsing the sanctity of life. It bans euthanasia or mercy killing, for example, declaring, 'A doctor shall not take life away even when motivated by mercy.' However, it distinguishes between medical ethics and Islamic law when asserting, 'Human Life is sacred ... and should not be wilfully taken except upon the indications specified in Islamic jurisprudence, all of which are outside the domain of the medical profession.'²⁹ Islamist clerics also forbid abortion except in cases where the mother's life is in danger. The influential Qatar-based fundamentalist cleric Yusuf Al-Qaradawi writes in *The Lawful and the Prohibited in Islam*, a widely-read simplification of *sharia* or Islamic law, that 'Muslim jurists agree unanimously that after the foetus is fully-formed and has been given a soul, aborting it is haram [prohibited] ... However, there is one exceptional situation. If, say the jurists, after the baby is completely formed, it is reliably established that the continuation of the

pregnancy would necessarily result in the death of the mother, then, in accordance with the general principle of the Shari'a, that of choosing the lesser of two evils, the abortion must be performed.'³⁰

A Code of Practice for Muslims in the West, a Shia Muslim manual reflecting the guidance of the moderate Iraqi Ayatollah Ali Sistani, addresses bioethical issues in much greater detail. In a separate chapter titled 'Medical Issues,' the volume specifies that organ transplants, even from dogs and pigs, which are considered unclean by Muslims, are permissible, in that the human body will, by 'rejuvenation' of the organ, purify it. The same text authorizes the use of insulin even if extracted from swine, as well as 'genetic engineering' to make human beings more physically attractive.³¹

Early in 2008, the UK House of Lords addressed an 'inquiry into the issues raised by the European Commission,' on organ donation and transplantation, and policy actions to be taken at the Europe-wide level, to religious organisations, including Muslim groups. An Islamic body, the Muslim Burial Council of Leicestershire (MBCOL) headed by Suleman Nagdi, replied to the Lords' queries as follows:

'Query 1: Please would you describe any particular aspects of organ donation and transplantation which are considered ethically problematic within the context of your organisation's religious beliefs – as these are perceived: (a) within the UK or (b) in other EU Member States?'

MBCOL's Nagdi offered the following comments: 'The interference and or the violation of the human body, whether living or dead, are prohibited in Islam. This concept has been applied in many differing ways by the Muslim community with regard to matters that relate to organ donation and transplantation. The application of this concept has been more rooted in cultural attitudes than strict application of Islamic

(Shariah) Law. As with some of the prohibitions there is a balance that needs to be struck. This balance is achieved by the prohibition being waived in some instances. These are in cases of necessity; to preserve the life of others and of one self. This is the Islamic legal maxim of *al-darurat tubih al-mahzurat* (necessities overrule prohibition). Many Scholars in Islam have examined this issue and the points that flow from opinions appear to be as follows: Medical professionals should be entrusted in defining “death” by clinical criteria and this is a question of medical fact rather than one of religious analysis.

‘We should accept brain stem death as the proper definition of the end of life. I would conclude that there are no real ethical barriers as such. The opinions all point to the fact that organ donation is permitted.’

Nagdi stated that Muslim objections to organ donation were cultural rather than religious, but expressed opposition to controversial UK proposals for a ‘presumed consent’ to organ donation, in response to the Lords’ citation of Muslim acceptance of ‘presumed consent’ in Singapore. Nagdi wrote, ‘We do not believe that a system of “presumed consent” would be appropriate. The idea of people having to “opt out” is in our view inappropriate when we look at the fact that ones organs are being used... We can envisage families raising legal, moral and ethical challenges against the medical profession when they are opposed to one of their loved ones bodies being used in this way.’ Nagdi elaborated,

however, that refusal of ‘presumed consent’ should be made through detailed documentation such as wills, with the participation of legal professionals, in a system that could easily become unwieldy and obstructive, especially considering that organ donations in countries like the US frequently occur after a loss of consciousness caused by severe injury, as in road accidents.³²

But there is also a creeping Islamist revision of bioethics, at least in the Sunni community. Some Muslim medical students in Britain, for example, boycott classes and leave test questions unanswered if they involve alcohol-related diseases such as those concerning cirrhosis of the liver or sexually-transmitted diseases on the pretext that both deal with conduct forbidden in their faith. No such prohibition exists in traditional Islam.

Notes: Islam and Bioethics

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33. *The Sunday Times* (London), 7 October, 2007



Samarkand, Uzbekistan: Ulugh Beg (1428-1429) built one of the most famous observatories of the Middle Ages on one of the highest hills around Samarkand. The observatory, three floors in height, was made in the form of a cylinder and contained a huge marble sextant which measured the coordinates of the sun, moon and planets as they passed through the meridian. Ulugh Beg calculated the 365 day year (with an error of 58 seconds compared to today’s calendar), fixed the eclipses, and determined the days of the equinox.

5. ISLAM, SCIENCE, AND THE EGYPTIAN MUSLIM BROTHERHOOD

Science is at the centre of many debates in classical Islamic thought and has generated diverse opinions and positions. In these debates, two main trends can be identified, the first stemming from a neo-Platonic interpretation of science, and embodied in the work of Ibn Sina (Avicenna); the second inspired by various areas of science inherited from Greek, Indian, Jewish and other sources, fused with the Islamic religious doctrine of absolute and transcendent monotheism (*Tawhid*). For Ibn Sina, the distinctions between physics, mathematics and metaphysics did not imply a strict separation between ontology and theology. In his conception, religion represents the core of both science and theology.

It is often assumed in the West today that science and theology are in contradiction, and that in a world dominated by science and technology religious fervour must diminish. If in the Western mind, science and theology are antagonistic approaches to human life and its development, in the Muslim world, they remain intrinsically linked. The separation between the two spheres is not always perceptible and they are not necessarily believed to exist in a binary opposition. That is, there is no basis in classical Islam for science to be considered subordinate to theology in practical affairs.

The Prophet Muhammad himself emphasized that the material world could only be understood through scientific inquiry. He anticipated an Islamic culture that should be knowledge-based. The prophet valued science over demonstrative worship and declared: *'An hour's study of nature is better than a year's prayer.'* Muhammad also taught that *'one should go as far as China for knowledge.'*

Nevertheless, the Islamic approach to science, even while tied to reason and knowledge, has come to differ significantly

from the Western outlook. The dynamic of Muslim scientific development slowed. The pursuit of knowledge, however, remained an inherent aspect of *Qur'an* and of Islam, even if political, geographical, cultural, and economic effects have left Islamic science on the intellectual margin. Given that science and religion have become counterposed in the West, science became associated in many Muslim societies with secularism and refutation of the omnipotence of the creator.

Yet among Islamic fundamentalists, and especially in *takfirist* movements, it is not unusual to find scientists, engineers, mathematicians or doctors. Such is most notable in the case of the Egyptian Muslim Brotherhood (MB). The MB, opposed to secular governance in Muslim nations, calls for a return to the original precepts of *Qur'an*. Since, as stated, it is often assumed in present-day global society that religion and science must be in conflict, it is equally presumed that in a fundamentalist environment like that of the MB, the concept of faith is antagonistic toward reason. As with other revivalist and fundamentalist Islamic groups, the MB expresses alienation from the modern world and claims oppression by secularism. The MB projects that the very existence and personal freedom of the Muslims are constantly subject to grave challenge leading to loss of identity. But at the same time, the MB argues that repudiation of Western secularism does not automatically mean a rejection of science and of new discoveries. Rather, it draws from classical Islam the argument that rationality and critical reason begin with divine signs (*ayat*, a term also referring to verses of *Qur'an*) and their prominent role in Quranic thought.

Ayat are divine signs commanding humans to use reason to find the truth.³⁴ Truth is revealed by God through various means, expressed in *ayat* and 'processed' for understanding through *al'aq* (intellect). The

Islamic conception of *al'aq* encompasses the dimension of knowledge based on faith informed by ethics. The mainstream interpretation of *Qur'an* regarding rationality holds that faith and reason are joined, along with the metaphysical aspect of reality, and the recognized limits to human knowledge. Thus, in the interpretation of the scripture of revelation to which the MB holds, Islamic fundamentalism does not exclude scientific rationalism.

5.1. Quranic Reasoning

In traditional Islamic interpretation, developed prior to contemporary fundamentalist discourse, the sciences and metaphysics have an essential place in *Qur'an*; knowledge and reason are perceived as complementary and as essential to the life of a believing Muslim. Knowledge and scientific inquiry in Islam were originally impelled by everyday practices, such as the use of astronomy to find the direction of Mecca for prayer, and the quest for exact knowledge made possible numerous discoveries and scientific innovations. Knowledge is mentioned in *Qur'an* more than 800 times, and the search for knowledge is defined as a religious duty. Still, knowledge, for most believing Muslims, remains divided in three categories: religious knowledge through revelation, knowledge of the world through investigation and analysis, and, finally, esoteric spiritual knowledge granted by God.³⁵

Differing perspectives regarding the relationship between science and religion in Islam have generally evolved, and are discussed, according to this triple conception of knowledge. This is especially emphasized by the traditional notion of the *ayat*. The word *ayat* figures in reference to cosmic verses (*ayat kawniyya*) that point the reader toward phenomena of nature, inviting him/her to read and interpret the work of the Creator. The essential and fundamental

principle of Islam is that of absolute monotheism or divine uniqueness (*tawhid*), which implies the unity of science, in that believing Muslims view all real knowledge as leading back to God and the truth.³⁶ From this premise, knowledge is acquired through a divinely-created reasoning and observation of divinely-created nature. The study of systems and sub-systems in the natural sciences, mathematics or others, leads to a truth that becomes absolute because it leads back to God.

Two prominent figures have played a major role in establishing the notion of divine unity of religious and scientific knowledge in Islam. The first was the 11th century theologian Abu Hamid Al-Ghazali. In his work *Al-Munqidh min ad-Dalal (Deliverance From Error)* he posits that rational knowledge is a divine gift. Any disagreement between philosophy and religious teachings results from error in the interpretation of philosophers or scientists, studying nature outside its scope of validity and therefore inducing them to commit mistakes.³⁷

The Spanish Arab philosopher Abu Al-Walid Muhammad Ibn Rushd, who lived in the 12th century and is known in the West as Averroës, opines in a series of *fatwas*³⁸ leading to his writing of *Kitab Fasli Al-Maqal (The Harmony of Religion and Philosophy)*³⁹ that the study and practice of philosophy and science is a religious obligation. According to Ibn Rushd, without scientific and philosophical knowledge, the interpretation of sacred texts could lead to erroneous interpretations and distortion of God's words as recorded in *Qur'an*. As noted, acquisition of knowledge is advocated in *Qur'an*, which encourages Muslims to study nature as a means to getting closer to God: *'It was [God] that gave the sun its brightness and the moon its light, ordaining phases, that you may learn to compute the seasons and the years. God created them only to manifest the truth. [God]*

*makes plain his revelations to men of understanding.*⁴⁰ Scientific inquiry, based on reason, is thus seen in the philosophy of Ibn Rushd as a form of worship. Reason and revelation are integrated methods for the pursuit of truth.

Qur'an teaches that *ayat* are pointers to the providential purpose in all levels of creation. Furthermore, *Qur'an* frequently refers to signs interpreted through the use of intellect (*la-ayatin li-gawmin ya'gilun*). The role of divine gifts in understanding and interpretation of nature and science requires a complementary human engagement in rational understanding of the *ayat* and in search of truth and correct religious guidance. The human understanding and interpretation of the *ayat*, as well as response to their content, rests on the integrity of reason, which stands as the central element enabling humans to comprehend the signs and respond to revelation.⁴¹ The greater the reason of an individual, the greater his or her capacity to fully grasp the importance and scope of revelation, thus allowing a more profound response to it.

The interdependence between faith and reason is specific in Islam and further defines Islamic thinking and spirituality, in which human intellect and intuition work together in the comprehension of observable facts that are interpreted as evidences of divine revelation. Divine revelation and direct human observation, although they are different from each other, are still interdependent for understanding and interpretation. Ultimately the latter, the product of natural observation, derives from the former, divine revelation, but interpretation is only possible when guided by the integrity of reason. Science and the observation of the universe, nature, or other objects of inquiry constantly demonstrate God's existence and inevitably their interpretation leads to reinforcement of the truth. Elements observed in the universe are

ayat and are referred to more than 400 times in *Qur'an*, of which the following is among the most representative examples: '*We will show them Our signs (ayat) in all the regions of the earth (afaq) and in their own souls (anfusihih), until they clearly see that this is the truth.*'⁴² '*In the earth, and in yourselves, there are signs (ayat) for firm believers (al-muqinin). Can you not see?*'⁴³

It is therefore posited in Islam that the truth is revealed by God in various ways and signs, inviting humankind to use different methods of thinking. In the Quranic tradition mental action encompasses numerous signs that are re-interpreted through reason and thus engage human intellect. The signs of God cannot simply be read as such; they require a complex process of interpretation of the *ayat*, involving a dynamic relationship between revelation and reason.

