

Islam in the Digital Age

E-Jihad, Online Fatwas and
Cyber Islamic Environments

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Pluto  Press
LONDON • STERLING, VIRGINIA

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1 Introduction

APPROACHING CYBER ISLAMIC ENVIRONMENTS

The writer's computer crashed completely whilst this chapter was being drafted. Some might interpret this as a sign of critical Divine Providence, although it was in fact a computer virus, something of an occupational hazard (the writer's firewall has since been updated). Internet and e-mail access became impossible. The writer, insulated in his office in west Wales, had lost contact with friends, colleagues and the sources of information usually consulted on a daily basis.

Given his research area, he considered what would happen if 'Islam', Muslims and Islamic organisations lost their computer access: the Qur'an and other Islamic sources would not be lost forever. It would *not* be like the consequences of a battle after the death of Muhammad in 632, when so many individuals who had memorised the Qur'an were killed that concerns were raised about the preservation of the sacred text, and according to tradition a decision was made to produce a 'definitive' collection of the various texts: without the Internet, Islam as a religion may not lose anything that is intrinsic or central to beliefs. There would still be a *hajj* pilgrimage, although it might be organised differently without computers. There would still be prayers, although the calculation of timings might in some contexts revert to traditional methods. There would still be *zakah*, the annual tithe on Muslims, although some authorities would have problems without their accounting software. Scholars would still talk to one another and questions would still be asked, but the answers would be less immediate for some, and anonymity would be less ensured. In effect, Islam does not need computers; in many parts of the 'Muslim world', Islam is practised without computer interfaces or the use of a mouse, and the Internet may remain a rumour or a luxury in the hands of an elite.

So, why write about Islam and the Internet? Well, although Islam as a religion would function effectively, a substantial minority of Muslims and Islamic organisations would be bereft of their significant propagation and networking tool, unable to dialogue, research and disseminate their message to followers or to interested (Muslim and other) observers. Some would be bound by the shackles of state

ensorship, unable to access other forms of media, and restricted in the forms of local and global contact and dialogue facilitated through the Internet. Sermons would continue to be circulated, perhaps in print, by fax or cassette, but their immediacy would be lost. Decisions on points of interpretation and reactions to current events would become restricted in their diffusion. Individuals whose international status has been enhanced through the medium, even though they are unrecognised or seen as pariahs by some local authorities, would return to their restricted local networks and a relative obscurity. Some observers would suggest that such a development would not necessarily be a bad one, and indeed they would encourage the creation of barriers to knowledge and dissemination around such individuals and organisations.

In the post-11 September 2001 climate, overt and covert efforts have been made to facilitate such restrictions – although there is also a consciousness that the Internet is in fact a window (forgive the term) into aspects of the ‘Muslim world’ and consciousness, which other forms of intelligence-gathering are unable to acquire. Whilst activism and Islamic activities (the two are not synonymous) were significant features of the Internet before September 2001, since that time they have acquired a new urgency and immediacy. The proliferation of Islamic websites, chat rooms, e-mail lists and other related media activity – including expressions of beliefs and the articulation of agendas – was a phenomenon heralding a maturity of Cyber Islamic Environments.

This is not to suggest that there was a lack of sophistication before that time; indeed, the extensive application of the Internet as a means of projecting Muslim authority and disseminating religious opinions represents a long-term and technologically adept integration of religious symbolism and traditional notions of power, wrapped up in a 56k modem and sent in digital packets on uncharted and twisted routes across the world. Measuring such activities and their impact is problematic; one scale might be to ask local imams and mosque leaders whether they would ‘miss’ the Internet. Some might feel more secure without it: how many in their community no longer came to them for advice, preferring a Google search or a visit to an online scholar? Others might wonder where Friday’s sermon might come from as they drew upon the media for inspiration, downloaded a pre-written sermon from an affiliated superior authority elsewhere in the world, or searched an online Qur’an or hadith database for a tricky, half-remembered quotation. Some activists, seeking to

synchronise the contents of sermons or discussions with their colleagues networked across the globe, would have to resort to more conventional channels of communication. Again, we may be talking about a minority, albeit a disproportionately influential one. The majority would retain their traditional, non-electronic connection with religious opinion and authority. Some scholars would suggest that this is not a bad thing: too many questions can distort beliefs. An analogy might be the physicians challenged by patients brandishing Internet opinions about treatments and diagnoses, wishing that these sources would suddenly disappear. Casual searching on the web will reveal a variety of opinions and dialogues about Islam to an interested Muslim, whilst her library shelf may contain only a copy of a Qur'an (that in itself would be seen as 'sufficient' by many!).