Islam supports analytical knowledge and understanding that generates insight rather than a purely dogmatic approach to belief. The two approaches are reflected in the familiar theological expressions *al-iman al-tafsili* (faith based on extended analysis) as opposed to *al-iman al-ijmali* (undigested and uncomprehending faith).⁴⁴ This leads us to the issue of method and its relevance in science.

5.2 The Scientific Method

As previously described, science in the Islamic view is generally considered a vehicle of knowledge regarding facts, which are inherently neutral. These same neutral facts are treated as a part of a world separate from religion by many Western thinkers. Yet in the view of Muslim believers, *Qur'an* includes extensive scientific data that even today stand as a testimony to religious revelation as a source of knowledge. The method of investigating these facts or data is of utmost importance, as the aim for the mainstream Muslim believer is not to create a new Muslim interpretation of science but rather to

understand the universality of science within the heritage of Islam. Numerous Muslim scientists have interpreted science through religion by recourse to new methodologies and have claimed to create a new 'Muslim Science.' This trend has been contested and denounced by Pervez Hoodbhoy, in his work *Islam and Science*, where he states, 'specifying a set of moral and theological principles – no matter how elevated – does not permit one to build a new science from scratch.'⁴⁵

According to Hoodbhoy, science is possible and achieved only within a single stream of inquiry. Science remains universal and has always been such. In this view, the Muslim science of the past was the same as that of today, only excepting that it was developed by scientists who happened to live in Islamic civilisations.

Method is all the more relevant in the relation between science and Islam in that it will determine the nature of truth. Scientific truth, the nature of method, and a separation of science from the cultural and social environment are basic principles in Western thinking about science and reason. Yet scientific knowledge in the Muslim tradition brings various additional nuances to the interpretation of facts and observations. For the Muslim believer knowledge stems from the words of God and applies to all spheres of life, making humans the *khalifat Allah fi-al-ard* (representatives of God on Earth).

In Islamic science emphasis is placed on the transcendent aspects of the truth attainable by science, whereas, in the view of many Muslims, the West emphasizes development of scientific knowledge based in a quantitative approach to reality. The analysis of science as an activity influenced by the culture in which it originates is not new. Modern developments in science, mathematics and physics have brought new questions requiring further consideration. Redefinition of the role and place of science

in Islam contributes to clarifying the proper ethical content and aims of science today while removing a major element of discord between Muslims and the West.

Put simply, science is a gateway to knowledge and an element in the quest for truth in Islam: a truth that leads to God. Still, the different historical pathways of Islamic and Western science are paired with other distinctions, as Islamic critical thinking, reasoning and the knowledge embodied in science derive from a different tradition than that generally accepted in the West. According to Al-Ghazali, two main sources of knowledge are recognized in Muslim tradition: human teaching (*al ta'allum al insani*) and divine teaching (*al ta'allum al rabbani*). This distinction is derived from the processes by which knowledge is acquired; either through transmission from one person to another, or as revelation. This interpretation of knowledge invites us to recognize that reality in Islam encompasses more than one manifestation.

It is universally recognized that Muslim thinkers were pioneers in science and discovery. Muslim scientists were known for their inductive and experimental approaches to research. In the Golden Age of Islamic knowledge, from 700 to 1700, scientists such as Ibn Sina and Al-Khwarezmi, the latter the inventor of the algorithm, which is named for him, contributed to the development of medicine, mathematics, chemistry, etc.⁴⁶ Dogmatic radicalism, however, imposes a 'sterilization' of creative thought among Muslims, even as some fundamentalist ideologues seek to assimilate science.

It is in this context that the Egyptian Muslim Brotherhood has recruited numerous members belonging to the scientific world, including doctors and engineers. As a revivalist organization, the MB aims to reestablish a single authority within the Islamic global community or *umma*, in which a God-decreed way of life and socio-political

organization will be represented in an Islamic state based on *Qur'an*. They oppose Western values and have advocated the removal of Western influence from the Middle East. In their approach to doctors and engineers they have insisted on an attitude toward science and investigation based on Quranic thinking and an Islamic context.

5.3 Science in the Ideology of Sayyid Qutb

Although scientific achievement has considerably declined in the Islamic world, the end of the twentieth century saw the emergence of scholars, scientists and philosophers who tried to formulate a contemporary style of Islamic thought and an Islamic philosophy of science. These recent movements evaluated the sacred and its role in science in strictly Islamic terms. The MB, in its desire to establish Islam as a legal and social governing principle, insists on *Qur'an* as the basis for law. As one of the largest and most influential Muslim organizations, especially in Arab communities, the MB bases its approach to science on the writings of the prolific Sayyid Qutb.

Sayyid Qutb was a social and political fundamentalist, an Islamist ideologue and leading figure in the MB. His work extends to such issues as Westernization, modernization, political reform, his conception of inevitable ideological conflict between Islam and the West, and his argument for armed *jihad*. Yet the Qutbist discourse is complex in that he

recognized the power of Western science, although he was a literary critic and had neither scientific nor religious training. Like other Islamist reformers, Qutb argued that Muslims had strayed away from their religion and their way of life and 'had forgotten that Islam appointed them as representatives of God, hence making them responsible for learning all the sciences and developing various capabilities to fulfil this high position which God had granted them.'⁴⁷

Qutb thus encouraged Muslims to acquire knowledge and to return to the study of sciences, including chemistry, physics, mathematics, etc. He wrote, 'A Muslim can go to a Muslim or to a non-Muslim to learn abstract sciences such as chemistry, physics, biology, astronomy, medicine, industry, agriculture, administration, technology, military arts and similar sciences and arts; although the fundamental principle is that when the Muslim community comes into existence it should provide experts in all these fields in abundance, as all these sciences and arts are a sufficient obligation (*fard al-kifayah*) for Muslims (that is to say, there ought to be a sufficient number of people who specialize in these various sciences and arts to satisfy the needs of the community).'⁴⁸

Sayyid Qutb saw the acquisition of scientific knowledge as a mandatory duty for the good of the community, while insisting that the approach to science had to take place within Islam. However, he made a distinction between the sciences that were to be studied



Sayyid Qutb presents his book *Milestones* to Dr William Ross, president of Colorado State College of Education

Greeley, Colorado; Qutb's US home for six months in 1949



Qutb on trial (right), circa 1965. He was hanged in 1966



by Muslims and others which he defined as forbidden. Qutb believed that some sciences should stay outside the realm of Muslim study: 'Principles of economics and political affairs and interpretation of historical processes... origin of the universe, the origin of life of man... philosophy, comparative religion... sociology, Darwinist biology.'⁴⁹ Such an attitude reflects little more than a fundamentalist assault on the Islamic intellect. Some of the most distinguished of all Muslim intellectuals dealt with political theory (e.g. Al-Farabi, Persian, 10th century), historiography (Ibn Khaldun, North African, 14th c.), philosophy above all (Ibn Rushd, Ibn Arabi, both Spanish Arabs of the 12th c., Al-Ghazali), and comparative religion (Ali Al-Tabari and Ibn Qutayba, Persian, 9th c.; Al-Yaqubi, Iraqi Arab, 9th c.; Al-Maqdisi and Al-Biruni, Persian, 10th c.; Al-Baqillani, Iraqi Arab, 10th c.) To expunge these disciplines from Islam is absurd.

Qutb also believed, obviously wrongly, that the discoveries and advances of the West were coming to a halt, because of an alleged lack of morality in the Western approach to science. Qutb abhorred the separation of science from religion and predicted that it would inevitably lead to the decline of Western science. Science must therefore be pursued within the framework of *sharia*, or Islamic law. It could not achieve anything meaningful outside Islam. How, he argued, could truth conceivably be found outside the realm of God, if God is the creator of all things and is present in all elements of the universe? To Qutb, secularism expressed either in scientific research or social institutions lacked the moral foundation necessary for social harmony. Qutb envisioned Islamic societies as founded on virtue, and the rejection of moral virtue was not only a sin but an inducement to error.

The sciences were encouraged by Qutb so long as they restricted themselves to practical experiments and their results did not

go beyond observation. For example, the assumption that the origins of life could be scientifically explained, as well as its evolution, was to imply rejection of any power outside the physical world. Despite his acceptance of the sciences, Sayyid Qutb did not think that they would rescue the human race from an inevitable downfall. Quite the opposite, especially in the West, the modern separation between human nature and daily life was a source of constant unhappiness and engendered what Qutb called the tyranny of technology. Islamic reasoning, interdependent with faith and originating with God, must not be separated from general interpretation and the faculty of analysis.

Qutb's work, including his attitude toward science, has become the backbone of MB ideology and is an inspiration for Muslim fundamentalist movements. Many have sought to emulate his preaching, and his approval of science has supported the policy of recruiting scientific professionals.

Rather than simply bless study of modern scientific fields that have advanced in the West, many Islamists seek a broader reconciliation between Islam and science. Sa'id Nursi (1877-1960), a Turkish Islamist inspired by a political form of Sufi spirituality, sought to reconcile science and the religion in *Risale-i Nur (Treatise on Light)* which, while never completed, is nevertheless widely published.⁵⁰ Sometimes such trends contradict the findings of hard science. As Islamism has increased in Turkey, so too has creationism. Harun Yahya, a businessman and Islamist ideologue born Adnan Oktar in Ankara in 1956, produces and disseminates glossy and expensive volumes questioning Darwinism and intertwining a criticism of it with anti-Freemasonry and other conspiratorial arguments popular in Islamist publications. In 2007, he sent free copies of a huge, multicoloured, two-volume *Atlas of Creation*⁵¹ in which he argued the creationist case to journals in every major country.⁵²

5.4 The MB and Science Today

Muslim science has stagnated for centuries, but today, this can be explained as much by failed educational and finance policies in Muslim countries, as by a stereotypical view of the relations between Islam and science. The MB's control of the Egyptian doctors' and engineers' syndicates demonstrates to the Muslim public that it can close the gap between fundamentalism and science. The MB also administers hospitals and schools as alternatives to the failed budgetary decisions of the Arab rulers.

Kamal El-Helbawi, who now lives in London, is a former MB senior official and spokesman in Europe. To El-Helbawi, science holds three main functions in society. First, it must benefit society, offering a set of tools which will serve the betterment of humankind and the improvement of the quality of life, through new technologies or by solving the problems that afflict the deprived and disfranchised. Science must have a higher purpose than the function granted to it in Western societies. Second, science and technology may be used for military ends – an ideological justification for acquisition of nuclear weapons. Since armed *jihad* represents a core doctrine of the MB, knowledge of war and strategy is essential, but it has to be underpinned by a religious logic.

This logic is a driving force in the exegesis of sacred texts, without restricting science within a literal interpretation of religion. Finally, El-Helbawi, like earlier Muslim writers, believes that science plays a role in reinforcing religious belief. In his opinion, *Qur'an*, as the word of God, was obviously intended by God to convince doubters of the truth of Islam and of the creation.⁵³ *Qur'an* may become from that viewpoint a source of knowledge, and foster an understanding of science that would otherwise be unattainable. *Qur'an* stands as a divine endorsement for technological

advances that serve a higher purpose.

Debates on literalism, reason and rationality divide the different branches of the MB. For example, Tariq Ramadan, a Muslim writer and the grandson of the main founder of the MB, Hassan Al-Banna, favours rationalism and suggests that *Qur'an* should not be read and interpreted outside of its historical context, while El-Helbawi considers, from a literalist perspective, that all science is contained in *Qur'an* and that there is no need for new knowledge. If Islamist movements like the MB are elected or otherwise brought to power in Egypt or other Muslim lands, the interpretation of *Qur'an* will certainly dictate their policies on science and technology.

Another leading MB figure, Yusuf Al-Qaradawi, who was born in Egypt and lives in Qatar, has written a manifesto for Islamist governments to come.⁵⁴ Al-Qaradawi's interpretation of science is plainly skewed by his literalist interpretation of the *Qur'an* in that he considers divine revelation as applicable at all times and to all situations. Still, as we have shown, while the MB is fundamentalist, that does not automatically imply that they will oppose all sources or forms of knowledge or scientific development.

The debate over the compatibility of Islam and science posits a division between the two, but the discussion is itself divided. Believing Muslims argue that the epistemology of *Qur'an* is inclusive not only of traditional knowledge, but also of modern scientific research. The Islamic conception of knowledge is conceived as a transcendental source of knowledge; Islam emphasizes the *purpose* of knowledge. For religious Muslims, the juncture of science and theology is perceived as harmony, not conflict. Interpretations of Islam may define the manner through which science and knowledge will be developed, but should not impede them.

The MB is an organization that fights

against the West and rejects the current regime in Egypt. In its view of science, and in its appeal to doctors and engineers, the MB proposes that the intrinsic value of truth and knowledge must remain separate from the claims of oppressive rulers guided by self-interest. Before the MB, the 19th century Egyptian religious reformer Muhammad Abduh (1849-1905), who is widely respected by differing groups among Muslim intellectuals, recognized the failure of the Muslim world to adapt to new discoveries. He believed that religion and science are both founded in reason and study, through different perspectives, of natural phenomena. Abduh and his mentor Sayyid Al-Afghani (1838-97) are known as 'Salafi' reformers because they claimed to emulate the *aslaf* or early generations of Muslims after the life of the Prophet Muhammad. The term 'Salafi' is also abused as political camouflage by Wahhabis. It is difficult to imagine that the MB, although it describes itself as 'Salafi,' would accept Al-Afghani or Abduh's vision of Islamic science, since the MB remains attached to the idea of an ideological-theological state along the lines pursued under Saudi Wahhabism.

The history of science and Islam is less important in the transition to renewed pluralism and entrepreneurship, as well as accountability and popular sovereignty, in the Muslim world, than the broader issue of ways of thinking among Muslims themselves. Traditional Islamic learning needs adjustment and improvement; it needs to be adapted to the reality and advances of the present time, and Islam needs to be interpreted through its past dynamic as a religion that supported intellectual openness in the quest for the truth. When it assumes a manipulative and absolutist political hegemony over the doctors' and engineers' syndicates in Egypt can we conceive that the MB would find a way to make their interpretation of science and technology in Islam beneficial for society?

Notes: Islam, Science, and the Egyptian Muslim Brotherhood

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6. EXTREMIST COMMITMENT – IRAN'S RADICAL DOCTORS AND ENGINEERS

6.1 Islam As An Ideology: Seven Preliminary Rules for Historical Analysts

1. The most important characteristic of radical Islamic groups is their projection of Islam as an ideology.
2. When science and ideology conflict, science will give way: scientific vocabulary oriented toward Shia theology was created in Iran at the time of the Islamic Revolution through reinterpretation.
3. It is important whether such terms are or are not useful in mobilization of the people. The ideologists of the Revolution interpret them in a manner intended to serve their interests. The ideology of Revolution is used by its leaders as the basis of a political system.
4. While an ideology may be built on an intellectual and philosophical apparatus, its main goal must be a practical application, or rather, achievement of practical results. A revolutionary ideology gives the movement direction and depth, it imparts consciousness to various elements, and may be embraced by the whole society.
5. To gain such an acceptance, the ideology must appear to improve the general quality of life, define the goals of the movement, and embody a new vision of history.
6. The more the populace is disinclined toward mobilization, the more general and less certain the ideology will be.
7. If the revolutionary movement lacks the organizational sense to mobilize people, ideology substitutes for that ability.

6.2 Engineers and Physicians in the Iranian Islamic Revolution

In the years before and after the Islamic Revolution, the most important political and



“...today Islamist movements are more characterised by the presence of professionals and other ‘privileged strata than by ‘the Muslim Street’.”

student movements in Iran originated at the medical, technological, and engineering schools. Medical programs in Iran had traditionally accepted gifted young people with ambitions for a more important role in society. Iran had officially encouraged modern medical education beginning with the 1911 Medical Law which required physicians to study and train in modern medicine. At first, this did less to improve education and more to de-legitimize Islamic folk healers.⁵⁵

But while doctors are perhaps the most influential tier in society in the Arab world, in Iran engineers share the stratum. The main competing factions in the religious schools emerged from student movements, and Iranian universities became a permanent arena of confrontation between right-wing and left-wing religious radicals. Considering that a tradition of multi-party politics did not exist in Iran, the universities played an important role in the political consciousness of society. After the fall of shah Muhammad Reza Pahlavi, universities were divided between totalitarian and non-totalitarian religious radicals, as well as Marxists, although subsequent revolutionary purges limited even religious discourse to trends supporting the personal role of the Islamic Republic's Supreme Leader. In a piquant detail little known in the West, the intellectual followers of Ayatollah Khomeini were divided between “Heideggerites” who had studied the eponymous German philosopher and favoured dictatorship, and

“Popperites” inspired by the social theorist Karl Popper. The distinction has persisted, with the labels still applied to prominent individuals, and the reforming trend of former president Muhammad Khatami are considered “Popperites.”

But Iranian doctors and engineers mainly lacked a deeper understanding of history, philosophy and religion. The comparison between Marxist and Islamic organizations in Iran in the decades before the Islamic Revolution shows that the founders and the forerunners of Marxist organizations were for the most part people who involved themselves in political, social and literary studies. On the other hand, the founders and leaders of Islamic radical organizations such as the *Mujahideen-e-Khalq* (People’s Mujahideen or MK)⁵⁶ and other, smaller armed combat groups were mostly graduates and students in technical and medical studies.

During the immediate pre-revolutionary period in Iran, from 1971 to 1978, a change was visible: the majority of rank-and-file members of Marxist and radical Islamist groupings committed to armed action were increasingly drawn from the technical class and students at technical universities. According to one survey, out of 341 people who died in clashes with the Pahlavi regime, 280 were students at technical and medical universities. Ervand Abrahamian’s *The Iranian Mojahedin* tabulates MK “martyrs” for the period 1981-85: Of a claimed total of 8,968, almost a third were identified as “modern middle class.” In that category, 1,653 were college students while 47 fell into the combined group of doctors, veterinarians, and dentists.⁵⁷ Three unnamed individuals classified as “prominent mojahedin” among the “martyrs” were doctors, veterinarians, or dentists.

Following the Islamic Revolution, the active elite in Iran was made up mainly of engineers and physicians, and to a lesser extent of people with higher education in

social sciences. The majority of the Revolution’s executive directors in business and public agencies were technical graduates. The practical consciousness of the elite enabled it to function widely in politics. Several doctors assumed high positions in the Islamic Republic. ‘Ali Akbar Velayati, foreign minister between 1981 and 1997 and current foreign affairs advisor to Supreme Leader ‘Ali Khamenei, is a pediatrician by training, with post-doctoral training at Johns Hopkins University.⁵⁸ Abbas Sheibani, a hard-line Islamist currently on the Tehran city council and a former minister of agriculture, also segued from medicine⁵⁹ into Islamist politics. Similarly, Hossein Shariatmadari, editor of the radical Iranian official daily *Kayhan* and an aide to Khamenei, was a medical student before his arrest and imprisonment by the shah’s regime.⁶⁰ Many others were engineers. The confluence of medical doctors or engineers and Islamism in Iran may reflect the weakness of liberal principles in society. The absence of liberalism, often conflated with Westernization, let alone hostility to both liberalism and the West,⁶¹ has maintained a vacuum. While the shah sought to promote Persian nationalism, his flight ceded the battle to Islamism and Marxism. Khomeini’s Islamic revolutionism won. Commitment to radical ideology offered Iranian doctors and engineers an opportunities for a fast political and social rise. Currently, however, the influence of the technological elite is in question.

Present-day debates in Iranian society, over the cultural and civilisational issues of freedom and democracy and their relationship with religion, show a conflict between two views. On one side is the attitude which opposes the ideological view of religion and social questions and which strives to establish a civil society suitable to Iranian conditions, and on the other side is the position which primarily bases itself on a religious ideology.

6.3 The Islamic Background

The Islamic movement in Iran may be divided into three trends.

The first would comprise an intellectual tendency we may call traditionalist. The traditionalists are not a political faction or an Islamic movement striving for a particular reform. Followers of this school do not ask for any political changes, but seek the traditional pursuit of religion. There are two kinds of traditionalists. One variety consists of those who in their religious practice do not care about the cultural and the civilisational achievements of the West and do not consider them as valuable.

The other element is the so-called 'Traditionalist movement,' mainly represented by the author Seyyed Hossein Nasr, who considers Islamic tradition in the perspective of the intellectual and cultural experience of the West. Nasr's Traditionalism has been criticized as a hierarchical and authoritarian conception linked with ultraconservative politics in the West. Both examples, however, stand on the view that religion must be accepted in its long-established sense. Traditionalists do not concern themselves with harmonizing religion with modern life. They hold that modern cultural and civilisational achievements are a product of human intellect alone and do not need to be involved with religious questions that originate with God.

A second major component, present in the global Islamic movement and contrasting with the traditionalist outlook, is religious-reformationist fundamentalism, and includes many who have founded and lead Islamist tendencies. Religious reformationism has two important branches. One is Wahhabism, a normative version of Sunni fundamentalism. Similar historic examples in Iran would involve certain religious movements which avoid considerations of tradition, like the school of Akhbarism, which advocated strict and literal interpretation of the *hadith*, the oral sayings of the Prophet Muhammad. They

stood directly against the *Usulis*, who were rational analysts. Among Shia Muslims, the overwhelming majority in Iran, intellectual rationalism has always been seen by most as preferable when compared to a literalist understanding of Islam.

One of the original and most significant representatives of Islamic political fundamentalism in Iran was the militant and violent tendency known as *Fadaiyan-i Islam* (*Partisans of Islam* or FI) which had considerable influence in outlining the political options of the extreme religious right. Inspired by the (Sunni) Muslim Brotherhood (MB) during the 1940s and 1950s, they offered a vision for the renewal of Islamic power. FI advocated the reaffirmation of tradition, but their interpretation of the return to tradition was ideological. Authentic traditionalists do not politicize or ideologise the faith. Fundamentalists, by contrast, aim at dominance over society through a religious reformation and the establishment of an Islamic state. They reject the established forms of religion and call for a return to the earliest Islamic institutions.

The third Islamic component is made up of religious modernists, who in their political and social actions have also often leaned toward radicalism. They advocate deep and essential changes in Muslim societies, and they are mainly connected in history with the 19th century 'Salafi' Sayyid Al-Afghani, the teacher of Muhammad Abduh. The teaching of Sayyid Al-Afghani differs from the reformationism of the Wahhabis, and following Al-Afghani's line of intellectual development, we come to Ayatollah Morteza Motahhari (1920-79). Motahhari was greatly influenced by Al-Afghani and Muhammad Abduh.

Islamic modernists also include Muhammad Iqbal (1877-1938) in India and Ali Shariati (1933-77) in Iran. In addition to their reliance on *Qur'an* and tradition, they sought to reconcile faith and modernity, rationalism, science, freedom, democracy... and it is in this

way that alongside the traditionalists and fundamentalists, they represent the third stream. Iqbal was trained in philosophy, and Shariati in sociology; neither were scientific professionals.

6.4 The Rise of Religious Radicalism in Iran

Iranian society in the 1940s and 1950s went through conflicts associated with modernity, including capitalism, economic imperialism and foreign occupations by the British and Russians during Second World War. The monarchy of shah Reza Pahlavi ended and he was succeeded by his son Muhammad Reza Pahlavi. The mass of Iranians felt betrayed and humiliated. The society was confronted by internal decay and domination by the West. These were the two main reasons for the appearance of populist political movements. The unsatisfied mass was given no opportunity to protect their traditions and new circumstances did not fulfill their needs. Before the emergence of the *Fadaiyan-i Islam*, ideological Islamic movements and tendencies were neither articulate nor coordinated. The *ulema* (clerics) and religious personnel heading such groups challenged the new developments in politics and society, calling on the people to take part in protest politics, but these voices were inconsistent, sporadic and without continuity. The clerics themselves never, at that time, advocated the establishment of an Islamic state.

The life of Navvab Safavi (1924-55), founder of the *Fadaiyan-i Islam*, is important. He was a charismatic personality with a gift for preaching and oratory that stirred the poor. The FI was a novelty, and advocated the establishment of Islamic rule with the program of the Egyptian MB as an example, and during those years some meetings with MB leaders were held. Thus, FI Ayatollah Abul-Ghasem Kashnani (1884-1961), a mentor of Ayatollah Khomeini, met with Hassan Al-Banna. The FI, however, did not gain much support from the

people, and since it chose terrorism as its means of mobilization it could never possess the influence of the traditional *ulema*.