The tendency to set off alarm bells about the Internet is not just associated with Islam, although a number of authorities and individuals have sought to challenge or negate its influence. For external observers, the combination of the Internet and Islam with such terms as *jihad* or *fatwa* may be seen as a provocative or sensationalising strategy. However, this detracts from the fact that it is these two areas that have seen a most significant integration of electronic activity with religion. By discussing these themes, it may also be possible to defuse the alarmist tendencies and realistically posit a rational analysis and discussion that does not incorporate fear of the Internet or fear of Islam.

Finding appropriate models to follow in this journey can be difficult: the writer has always been struck by two very different, but significant, writers about Islam and Muslims, Ibn Battuta and Edward W. Lane. In idle moments, he has speculated how they might have reacted to time spent in Cyber Islamic Environments.

Ibn Battuta was a great explorer and recorder of the Muslim world in the fourteenth century (Common Era), venturing into regions that had been obscured by distance and history, traversing dangerous roads and ultimately writing about what he saw. A scholar of Islamic law, Ibn Battuta's book *al-Rihla* became the key guide for future travellers over the centuries and was translated into many languages. Would he have produced a guide to cyberspace or dismissed it as an irrelevance? Could it have given him an understanding of the diversity of Muslim expression, and to what extent would it have been an equivalent to its real-world manifestation?

Edward W. Lane, by contrast, lived in nineteenth-century Cairo, recording the manners and activities of Egyptians – including their religious understandings and belief patterns – and was significant in introducing many facets of Islam to his English-speaking audience for the first time, in a rational and non-sensationalistic manner, as well as recording their utterances and developing detailed Arabic–English dictionaries. This translation of statement and experience was a key to Islam for later scholars.¹ Again, the writer's contemplation of Lane's possible reaction to cyberspace engages him: would he have 'lurked' in a chat room, attempting to blend into his surroundings as he did on occasion in Cairo? How would he have recorded and chosen the sites, and how would the diffuse conceptual frameworks have manifested themselves on the page?

Both authors are no doubt rotating in their celestial havens at the thought of being integrated into such a discussion, and despite some aspirations, it is not the intention of this writer to endeavour to emulate such esteemed and influential individuals. The point of this diversion is to highlight the point that those 'traditional' Islamic landscapes and environments in contemporary contexts must be recorded and analysed, but if a holistic contemporary understanding of Islam is sought, then part of that interpretative process has to include (even as a small proportion of an overall picture) a discussion about the Internet. This present book is a modest contribution, or a single pixel, in a substantial, high-resolution screen of knowledge.

DEFINING CYBER ISLAMIC ENVIRONMENTS

Cyber Islamic Environments have the potential to transform aspects of religious understanding and expression within Muslim contexts, and the power to enable elements within Muslim populations in minority and majority arenas to dialogue (not necessarily amicably) with each other. In conjunction with traditional forms of knowledge and media about Islam, access to (and perhaps ownership of) the Internet has become a significant element of propagation and identity for Muslim individuals and organisations. The changes may be subtle rather than overt. A complex spectrum of access, dialogue, networking and application of the media associated with Cyber Islamic Environments emerges. Like the Internet itself, this spectrum is not one that can easily be classified or systemised, and does not fit neat categorisation models.

A broad range of Muslim expressions can be located online. This writer has discussed elsewhere the religious and political factors influencing the development of Internet access within Muslim contexts.² In particular, the pronouncements by 'authorities' on the Islamic legitimacy (or not) of the Internet have combined with political strategies, often articulated utilising religious 'values' and concepts, which have sought to engineer specific forms of what are described by this writer as Cyber Islamic Environments, an umbrella term which can refer to a variety of contexts, perspectives and applications of the media by those who define themselves as Muslims. These may contain elements of specific Muslim worldviews and notions of exclusivity, combined with regional and cultural understandings of the media and its validity. These pronouncements have often been tempered with a realism, which recognises a need to have a voice in cyberspace in order to propagate values and views within the information marketplace.

The development of online *khutbahs*, or sermons, either transmitted 'live' or recorded and uploaded onto websites, has extended the audiences for several imams. Specific interpretations of Islam, justifying political and religious actions, can also be located online and are frequently updated. They can contain news, chat and networking opportunities that go beyond the traditional ideological and religious frames of reference of many organisations. Frequently, these are networked to other platforms operating similar sites on related issues.

The writer has received responses from some readers, who have reservations about the term Cyber Islamic Environments 'inappropriately' relating to some 'Islamic' perspectives, or for the writer not criticising the application of the Internet by some 'Muslim platforms'. It is stressed here that the intention again is to 'delineate the Islamic Internet landscape'.³ This is seen as a significant task in its own right, given the dramatic changes that have taken place within cyberspace and the real world since *Virtually Islamic* was published in 2000. Rather than simply updating that volume, this book intends to explore some of the key issues it raised in a greater depth, with the benefit of having discussed these elements with a variety of interested parties, both on- and off-line, and having continued to publish reactions and analyses in the interim period.