6.5 The Principle of Practicality

Engineers and physicians are the most-educated Iranian professionals, and satisfy the revolutionary ideological test, necessary for mobilizing the masses, of representing practical results. As opposed to the traditional *ulema*, which was not educated in science, engineers and physicians in Iran follow the most recent research developments. Many of them attempted, therefore, to realize some sort of fusion of faith and modern knowledge, or rather to draw on modern knowledge to attain what they called 'strengthening of the Muslims.' FI leader Safavi was such a person; he graduated from the German technological school in Tehran, and his religious education was elementary.

Safavi's movement was oriented towards practicality, as one finds the principle of practicality behind all the succeeding radical right-wing or left-wing tendencies. It is unsurprising, therefore, that beginning with the FI of the 1940s-50s, through the emergence of Islamo-Marxists in the MK and other Islamic armed factions before and after the Islamic Revolution, the majority of activists came to be educated in medicine and technology.

These groups neglected the philosophical and gnostic teachings, or *irfan*, that have assumed a central place in Shia Islam. Moreover, not only did they lack knowledge of Islamic philosophy, they also were ignorant of the philosophy of the West. The most important sources of their knowledge of the philosophy of the West were Marxist works; either they accepted Marxist ideological categories or, still from an ideological perspective, they criticized them. That is also how the members of the FI analyzed translations of the writings of the

Egyptian Muslim Brotherhood. The MK attempted to establish a distinctive combination of Marxism and Islam, and they held that Marxism needs to be taught solely because it is based in an engaged and combative discipline.

Nevertheless, the most serious discussions of socio-religious thought in Iran took place mainly between traditionalists and modernists, with both radical elements, the fundamentalists and Islamo-Marxists, left behind. Entities like FI, or elements with an Islamic communal spirit in recent times, were born from different religious institutions, and used radicalism as a means of pressure. But with the decline of radical views in the majority, the practice of Islamists in Iran had, until recently with the election of President Mahmoud Ahmadinejad, been marked by avoidance of confrontation between extremists and other current public and Islamic movements. Radicals have initiated a return to themselves and to the concept of an ideal, utopian state. This is associated with the reappearance of the 12th Shia imam, or Hidden Imam, Muhammad ibn Hasan ibn Ali, born in the 9th century and believed to have disappeared in childhood, but destined for return among people at an unstated time. They are distant from political reality and advocate social changes regardless of the conditions of the time.

6.6 Practical Failure of Organization and Activity in the *Fadaiyan-i Islam*

The FI based their views on a practical realism that had as its goal to extinguish all passive idealism. This movement relied exclusively on the elite that lead it. But the FI also distinguished itself by certain weaknesses in organization and a sense of management of a movement. FI lacked a strong and enduring internal structure. Because of that, after the arrests of leading personnel in the movement in 1954-55, this movement remained

decapitated and began to die out, given that no new leadership for it came forward.

The main weakness of FI was their timidity, or rather their inability, in going beyond the religious sphere. The *Fadaiyan-i's* had a very strict and fundamentalist view of Islam. Their program encompassed the fear of God and observance of sharia principles, and they advocated a complete ban on alcohol, tobacco and other intoxicants, movies and gambling. They further advocated cutting off the hands of thieves, the prohibition of foreign clothing, music, a commitment to *hijab* for women; in sum, a completely puristic religious way of life.

The *Fadaiyan-i's* knew the intellectual and political trends of the time, but they could not criticize them or take something from them for their own use. They therefore underwent intellectual and practical regression. Regardless of the bravery for which he was honoured, Navvab Safavi never became an influential leader comparable to Al-Banna or Outb. Safavi could not confront the dominant conceptions of his time. The FI became best-known for organizing terror, as opposed to cooperation with other opponents of the regime and debate over religious and political questions. The traditional Iranian Shia authorities, the highest-level clerics or *marjae*, did not permit a strengthening of the FI; the movement was constantly overshadowed by the *marjae*.

Regarding their anti-monarchist and anti-foreign position, the *Fadaiyan-i's* needed a proper network for agitation and action, but, guided by their ideological proclivities, they always tried to organize it in small and marginal groups, and so quickly failed. Because of certain ideological arguments they did not join the massive national movement of 1952, which stood behind Mohamed Musadeq against the then-premier, and thus the *Fadaiyan-i's* alienated themselves from the national movement. Their lack of cooperation with other groups that opposed

the Pahlavi regime, which lay in the insistence of the *Fadaiyan-i's* on their theoretical principles, further enabled the regime to stifle the movement. All these failures reflected an incapacity to understand the principle of practicality, over which the FI sought to prevail, by utopian will alone.

6.7 Political Revitalization of Faith

The rebirth of Shia Islam that culminated in the Iranian Islamic Revolution was mainly based on a new attitude toward certain basic postulates of Shiism, and a sense of re-engagement with the political principle of just governance. In this regard, while it is often perceived by Westerners as a utopian phenomenon, Iranian revolutionary Shiism represented the return and restoration of the principle of practicality. The concealment and eventual return of the Hidden Imam remained a powerful signifier of Shia belief. The main principles in this process of political redefinition have been faith in God, following a correct path, witnessing, praise for martyrdom, awaiting the coming of the Hidden Imam, the occultation of the Imam, the perfection of the Imam as a person without sin, the rule of the Imam, *taqlid* or obedience to jurists, justice itself, *ijtihad* or individual reasoning in jurisprudence, and prayer... and every one of them was redefined by the Khomeinist movement with the aim of mobilizing the people.

The goal of Shia political education became the stimulation of revolutionary awareness. For example, reference to the 'coming of the Imam' was given a new meaning. It did not mean, as in the past, the hope of forming a just rule and correct guidance for humanity through God's anticipated but unpredictable intervention, but rather a spiritual, practical and ideational readiness, in the ranks of the living community, for reform, revolution and changes in the world situation. The quietist belief in the eventual arrival of the Imam had

been transmuted into a millennial conception of imminent universal transformation. In however distorted a way, utopianism had been overcome by practicality.

Such expectations have to be creative, basic and lead to power and effective change. The absence of the Imam was also not to be understood as permission to ignore the immorality of the shah's regime, or to neglect social responsibility, under the excuse that only the sin-less Imam would be capable of exercising leadership. Rather, it was about understanding that one's destiny lies with the people and it is they who must determine their religious, spiritual, social and political leader until the Imam arrives. This doctrine became the essence of Iranian Islamic revolutionary politics, and in this context the recent recourse to a revival of it in the rhetoric of Ahmadinejad seems less an expression of hallucinated eccentricity than a simple gambit to restore confidence in the regime and its leaders through yet another revitalization of its core ideology.

6.8 Engineers and Physicians As Politicized Social Sectors

Extremism has always existed, in all times and in all places. Fundamentalism presents a distinctively modern reading of religion, and therefore it is no wonder that in Egypt and Iran, engineering circles, prone to a superficial knowledge of religion, most often expressed fundamentalist tendencies.

As the Iranian example eloquently shows, liberal principles are weak in Muslim countries. Liberal theories never came to life in those societies and they view democracy and civil liberties as a product of Western aggression. To refute these conceptions would be the responsibility of experts in social sciences, but in some Muslim countries such personalities do not exist at all or they have a minor influence over the political development of society. In Iran, which unlike the Arab countries has produced a civil

society, there are disputes between new forces, which are proponents of political development and civic liberties, and the conservative establishment.

Ideology is still alive among the combative movements in the third world. In Arab countries it is expressed in the framework of Arab nationalism, and in Iran, in which an official ideology has never been fully articulated, certain leftist and Marxist ideas are present, even as the main conceptions of right-wing groups. These include strengthening the role of the state, political radicalism, a fight against the West and opposition to the establishment of normal relations with America and Europe. It is no coincidence that Ahmadinejad dreams of closer links with radical leftist regimes in Latin America.

Fundamentalism succeeds where there is a vacuum in civil society. Governments in the majority of Muslim countries do not offer their citizens a free and democratic environment. Tendencies toward extreme fundamentalism always need to be analyzed in relation with the limitations on political activities in such countries. That is why we saw the rise of fundamentalism in Afghanistan, Pakistan, Egypt, Jordan and Saudi Arabia, where the phenomenon is a consequence, first of all, of non-democratic systems of governance.

Shia fundamentalism in Iran lacks a wide basis among the people. Traditionalist and modernist paradigms have much more influence in society. Shia fundamentalist tendencies mainly flourish in pressure groups, small political factions, in some unofficial centres of political power and certain circles of religious functionaries.

Fundamentalism in education is, however, still one of the most significant issues in Iran today. The right-wing fundamentalists in Iran have a strong influence in elementary, middle, and high schools, while their influence on universities is weaker. The

educational system does not emphasize creativity and innovation; it is mainly conservative and oriented towards classical Persian literature. Iranian reformists under Muhammad Khatami's presidency insisted on separation of culture from religion and prepared programs to stimulate creativity in students. Yet a great part of the educational system still propagates Islamic ideology and a religious organization of society. There is no dedication to modern intellectuality; rather schooling is based on a fundamentalist religious interpretation of the world, without paying attention to positive changes and related events in the world, and with obligatory criticism of the West.

If we view fundamentalism from another perspective, as a reactive phenomenon, then the progress and spread of fundamentalism in Muslim countries will appear to respond directly to the policies of the United States and Europe toward the countries of the third world, since the fundamentalists adhere to the thesis that the United States and Europe are responsible for all misfortunes and decadence in the third world.

In Iran some officials of the Islamic Republic belong to a new school of philosophy, made up of opponents of political reform. This world-view, whose founder was Ahmad Fardid (1939-94), held to some of Oswald Spengler's and Martin Heidegger's theses about the end of Western civilisation, combined with traditional Islamic philosophy. At a superficial level they asserted that the West had reached the end of philosophy and history. Such an idea existed in the work of Sayyid Qutb, who called the culture and civilisation of the West 'modern ignorance.' Fardid's impatience with the West was transferred to his students but in the traditional Shia seminaries or *hawzas* for instruction in religious sciences, it did not, after all, penetrate especially deeply, and the

reformists have many more followers.

The fundamentalists inside Iran mainly confront the forces of reform; Iranian fundamentalists do not embody an independent option, but represent a pressure group against followers of the reformist course. The engineering profession, especially, supports fundamentalism, as it did in the past.

The ideas of the Iranian Islamist groups differ in one important detail from ideas of the Sunni Islamist groups. The Shia movement of Ayatollah Khomeini had a quintessential, *practical* goal – to establish itself in power. The political thought of Khomeini represents a combination of the theory of Islamic rule and the idea of a republic. That movement grew into an institution in the framework of which all the Iranian Islamic tendencies function. Some fundamentalist tendencies seek to undermine the republican system and diminish popular sovereignty; above all, they wish to reduce the ballot to a symbolic institution. These groupings, or parties, to which belong one part of the militant *ulema* and members of Hezbollah, are led by personalities from the engineering and medical professions.

As noted, Islamic fundamentalism in Iran has provided opportunities for members of the technical professions to achieve a fast political and social rise. Individuals without a significant career, inferior and marginal, mediated by a turn to religious propaganda, suddenly achieved political and civil authority. They overcome their former feelings of inferiority and become reborn as people.

The role of criminals and 'mafia' is also relevant in a discussion of Islamic fundamentalism. While it is rare in Iran for criminals to be redeemed by religion, they do enter extremist milieux and become especially dangerous. Whole strata of former criminals may, in periods of modernization, represent especially combative and rebellious elements. The majority of fundamentalist leaders have a

criminal past. For example, Abu Musab Al-Zarqawi was a former Jordanian criminal who became the leader of Al-Qaida in Iraq. Thanks to his boldness and arrogance which appealed to people, he imposed himself as a leader.

Fundamentalists have always skilfully employed sanctity and religious terminology. A fundamentalist firmly believes that his is true belief and that every means he uses toward realizing his goals is not only allowed but is also sacred. In fundamentalist practice, one must first challenge the other, and it is then easier to remove one's opponents. For the purpose of challenging their opponents they typically use a specific religious terminology, calling others unbelievers and atheists.

The engineering profession in Iran is in transition. The engineers of the present day occupy inferior places in the leadership and their position is weakened. They are merely bureaucrats who manipulate the actions of fundamentalists. In a practical sense the technical professions enjoyed much greater power in the 1970s and 1980s than today. In an aspect of Iranian society unperceived in the West, the drive of the rulers to gain nuclear capacity reflects, in great part, the assertion of the fundamentalist engineers to a restored claim on influence.

Notes: 6. Extremist Commitment - Iran's Radical Doctors and Engineers

55. Menashri, David, *Education and the Making of Modern Iran*, Ithaca, Cornell University Press, 1992.

56. MK was associated with the anti-Iranian efforts of Iraqi dictator Saddam Hussein and is designated a terrorist organization by the US State Department.

57. Abrahamian, Ervand, *The Iranian Mojahedin*, New Haven, Yale University Press, 1985.

58. *The New York Times*, Oct. 4, 1985.

59. Bahadori, Moslem, MD, "A Historical Review of the Development of Pathology in Iran," Academy of Medical Sciences of Islamic Republic of Iran, Tehran.

60. *The New York Times*, 22 September 2007.

61. See, for example, Al-Ahmad, Jalal, *Gharbzadagi (Westoxification)*, Tehran, Intisharat-i Firdaws, 1994.

7. From Mark Zborowski to Ayman Al-Zawahiri – Islamist Radicalism as 21st Century Terrorism

There have been ‘terrorist doctors’ since the rise of 20th century totalitarian ideologies. Dr Mark Zborowski, the Stalinist assassin; Dr Josef Mengele, the infamous ‘genetic researcher’ in the German concentration camps; ‘Che’ Guevara, whom we have mentioned; Dr Radovan Karadzic, the state psychiatrist who became an inciter of ethnic massacres in the former Yugoslavia, may all be described as historical companions of Dr Ayman Al-Zawahiri, the ‘medical assistant’ of Osama Bin Laden in the murderous activities the latter has commanded and coordinated.

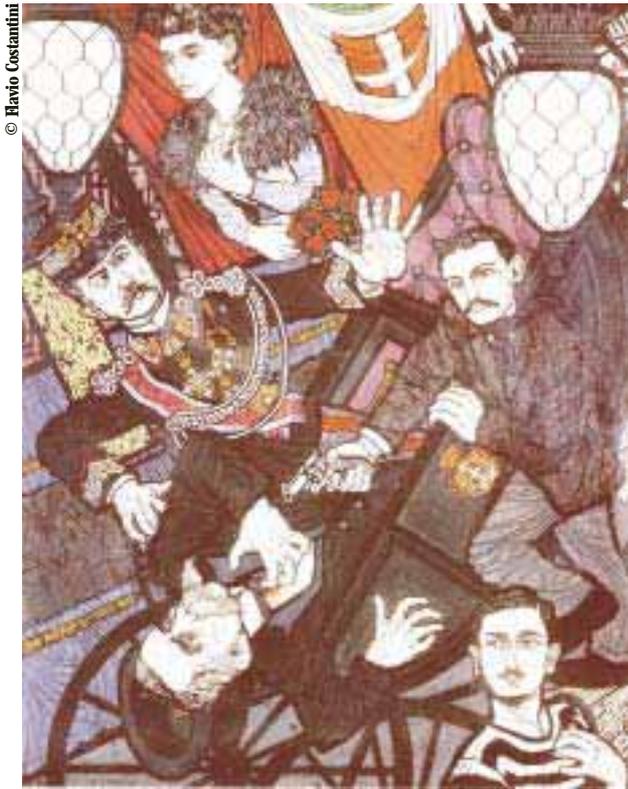
If there is a single element that unites these five variants in perversity, it may be that they all originated in unstable societies, where the social position of educated professionals was or had become generally insecure. Zborowski was born in tsarist Russia, Mengele was a product of German defeat in the first world war, Guevara grew up in an Argentina suffering the crises and demagogic despotism of Gen Juan Perón, Karadzic came from a Yugoslavia without a firm national identity or social structure, and Al-Zawahiri exemplifies the failures of state, religion, and community in Egypt.

In all of these environments ‘the armed intellectual,’ as defined by the Hitler biographer Konrad Heiden, became a broad social category and a major element in radical politics. Heiden wrote, ‘The revolutions of the 20th century gave rise to a new militarism... a new kind of army... it was not fighting for an existing social order. [It] condemned the cowardice, sensuality, and other vices of many comrades... the hope for a return of the golden days remained its secret consolation... At all times and among all nations, a crafty and strong personality has recognized the simple secret of rule by violence... He is a torn personality; long reaches of his soul are insignificant, coloured

by no noteworthy qualities of intellect or will; but there are corners supercharged with strength. It is this association of inferiority and strength that makes this personality so strange and fascinating... Two separate worlds are fighting: a rising world of order, still with tender membranes and limbs, easily hurt, growing and solidifying among infinite perils – and a world of disintegration and tumult, struggling with wild outbursts against its own ruin.’ These phrases accurately describe the world of the jihadist professional.

Such a conflict – between a new reality and the vestiges of the old order – is visible throughout the biographies of Drs Zborowski, Mengele, Guevara, Karadzic, and Al-Zawahiri. Against global unification of markets, expanding popular education, and growing income and prosperity, Drs Zborowski, Guevara, and Karadzic embodied the atavisms of tsarist Russian authoritarianism – ‘a world of disintegration and tumult’ – by killing the advocates and defenders of authentic transformation, as promised by rational economic planning in the Russia of the 1930s, the end of Latin American dictatorships in the 1950s, and the emergence of new definitions of communal identity in the former Yugoslavia of the 1990s. Drs Mengele and Al-Zawahiri represented parallel remnants of a ‘disintegrating and tumultuous world’ – in the first case, that of Prussian imperialism, and in the second, Arabocentric *takfirism* – against the promises of accountability and popular sovereignty in Germany during the 1930s and the Muslim *umma* today.

Prior to the emergence of 20th century ideologies, extremist members of the engineering profession were a notable element in the Russian revolutionary movement of the 19th century. Russian engineers sometimes combined scientific research with terrorism. Nikolai I. Kibalchich (1853-81), one of the outstanding pioneers of rocketry, used his technological abilities to design a rocket-bomb used to assassinate Tsar



Monza, July 24 1900: Gaetano Bresci assassinates King Umberto I

Alexander II. He was executed for this act.

A temptation among engineering and scientific students to identify their profession with scientific progress, at a time when progress itself was associated with socialist and other revolutionary doctrines, persisted into the 20th century. An unknown but impressive number of ideologised scientists contributed to Soviet espionage against the US Manhattan Engineering District through which the first nuclear bombs were created. Nuclear engineering is a political topic in Iran at present, with engineers holding out the development of nuclear weapons as a means to raise the country's status in the world.

Terrorism *per se*, as we now understand it, appeared in the late 19th century. Unlike Jacobin 'totalitarian democracy' in the French Revolution and its aftermath, it did not aim at the solidification of a regime. During the 20th century the incidence of terrorism at first evidenced a decline, but then burgeoned. The Sarajevo assassination of Habsburg Crown



St. Petersburg, March 13, 1881: assassination of Tsar Alexander II

Prince Franz Ferdinand and Princess Sophie in 1914 – reflecting cultural and political issues that remain unresolved today – was a major terrorist act that led to the first world war, but such activity increased as it was adopted by ethnic and ideological radicals and totalitarian secret police agencies.

It was observed in 1909 that terrorism as a method does not have a lasting impact on society. Terrorists can, at worst, disorient society. Terrorism is shocking in outward form (murder, explosions, etc.) but without effect on the long run of history. Described a century ago, these arguments are equally valid today.

The five exemplars of the 'terrorist doctor' we have mentioned here have many common characteristics.

Dr Mark Zborowski has been described as having 'left behind a trail of duplicity and blood worthy of a Shakespearean villain'⁶² and is considered the most fearsome foreign agent of the Soviet secret police between the



Sarajevo, June 28, 1914: Archduke Franz Ferdinand of Austria and his wife, the Duchess of Hohenberg leaving the Town Hall three minutes before their assassination.

1930s and early 1950s. He mainly tracked down followers of Leon Trotsky, the Russian revolutionary who was exiled by dictator Josef Stalin. His involvement with Soviet espionage began in 1932-33, according to his own testimony in 1956 before a US Senate panel investigating spy activities within the United States. It is likely, however, that his entry into Soviet service began in the late 1920s in Poland.

Zborowski went from Soviet Russia to Paris, to study anthropology at the Sorbonne. He began actively befriending Russian dissidents and passed on their names and papers to other Soviet secret police agents. He used the pseudonym 'Etienne,' and was identified in Soviet secret communications as 'Tulip' and 'Kant.' Trotsky's younger son, Lev Sedov, had also gone to Paris, and was Trotsky's main assistant in publishing documents from Russian prison camps and underground critics of Stalin. Sedov died mysteriously in 1938 after Zborowski checked him into a Soviet-run hospital. With the brief opening of Russian historical inquiry after the collapse of Communism in 1991, Zborowski is now widely admitted to have killed Sedov by poisoning.

A year before Sedov's death, in 1937, Zborowski became involved in the defection and assassination of a Polish-born Communist, Ignacy Porecki-Reiss, who was



Sarajevo, June 28, 1914: A chance snap captures the moment when the Archducal pair's assassin, Bosnian Serb Gavrilo Princip, is frogmarched into custody.

the field director of all Soviet secret police activity in the West. Porecki-Reiss defected to Trotsky's camp. Within six weeks, Porecki-Reiss was killed while hiding in Switzerland. His whereabouts had been known only to Trotsky's son Sedov, Zborowski and very few others. Although Zborowski was accused of being an accomplice in the killing by the slain man's widow, no official action was taken. The network to which Zborowski belonged included numerous other intellectuals, but mainly in the cultural field, and targeted other anti-Stalinists, some of whom were also killed, in Europe.

In 1940, Dr Zborowski went to the US, where he continued his spying and terror activities. He served time in a federal prison for perjury in the prosecution of the Soviet spy team to which he belonged. In the 1960s, Dr Zborowski went to San Francisco and worked as a medical researcher at a major local hospital, where he established a 'Pain Centre' that studied 'cultural aspects of pain.'⁶³ Dr Zborowski, as a clinician, trained nearly the entire body of psychiatric personnel in the San Francisco area during his life there.

When Dr Zborowski died in 1990, at 82, in San Francisco, his professional colleagues were aghast at public disclosure of his past in local media. Dr A Harvey Salans, a San Francisco physician who had recruited

Dr Zborowski to his final employment, wrote to the local press, 'From the early 1960s to his retirement in the early '80s, no person was more warmly embraced by a cross-section of the Mount Zion Hospital community than Mark Zborowski. His recent death is deeply mourned by many of us who feel strongly that the good he did must not "be interred with his bones". His book *Life Is With People* is an acknowledged classic on the culture of the shtetl (little town), a description of which is incorporated in the *Hebrew Encyclopaedia*. Another of his books, *People in Pain*, was the forerunner of a unique, highly successful pain clinic at Mount Zion.'⁶⁴

Dr Josef Mengele is a more significant figure in quantitative terms than Dr Zborowski. This reflects in his deliberate torture and murder, under pretext of scientific research, of an unknown number of children at the German concentration camp of Auschwitz in occupied Poland, where he was nicknamed 'the Angel of Death.' But Dr Mengele is also the subject of an immensely larger and more accurate biographical corpus of literature than Dr Zborowski. The two men had fascinating aspects in common: Dr Mengele had also been trained first in anthropology and then in medicine, and both escaped from Europe to the Western Hemisphere. Dr Mengele is reported to have died in 1979 in Brazil, aged 68.

Dr Guevara has been lionised as a revolutionary personality to so great an extent it is unnecessary to review the details of his life. But one must note that this 'romantic hero' was a medical doctor, and therefore had pledged to save life, but callously ordered executions during his adventurous career.

Radovan Karadzic is a product of the ex-Yugoslav Communist system, and does not possess the confirmed credentials gained by Drs Zborowski, Mengele, Guevara, and Al-Zawahiri. He is said to have studied psychiatry at the University of Sarajevo and at

Columbia University in the US, where he is known to have visited. He was also charged with embezzlement and fraud in the mid-1980s, but did not serve prison time, and pursued a surprisingly successful career as a poet. His medical post is reported to have consisted of counselling for a Sarajevo football team. One must bear in mind that psychiatry in Soviet-style states, including Yugoslavia, was mainly a secret police function; in addition, the patrons of Radovan Karadzic in Sarajevo literary circles included a Serbised Stalinist of Muslim background, Izet Sarajlic.

Dr Karadzic was not arrested after the imposition of the Dayton Agreement, which ended combat in Bosnia-Herzegovina. In 1995 he was indicted by the International Criminal Tribunal for Former Yugoslavia (ICTY) at The Hague, for genocide and crimes against humanity, and in 2000 the indictment was amended to include two additional charges: violation of the laws and customs of war, and grave breaches of the Geneva Convention of 1949.

Dr Karadzic remains at large at the time of publication of this report.



Dr. Radovan Karadzic

The Upsurge of Islamist Terrorism

The 21st century was inaugurated with a global offensive of Islamist terrorism, which differs in apparent content from the terrorism of the past century and a half. But this distinction is illusory. The ethnic and political terrorists of 100 years ago, like their Communist and Nazi successors, and today's Islamist extremists, aimed their efforts against the tranquillity, political canons, and public culture of the West. Still, Islamist terrorists, given the wide geographical reach of their crimes, have left an undeniable mark on Western society, but have caused no fundamental transformation of values.

The stereotypical terrorist, in the Western mind, is a poor, young, uneducated, and even physically unattractive person from the muddy backstreets of Middle East towns and villages. But the majority of the activists linked to Osama Bin Laden do not conform to the stereotype. In addition, ideological indoctrination is not simple conditioning or cult-like 'brainwashing.' The researchers on *Scientific Training and Radical Islam* do not support a behaviourist explanation for the appearance of Islamist terrorist doctors.

Islamist terrorists were often good students in high schools and then graduated from US and Western European universities. Their career path was, in general, strikingly respectable. Many hold degrees in architecture and related disciplines, as well as in medicine and engineering. They had considerable opportunities, before the events of September 11, 2001, to establish themselves in the Western elite, with excellent incomes and cosmopolitan culture.

Professor Marc Sageman of the University of Pennsylvania, a counterterrorism adviser to the US government, has dealt with these matters in analyzing biographies of radical extremists derived from open-source material. Although Sageman lacks a grounding in Islam and submits to the false self-identification of Wahhabis as 'Salafis,' he

understands much about the new class of Islamic terrorists.⁶⁵

According to Sageman and some others, traditional social theories about terrorism are obsolete, and Sageman's analysis in particular supports the perspectives developed in this report by the CIP researchers. Extremists may lack religious education, having been schooled in a secular environment, before joining not only Al-Qaida, but also such parallel groups as Egyptian Islamic Jihad, which produced Dr Al-Zawahiri; Jemaah Islamiyah in Indonesia, and Abu Sayyaf in the southern Philippines.

Media and official documentation, as well as court documents produced by trials in the US, Europe, Egypt, Indonesia and Morocco, offered the basis for Sageman to assemble a sample of 172 profiles drawn from the main jihadist trends active today, which are Sunni and *takfirist*. The sample (hereafter, 'Sageman') comprises four main centres:

- the leaders of Al-Qaida, with 32 'Central Staff' figures in Sageman;
- North African Arabs (Maghrebi, i.e. Moroccan and Algerian), accounting for 53 individuals in Sageman;
- core Arabs, with a plurality of Saudis, comprising 66 activists in Sageman;
- a Southeast Asian group, made up of 21 major personalities mainly from Indonesia.

These four groups have a single major trait in common: professional education. *Fewer than 15 percent of Sageman's sample possessed a religious education.*

Sageman confirms that the great majority of those he examined were middle to upper class and well-educated. Of 102 individuals in his sample, 18 were upper class and 56 were middle class, making up two-thirds of the biographies. In terms of schooling, 114 out of 137 had a secular education; 94 of 132 had finished college and university studies.

In Sageman's correlation, only three of 27 profiled in the 'Central Staff' with Bin Laden

had a religious education – and it should be noted that Bin Laden himself lacks religious training, does not write in the normative idiom of an Islamic scholar, and does not have authority to issue *fatwas*. None of the Maghrebis had religious training. Of 134 in the Sageman sample, 57 were employed as professionals.

How then did people from middle-class backgrounds, with presumably upwardly-mobile aspirations, become accomplices or initiators of mass murder? In the creation of Al-Qaida, Osama Bin Laden and Ayman Al-Zawahiri fulfilled differing functions based on their origins and individual formation. Bin Laden had ideological commitment, financial resources and a network in Afghanistan and Pakistan, but needed Dr Al-Zawahiri, as an organizer and propagandist. Dr Al-Zawahiri had exceptional and valuable experience in the creation of illegal cells and cadres, the weapon of disinformation, and similar clandestine arts of subversion.

We have noted that Dr Al-Zawahiri represents a 'medical dynasty.' The Egyptian Muhammad Atta, operational leader of the Al-Qaida cell that carried out the September 11 attacks, had come to the Technical University of Hamburg-Harburg in Germany in 1992 to study architecture.

In contrast with the 'successful' profile of his countryman Dr Al-Zawahiri, Muhammad Atta most represents the sociological profile of the dislocated or disfranchised member of the aspiring Muslim elite, in the manner described by 19th century French social critics as '*raté*' or 'crushed,' rather than the Islamist elite itself.

An ambitious but apparently disappointed and disoriented member of the Egyptian professional class, Atta found in radical Islam the militant role that redeemed him. He represents the great 'other' serving the goals of self-confident Egyptian physicians, religious Pakistani doctors, or ideologised Iranian engineers. The peers of Dr Al-Zawahiri represent Islamist ideology on the road to

power; those of Muhammad Atta represent foot soldiers that will be convinced to sacrifice themselves or otherwise disappear along the way.

7.2 Aspects of Globalization

The sociological model of professional radicalization retains great appeal, particularly since globalization and its penetration of Muslim lands have been received with difficulty. The effects are visible not only in their national economies but in politics and culture. The rising middle class cannot easily prosper in shrinking economies and shifting cultures. Globalization has also forced elements of liberalization on insufficiently-developed Muslim societies. Entry of women into professions, for example, caused resentment not only by abstract religious reactionaries but also by those who felt threatened by female competition and loss of male authority.

But as may be implied in the examples from the Pakistani diaspora in the following section, as well as that of the Hamburg cell, there is a 'blowback' effect of globalization inside the developed countries, as well as in the other direction. Migration out of the third world contributes to the entry into extremism of members of elites, including trained professionals, who sojourn in Western, urban environments. Ramzi Ahmed Yousef, the 25-year-old Pakistani who planned the bombing of the World Trade Centre in 1993, attended college in Swansea in Wales. Muhammad Atta seems to have developed his particular brand of anti-Western radicalism while in Hamburg rather than in Cairo, where he had been a member of the anti-government MB but was never involved in terrorism. Khalid Shaikh Mohammed, a key planner of the September 11 atrocities, studied at North Carolina Agricultural and Technical State University in the US, where he obtained a mechanical engineering degree. Ahmed Omar Saeed Sheikh, the Briton convicted in the murder of

American journalist Daniel Pearl, attended the prestigious Forest School in Walthamstow and the London School of Economics in London.

Individuals in the Islamic world as well as among Muslims in the West exemplify a 'divided mind' when professionals with scientific training are drawn to radical Islam. They seek to repair the split within them, but their unifying element is neither faith, nor training, nor professional standing, nor aspiration, but ideology. Ideology unites them to a simplistic revitalization of religion, but separates them from the reality of authentic religiosity as well as personal ethics and professional fulfilment. It is through the



Ramzi Ahmed Yousef: Welsh-educated mastermind of the first World Trade Centre bombing

defeat of the Islamist ideology that the divided mind of the Muslim professional may be healed. But

Islamist ideology, appealing to piety, yearning for modernity, frustrated ambitions, or a backward-looking utopianism, may only be vanquished by Muslim thinkers and professionals. These must embody the pluralism of classical Islam, the rigorous study of nature, fidelity to intellectual standards, and a commitment to bringing the global Muslim community into full participation in the world of entrepreneurship, accountability, and popular sovereignty.

Notes: 7. From Mark Zborowski to Ayman Al-Zawahiri - Islamist Radicalism as 21st Century Terrorism

62. Levine, Isaac Don, *The Mind of An Assassin*, New York, Farrar, Straus, and Cudahy, 1959.

63. Schwartz, Stephen, 'Mark Zborowski,' *San Francisco Chronicle*, 12 May 1990.

64. Letter to the Editor, *San Francisco Chronicle*, 28 May 1990. The 1952 volume *Life is With People*, written with Elizabeth Herzog, included a foreword by the famous US anthropologist Margaret Mead.

65. Sageman, Prof. Marc, *Understanding Terror Networks*, University of Pennsylvania Press, 2004.



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Parwan Province (north of Kabul): Afghan Mujahidin

8. THE HUMAN PROFILE: CASES IN PAKISTAN, AFGHANISTAN, KASHMIR, THE PAKISTANI DIASPORA IN THE UK AND US, AND IRAN

The problem of radicalized medical and other scientifically-trained professionals in the Islamic world, and of radicalized Muslim professionals in the West, is best introduced by a series of abbreviated case profiles. The indoctrination of vulnerable Muslims in radical ideology is a central issue to the understanding of present local and global conflicts. Many accounts of such ‘re-education’ appearing in Western literature offer an undifferentiated view of extremism as a simple appeal to military jihad by the Muslims against an oppressive, imperialist West. It is rare to find detailed descriptions of how the Islamic elite in Muslim countries, including those with professional training such as medical doctors, become prepared to sacrifice their long years of rigorous education in the ethics of ‘doing no harm,’ substituting for that outlook such radical, brutalizing

concepts as ‘death to unbelievers.’

The following notes outline various cases of Muslim doctors and related professionals who were ‘converted’ to armed jihad in recent years.

8.1 Pakistani and Pakistani Diaspora Cases

Case 8.1.1

In 2002, Dr Amir Aziz, a surgeon and former chief executive of the Muhammad Ali Jinnah Hospital in Karachi, Pakistan, was arrested in Rawalpindi, charged with involvement in the activities of the Afghan Taliban and Al-Qaida. His acquaintances stated that Dr Aziz had been drawn into extremist activities as a humanitarian volunteer. He was initially attracted by agitation in favour of Muslim combatants in Kashmir, and went to the Kashmir combat zone where he instructed fighters in battlefield medicine, including the establishment of dressing stations and emergency surgery.



Taliban fighters, Afghanistan



© Sayed Salahuddin/Reuters/Corbis

During his service in Kashmir, Dr Aziz began to show greater attachment to religion, and grew a beard. (Facial hair is a variable indicator of religious attitudes in Islam, but long and untrimmed beards are habitually seen among radicals.) In the 1980s, he began working with Afghan and Kashmiri refugees who had gone to Pakistan, in what appeared to be a purely humanitarian activity. This included free medical treatment and financial donations. Reportedly, he served as a jihadist fund-raiser and his involvement in volunteer work began to interfere with his private practice.

After the terrorist attacks of 11 September 2001, US forces began bombing Taliban-controlled Afghanistan. Dr Aziz went to Afghanistan to treat the injured, and joined a Western-based nongovernmental organization delivering relief services. He worked to rehabilitate a hospital in Kabul, and began delivering treatment to Taliban and Al-Qaida leaders. With the fall of the Taliban regime he was arrested and released, but remains under surveillance because of his proximity to Bin Laden.

Case 8.1.2

In 2004, a Pakistan court remanded to police custody two doctors charged with links to Al-Qaida: Dr Akmal Waheed, a renowned heart

specialist, and his brother Dr Arshad Waheed, an orthopaedic surgeon. The affair became known as 'the doctor brothers case.' The pair were alleged to have provided medical treatment to jihadists from Jindullah (Army of God), including some who came from outside Pakistan and Afghanistan. Investigators said the doctors treated combatants in their private clinic in the town of Malir, while also providing refuge to terrorist fugitives. Dr Akmal Waheed had been president of the Pakistan Islamic Medical Association (PIMA) and director of its relief operations. The arrest of the 'doctor brothers,' like the case of Dr Amir Aziz, caused complaints from radical Islamist parties as well as challenges on civil liberties issues, given the dictatorship ruling Pakistan today.

Case 8.1.3

The problem of radicalization of professionals in the Muslim world naturally extends to medical students. In a noted case reaching from the US to Pakistan, the successful American entrepreneur Farooq Kathwari, owner of the Connecticut-based Ethan Allen Interiors, Inc., learned that his son Irfan had died in jihad.

Irfan Kathwari was killed in 1992, aged 19. Although never previously known for religiosity, he had quit his studies at Harvard

University and transferred to a university in Pakistan. He threw himself into jihad in Kashmir, and died fighting in circumstances still unclear.

Farooq Kathwari established the 'Irfan Kathwari Foundation' to memorialize his son. Mr. Kathwari is an extremely prominent member of the American Muslim community.

Case 8.1.4 – A Professional Pilot

We have previously noted that the attraction of radical Islam is observed in other professions requiring scientific training, aside from medicine, such as engineering. A case similar to that of Farooq Kathwari, in linking the United States to the Muslim areas of the Indian subcontinent, involved Inayatullah Khateeb, a Muslim businessman from the Indian-controlled Kashmir city of Srinagar. His son Nadeem Ahmed ran away to the jihad zone of Kashmir at age 19, in 1980, joining the radical Harkat ul-Ansaar (HUA – Movement of [Islamic] Volunteers.) Nadeem then returned to his family home and demanded that his father pay for his education in aeronautics at a school in the United States.

Nadeem Khateeb became a successful pilot and flight instructor in Georgia, but his involvement with HUA drew him back to Kashmir, where he returned to combat under the nom-de-guerre of Hamza. He was killed in 1999 along with two other jihadists.

8.2 Some comments

Radical ideology appeals to Muslims throughout society, including the professionally trained, who are the subject of this study. One critical reason for the spread of extreme doctrines has been identified by some Muslim reformists with a parallel to Christianity before the Protestant Reformation: religious interpretation is usurped in poorer countries such as Pakistan by a minority proficient in Arabic, often trained in Saudi Arabia and Iran, and thereby infected with

radicalism. Yet lack of Arabic knowledge can hardly be considered a problem in such countries as Egypt and Saudi Arabia themselves, as major areas for radical activity. In addition, for each country in which Islamic knowledge appears associated with fundamentalists there are counter-examples: countries in which Arabic-reading Islamic scholars propose contemporary and new interpretations, including in the Balkans, Turkey, Central Asia, India, Malaysia, and Indonesia.

While the restriction of religious authority to those with Arabic training may limit religious knowledge in some Muslim lands, the clerics privileged with such a position will not necessarily turn to radicalism, and, outside Saudi Arabia and Iran, extremist ideology seldom emanates from the clerical class. Many of the most radical readings of Islam come not from clerics trained in Arabic interpretation, but from individuals who can only be called 'amateur Islamic scholars.' Sayyid Qutb, the most famous theoretician of modern Islamist radicalism, had no significant religious training; nor did the Iranian radical Navvab Safavi. Similarly, the Indo-Pakistani author Sayyid Abul-Ala Mawdudi (1903-79), who with Qutb shares the main legacy of extreme fundamentalism in contemporary Sunni Islam, did not complete his formal Islamic studies and became an 'independent scholar.'

Contemporary Islamist mobilization of discontented followers ultimately originates neither with fundamentalist religious doctrines nor with the economic and social grievances typically cited, but with the ideological instinct. It attempts to make sense of the crisis of power in the Islamic world, 'struggling with wild outbursts against its own ruin,' in Heiden's vocabulary. As with other totalitarian ideologies, Islamist radicalism surpasses its religious idiom and social environment to foster a separate universe of 'false consciousness.' Distinct from religion and

politics, ideology acquires the appearance of a life of its own, and in our judgment the focused appeal of ideology to Muslim elites far outweighs elements of religion or socio-political conditions. The target area of the radical Islamist movements is neither in the mosque nor on the impoverished 'Muslim street' nor in the ranks of war refugees but in the frustrated ambitions of the middle class.

Recent jihadist recruitment has benefited immensely from such notable technological advances as the internet. The '*e-jihad*' gives the sheen of modernity to fundamentalism. This illustrates another aspect of the involvement of professionals with radical Islam: the simplistic claims of radical religion may also appeal to secular-educated individuals who have moved away from religious tradition in their pursuit of success, and who, in experiencing nostalgia for their faith, desire no more than an 'efficient' manner of belief. For such social strata, radical Muslim preachers have answers, increasingly purveyed online.⁶⁶ It should also be understood, however, that in the vast social crisis now affecting the Muslim world, the internet, celphones, and similar forms of personal technology may also provide opportunities for expression by political and social reformers, whose aims may be more benevolent by far than those of purported religious purificationists.

8.3 Diaspora Professionals – Pakistanis in the UK and US

8.3.1 United Kingdom

Professionals of Pakistani and Bangladeshi origin – typically known as 'British Asian Muslims' – are a leading element in British Islam. In an informal survey prepared by Christian ministers after the 7 July 2005 bombings in London,⁶⁷ the following demographic features were sketched out in describing British Muslims.

- British Asian Muslims have gathered in enclaves. The most famous example is to be found in the northern English town of Bradford, where nearly 85,000 Muslims from Pakistan and Bangladesh live, comprising 17 percent of the population.
- Similar patterns include an 11 percent presence of Pakistani- and Bangladeshi-origin Muslims in the town of Oldham (about 25,000 Muslims), with about 12 percent of the population of Leicester made up of Muslims from Pakistan, Bangladesh, and Somalia (35,000 Muslims).
- Birmingham includes about 15 percent Muslims, or some 150,000 people, largely from Pakistan and Kashmir. Indeed, Birmingham has the largest urban concentration of émigrés from Kashmir in the world.
- London's Muslims, counting 1 million (14 percent), are led in numbers by 250,000 of Pakistani and Bangladeshi origin. They are followed by about 150,000 Turkish and Kurdish Muslims. In contrast with Muslims from the Indian subcontinent, the Turkish and Kurdish immigrants tend to secularism, heterodox forms of Islamic mysticism, and a profound dislike of Islamic fundamentalism, radicalism, and extremism.

Islam in northern England communities like Bradford was dominated for a generation by the Indian Barelvi sect, which appeals to the original cohort of immigrants and is oriented toward Sufi spiritualism as well as to British loyalty – notwithstanding that many Barelvis have never fully learned English or assimilated British customs. Barelvis are also considered amenable to better relations with Christians. Younger Muslims, feeling more socially-dislocated because they have fully experienced Western as well as Muslim culture, are increasingly drawn to the Deobandi sect, a fundamentalist interpretation also originating

in India. Although the Deobandis were long viewed as pacifist, they included students in *medresas* in Pakistan who assumed power in Afghanistan as the Taliban.

The story of the ultraradicalisation of Pakistani Deobandism, and its transformation from a religious interpretation into an ideology, is a complex one, but one thing is certain: Deobandis in Britain are no less rigid and extreme than their mentors in Pakistan and Afghanistan. Deobandis are known for their violent condemnation of Barelvi spiritual practices. Further, Deobandi women will typically wear *hijab* (head covering) and even full *niqab* (total covering including the face veil), while Barelvi women wear loose tunics and trousers – ethnic garments that do not cover or hide the shape of the whole body, and may be quite fashionable. The same outfit may be worn by Barelvi men. Barelvi men also frequently wear Western clothing, while Deobandis affect a long, white ‘Islamic’ garment. Barelvi women pursue professional careers, while Deobandi women may be kept at home, out of public scrutiny.

In addition, Britain has recently seen the penetration of its Muslims by Wahhabism. Britain is also home to followers of the Muslim Brotherhood (MB) and the Pakistani Mawdudist movement, both of which target lay professionals.

The main British Muslim leadership organization, the Muslim Council of Britain (MCB), with Muhammad Abdul Bari as its General Secretary, is widely considered an MB front, but includes only about a third of mosque congregations. The MCB has failed to attract followers from Barelvi mosques.

Professionals have been prominent in the Deobandi and Wahhabi milieu, mainly doctors, engineers, and lawyers. One liberal Muslim argument suggests that university curricula in these fields, without emphasis on the arts and humanities, lead to a simplistic view of religion. At the same time, it is noticeable that Muslim fundamentalists and

jihadists consider themselves reformers, and have mounted a sustained attack on the inclusion of miracles, healings, relics, and shrines in the religion of Islam, much as such phenomena have come under criticism in the Judeo-Christian world. That Judeo-Christian religious reformation would lead ultimately to social peace, while Islamic ‘reform’ currently produces jihadist aggression, illustrates many differences in the geographical and historical experience of the West and East over the past 1,400 years. To emphasize a point made throughout this study, radical Islam presents itself as a rational and modern expression of faith; this is the essence of its ideological nature. In Britain, Barelvi Islam, which is spiritual and traditional, is viewed as rural and popular among the uneducated, while Deobandi and Wahhabi Islam have an elite reputation that can easily attract professionals.

It is unsurprising, then, that the Deobandi sect and its missionary offshoot, the controversial Tabligh-i-Jama‘at mass movement, flourish in urban communities in Britain, among the educated and affluent. Once again, radicalism appears as an expression of rising expectations rather than social grievances.

Case 8.3.2 – The US Midwest

In Toledo, Ohio, Islamist doctors spearheaded the take-over of a once-progressive mosque, which had preached respect for other faiths. They began by promoting the writings of Qutb and Mawdudi, and ended by organizing a vote to oust the mosque’s moderate leadership. A former congregant at the mosque said, ‘What surprised me was that this takeover scheme was masterminded by Muslim physicians.’ He suggested that the majority of Muslim medical doctors in the region had embraced radical ideology.

When the doctors took over the mosque, they temporarily succeeded in removing an American flag from the premises although three converts to Islam demanded it be

returned to a place of honour. Islamic religious instruction at the mosque became saturated with extremism; one religious teacher called for the beheading of US military personnel in Iraq. Congregants who criticized such radicalism and the substitution of politics for theology were branded as 'Zionist, neoconservative spies helping the US authorities in the destruction of Islam.' In February 2006, the FBI arrested an alleged cell of three terrorists in Toledo.⁶⁸

Case 8.3.3 – New York

In 2005, a federal grand jury in New York indicted a suburban Florida physician, Dr Rafiq Sabir, and a Bronx jazz musician for conspiring to provide material support and resources to Al-Qaida. As noted in media coverage, 'federal prosecutors said Dr Rafiq Sabir planned to use his skills as a healer and his contempt for America to aid 'the worst enemy of our country,' i.e. Osama Bin Laden and Al-Qaida.

Investigators stated that Dr Sabir and Tarik Shah swore bayyat, or a loyalty oath, to the terrorist network in a Bronx apartment. The government claimed that, during an inquiry beginning in 2003, Sabir and Shah presented themselves to an undercover agent posing as an Al-Qaida recruiter, as a 'package deal' to help their Muslim 'brethren' wage armed jihad. Shah offered to provide martial arts training while Dr Sabir would give medical aid, according to the federal complaint.

In a search of Dr Sabir's home, remains of burned writings in Arabic were located along with swords and knives.

Case 8.3.4 – Southern California

A prominent member of Masjid Abu Bakr, the largest Sunni mosque in San Diego, conducts religious courses imbued with radical interpretations and offers discounted dental services to his students, an attractive perk to immigrant Muslims who may not be

prosperous.

Perhaps the most famous Islamist doctors in California are the Egyptian-born brothers Maher and Hassan Hathout, who have been prominent in the Islamic Center of Southern California, as well as such organizations as the Muslim Public Affairs Council (MPAC), a Saudi-funded Islamist front group. Maher is a retired cardiologist while Hassan is an obstetrician and gynecologist.

8.4 Cases in Iran – Engineers and Doctors

The researcher for Iran on *Scientific Training and Radical Islam*, Kamal Hasani is an Iranian associate of CIP now living in the US. His work has been conducted under very difficult circumstances. In 2006, Kamal Hasani developed a corpus of field interviews in Iran, mainly with engineers. Hasani indicated that with the coming to power of Ahmadinejad 'it was very difficult to talk to people.' He also pointed out that many Iranians feared that Ahmadinejad would launch a 'cultural revolution' in Iran, intended, as in China, to purge reformist elements from the elite, including the professional strata. Because of Iranian restrictions on meetings with women, all the subjects interviewed there were male.

Case 8.4.1

The subject has served as a physician for 10 years, since his graduation from the University of Tehran. He was drawn to the field by a desire to help people in distress as well as the high degree of public respect accorded the profession.

He described himself as coming to radical Islam by his intense faith, regular mosque attendance, and desire to change society in a direction he considered satisfactory to God. His main inspiration was Sayyid Al-Afghani, who sought to modernize the Islamic world by simplification of religion.

While subject 8.4.1 claimed to accept the values of modern medicine and science, he professed an extremist outlook based on the

classic position of Ayatollah Khomeini, who held that the population needs strong control by a clerical government to reinforce Islamic values.

Because Shia Muslims, and particularly Iranians, are devotees of classical Greek and Islamic philosophy in a manner largely absent among Sunnis, the Iranian interviewees were queried about their attitude to philosophy, since it is inseparable from the advanced sciences. The doctor in case 8.4.1, however, stated that he does not read philosophy and believes that philosophy should be based exclusively on Islam and sharia. He stated that the ruling clerics possess knowledge of both and for that reason the work of the philosophers is of no use.

Case 8.4.2

The subject is an electronic engineer who also functions as a cultural activist. He is a lower-ranked member of a religious-conservative political movement. He graduated from Amirkabir University in Tehran and has pursued his career for seven years. He was attracted to the engineering profession by its prestige.

He became radicalized because he believed Islam is under attack. He was previously influenced by the Fadaiyan-i Islam (Partisans of Islam), the main Iranian Islamist radical movement of the 1940s-50s.

His radical path was strengthened by mosque preaching, supererogatory prayers (common in Shia Islam), and participation in programs commemorating the martyrdom of Imam Husayn, the grandson of the Prophet Muhammad and an outstanding exemplar of public virtue for Shia Muslims. The Ashura or memorial ceremony for Imam Husayn is an extremely emotional occasion for all Shias, in which adherents weep and beat themselves. While flagellation remains an Ashura practice, the former devotional habit of opening one's veins and allowing human blood to flow was forbidden by specific order (fatwa) of



A page from a 14th-century copy of Avicenna's five-volume *Canon of Medicine* describes several internal organs, as well as the skull and bones. The *Canon* was a compilation of Greek and Islamic medical knowledge.

Khomeini, and has been largely abandoned.

The subject reads newspapers and magazines rather than books, although he may occasionally read a religious work.

He argued that radical Islam is not in conflict with the values of medicine and science, because these fields have no values, but are practical studies. He asserted that everyone in society needs ideological principles, and that Iranian society requires cleansing. Such an individual would be extremely vulnerable to the appeal of a movement for 'cultural revolution.' He admitted an ignorance of philosophy, and stated that philosophy is unnecessary but permissible if it does not conflict with Qur'an. He declared that Muslims need science and technology rather than philosophy. Intellectually, the subject showed a remarkable ability to apparently reconcile obvious contradictions – a characteristic of the atmosphere in contemporary Iranian society.

Case 8.4.3

The subject has worked as a construction engineer for four years, and is a ministerial employee of the Ahmadinejad government. He was a member of an Islamic student organization at Elmoo-Sanaat University in Tehran, from which he graduated.

He was attracted to engineering because he was good at mathematics and sought a well-respected profession. He is the son of a cleric, was religious from childhood, and became radicalized by a need to contribute to the betterment of Islam. He fought in the Iran-Iraq war, which further radicalized his understanding of religion.

He was influenced by religious classics,



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Neauphile-le-Chateau, Paris: the Ayatollah Khomeini in exile.

Tehran. January 1979: Khomeini returns to a triumphant welcome.



© Abbas-Gamma, Frank Spooner Pictures

books on religious jurisprudence, and the works of Ayatollah Motahhari. He also reads widely in Iranian history and the literature on relations between the US, Britain, and Iran.

He does not see a conflict between the values of science and Islamic extremism. Rather, he sees radical Islam as a concept unconnected to one's relations with other people, but only to one's relations with God. He views philosophy as a component of religious thought along with the Shia concept of gnosis or irfan. He rejects the need for alternatives to religious philosophy.

He argues that in Islamic thought, and especially in knowledge of Muslim jurisprudence, all solutions to social problems may be found. He considers Western philosophy, sociology, and democracy irrelevant to Islamic societies. He believes all social and political problems may be solved according to sharia.

Case 8.4.4

The subject is an engineer, an activist in the Islamic Union of Engineers and a member of the Basij or Islamic militia supporting Ahmadinejad. He graduated from Elmoo-Sanaat University in Tehran and is very satisfied with his work and position; he averred that he was attracted to engineering because of its high status and the opportunity to realize his ambitions. He is now head of the administrative staff in a ministry under Ahmadinejad.

He gravitated to extreme interpretations of Islam because of Ramadan and Ashura programs in mosques and husseiniyat (Shia meeting houses). He was influenced by religious books, including the works of Sayyid Qutb, a Sunni who is popular with Shias, as well as the Shias Ali Shariati and Ayatollah Motahhari. He believes in the maintenance of the clerical regime in Iran.

Many of his close relatives were killed as soldiers in the Iran-Iraq war.

Nevertheless, the subject condemns extremism in any form as wrong, and states that he would never lend himself to extreme acts. He rejects the Saudi-Wahhabi style of Sunni fundamentalism. But he believes there can be no peace between Islam and the West. He claims that the global powers use science and medicine for political ends, especially the US, with its arsenal of nuclear weapons which he believes is used to perpetuate US dominance.

He believes Muslims may be either radical or liberal, but that these trends are irrelevant to science and medicine. He does not believe science and medicine have specific values.

He believes philosophy is included in Islam, but that science does not require classical philosophy. He values philosophy and sociology as sources for the resolution of practical problems, so long as religion is not overlooked.

Case 8.4.5

The subject, a static engineer, has pursued a career for five years, but has been much more engaged in conservative politics. He belongs to the Iranian Hezbollah. He graduated from the ideologically-radical Shahid-Beheshti University in Tehran.

He was attracted to engineering because he liked mathematics and recognized the high status of the profession.

His radicalization was caused by his political interactions with religious people. He attends mosque services regularly, listens to preaching, and has close relations with some clerics. He reads religious and historical books, dealing with Shia history and controversies in Islam.

He states that he does not believe there is a place for extremism in Islam, but that Muslims must be watchful and smart in preserving their personal and collective rights. He does not believe that medicine and science will furnish moral guidance, but that both may

be used by people positively or negatively, according to their ideology.

He accepts philosophy if it accords with Islam and sharia. He rejects Western and secular philosophy. He believes that the knowledge of Islamic jurisprudence is most important, and that philosophy should be employed to support it.

Case 8.4.6

The subject is an emotional believer who considers Iran the centre of the world and believes all of humanity should emulate it. He graduated from the University of Tabriz and has worked as a mechanical engineer for six years. His family were engineers by tradition.

He was radicalized by his belief that the West hates Islam. He was a soldier in the Iran-Iraq war in which his brother was killed.

He is a reader of Ali Shariati, Ayatollah Khomeini, and Ayatollah Motahhari.

He repudiates Islamic radicalism, and accepts that the values of medicine and science are in conflict with extremism. He believes science should be controlled by virtuous people. Nevertheless, he is opposed to any toleration of criticism directed toward Ahmadinejad and his political line.

He has an idiosyncratic view of science and philosophy, viewing philosophy as a scientific field. He states, however, that philosophy is irrelevant to rationalism and good social management. He believes everything is included in Islam, and that philosophy must conform to Islamic teaching.

Notes: 8. The Human Profile: Cases in Pakistan, Afghanistan, Kashmir, the Pakistani Diaspora in the UK and US, and Iran

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67. Groves, Sarah, 'Islamic Groups in Britain: A Background Paper From the Social Responsibility Committee of the Moravian Church,' September 2005.

68. WTOL TV11, Toledo, OH, USA, 24 April 2007.

9. RECOMMENDATIONS

1. Too often, the conduct of extremist Muslim doctors is rationalized as religious fanaticism, or a protest against deprivation and corruption in Muslim majority states or a reaction to the humiliation of Palestinians and Iraqis at the hands of Israel, Western Europe, or the United States. While they are popular, there is little evidence to support such simplistic analyses. The radicalization of Muslim doctors is more systematic. They occupy a superior stratum of their society and, as such, are targeted by radical ideologues. How then can medical professionals and governments in the West respond to this challenge? Vetting of Muslim doctors for radicalism may prove ineffective and will doubtless raise civil liberty concerns. More possible would be closer monitoring of radical Islamist groups to counter incitement and pre-empt violence. Radicalization of Muslim doctors, however, is only a symptom. Until the West pressures Muslim governments—especially Saudi Arabia, the United Arab Emirates, and Pakistan — to stop their financial support and that of their citizens for radical ideological groups, Islamists will erode not only medical ethics but other aspects of Western liberalism.
2. Visualize the Muslim world not as a theatre of conflict between fundamentalists and secularists, but as a continuum in which fundamentalism and militant secularism both represent extremes, with an overwhelming mass of moderate, religious people in the middle. Bear in mind that in Western discourse, the moderate Muslim majority has been overlooked. Western media concentrate on fundamentalism and occasionally counterpose it to secularism, but do not grasp the moderation of the majority. Were the majority of Muslims not moderate in religion, terrorism would have occurred at a scale ten to a hundred times greater than the world has experienced. All US policy options for dealing with the Muslim world, without exception, are explicitly or implicitly based on the existence and role of moderate Muslims. The West cannot wage a struggle against the faith of Islam. The West, allied with moderate Muslims, can defeat radical Islam.
3. Westerners should support the foundation and permanent maintenance of an international moderate Muslim civil society network – Islamic but not Islamist – that organizes professionals, entrepreneurs, intellectuals, and clerics to revitalize religious identification while improving professional, ethical, and educational standards. The bases for such a network already exist in nearly every Muslim country. Although in Saudi Arabia and Iran its affiliates may for some time have to work under difficult conditions, the creation of active branches in the Western countries including the Balkans, as well as in Turkey, French-speaking West Africa, Morocco, Algeria, Egypt, the other Gulf states, the Arab sector of Israel, Jordan, the Central Asian ex-Soviet republics, Pakistan, India, Malaysia, and Indonesia may be realized in the short term. The establishment of such a network or system of civil society institutions could and should be a central element of US policy in Iraq.
4. Reinforce the Muslim traditions of intellectual pluralism and empirical and modern medicine as alternatives to fundamentalism, as well as to prophetic or faith healing. This may be done by holding seminars, publishing research, and fostering debate.
5. Introduce and sustain the concept of an Islamic field of psychology, in which Sufi (Islamic spiritual) conceptions may be experimentally introduced. Islamic spirituality centres on developing



An illuminated page from the *Maqamat* of al Hariri, illustrated by al Wasiti. Baghdad CE 1237, the caliph's army on the march
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© Helen Tann

Sufis performing dhikr in Cairo's Northern Cemetery



© Trevor Mastyn

Sufis performing dhikr near Omdurman, Sudan

individual, personal calm and balance in one's daily life. Sufi techniques for anger management and self-discipline provide the basis for a rational Islamic conception in psychology. This inquiry may be advanced by seminars and other research.

6. Study the role of Muslim *zakat* (obligatory donations to charity) as a foundation for financing of health, education, and social improvement programs, in place of the state budget in countries afflicted by poverty, corruption, and the legacy of socialism.
7. Analyze whether more Western training of medical personnel would suffice to close the technological gap between health services in the West and the Islamic world, and the cost of closing the gap through upgrading of medical schools in the Islamic world.
8. Consider India, the ex-Soviet republics in Central Asia (which established European medicine in the Soviet era, if of poor quality), the Israeli Arab sector, and Singapore as centres for global upgrading of Islamic medical education. These proposed countries are chosen not out of local medical need but because of their existing infrastructures.
9. In Indonesia, the Sufi-based, moderate Nahdatul Ulama (NU) organization, with

40 million members, maintains a massive network of schools, hospitals, and community projects. We have shown the role that provision of such benefits plays in supporting the appeal of the Muslim Brotherhood in the Arab countries. A comparative study should be made of NU practices and experience, in contrast with that of the Muslim Brotherhood.

10. Commit specifically to assist in reestablishment of the independence of the professional guilds in Egypt and other Muslim countries from political or ideological control.
11. Enable Muslim critics of radicalism, extremism, takfirism, and other ideologies. This requires identifying and assisting moderate Muslims, who have a Muslim audience, rather than Muslim or Arab gadflies in the West, who typically address themselves to the non-Muslim public. It also requires bidirectional efforts: Western supporters of moderate Islam need to learn more about Islam, the better to assist Muslim moderates. The aim is to restore Islam to its traditional status as one among the world's major religions, and to free it from the burdens of politicization and ideology. ♦

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A Western depiction of the battle of Hattin from Matthew Paris's *Chronica majora*. Salah'ud'din rides in from the left and seizes the relic of the Holy Cross from King Guy of Jerusalem, who struggles to hold it. Cambridge, Corpus Christi College MS. 26, page 279 [140]: © the Master and Fellows of Corpus Christi College, Cambridge.

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