The evolution of using the Internet as an 'Islamic tool' has been observed in a relatively compressed historical period, and it may be only with the passage of time for an appropriate perspective for the

full picture to be realised. One significant issue and problem for future research in this area is that little has been archived or recorded to date, and that sites emerge and disappear with regularity. The archiving issue is a critical one for studying Cyber Islamic Environments; this writer has made a modest effort to archive sites he writes about, although clearly it is not possible to visit every site on a regular basis, given that there are so many activities to observe in cyberspace. This is reflected in the book, which cannot offer a *scientific* analysis of web traffic, visitors, page updates and usage of sites, but can offer a commentary on significant changes in relation to content and ideas expressed on the Internet, and developments which are significant religiously, socially and politically.

The term 'Internet' in this book refers to the connected network of computers and other electronic communications tools, through which diverse forms of electronic communications and media can be facilitated. The 'web', or World Wide Web (WWW), can be defined as:

A global Web of interconnected pages which (ideally) can be read with any computer with a Web browser and Internet connection. More technically and specifically, the WWW is the global Web of interlinked files which can be located using the HTTP protocol.⁴

The focus of the present volume is on Islam and the World Wide Web, although that term can seamlessly flow into other elements of the medium. The term 'cyberspace' is utilised when discussing the Internet, being the electronic, amorphous territory navigated or surfed through the use of a browser (such as Internet Explorer, Netscape or Opera) across the Internet.

The origins of the writer's interest in the subject are associated with approaches to Islamic knowledge and expression, and how methods of communication have adjusted and influenced forms of dialogue and self-understanding, in local, regional and global contexts. This has some linkage with cyber-cultural studies, although the writer's approach is based more deliberately in the area of phenomenology and the study of religions: symbolism, authority, diversity, experience and expression are key 'filters' for the writer when observing Cyber Islamic Environments. Other writers may select different avenues and methodologies to explore these elements of cyberspace, contributing to a developing field. The appropriate intellectual tools and rarefied conceptual frameworks may emerge within such studies. However, the current book seeks to describe and

discuss essential features and observations, perhaps contributing to future analytical arguments that have had the luxury of historical perspective and resources in order to facilitate them.

One issue that surprised the writer is that the subject held a wider appeal than the Religious Studies and Islamic Studies framework it emerged from, but that there were also occasional conflicting (and unrealistic) methodological expectations from those in other disciplines. The present volume holds those expectations in mind, but still aims at the informed, general reader with an interest in Islam and the Internet. It should be stressed early on that a *complete* analysis of Cyber Islamic Environments is a task beyond the single writer and his resources, especially given the radical expansion in the number of websites, e-mail lists, chat rooms and other forms of electronic communication; there is a substantial increase in languages other than English being applied on the Internet, and this is reflected in the discussion where possible. It is hoped that future research can be encouraged, to embrace languages that cannot fully be represented in this volume. The writer has started to network with interested academics and commentators worldwide, in an effort to encourage such research and resources, with a view to publishing findings in a future volume.

Despite the relatively low levels of access and availability of the Internet in many Muslim contexts, the medium has been drawn upon by governments, organisations and individuals, both as a means of articulating views to domestic audiences, as well as networking and propagating views for international readership. Some sites are focused entirely on small cultural, political or religious groups, rather than general audiences. Unique forms of access to readers can be acquired, thus transcending conventional communication networks and opening up new opportunities for dialogue and dissemination. Whilst English has been seen as a primary Internet language and has been applied extensively, the Muslim Internet arena has been affected by the substantial growth in online Arabic language materials, together with the development of extensive resources in other languages. Questions may be asked as to levels of readership or how these materials influence societies and individuals.

The emphasis in this volume is on observation of the phenomena associated with two key aspects of Cyber Islamic Environments, surround the notions of jihad and *fatwas*. There was some contact with individuals associated with some of the websites, but the nature of others (combined with their writers' personal security concerns,

and perhaps this writer's too) did not engender an appropriate climate for wideranging e-mail interviews. The post-11 September climate was not one in which such activities could take place, and this remains an ambition for a future volume rather than a realistic outcome for the present book.

ACCESSING CYBER ISLAMIC ENVIRONMENTS

Technology for surfing the World Wide Web will become cheaper, and the availability of alternative interfaces may offer improved access both in and outside urbanised areas in the Muslim world(s). Such access is related to the availability of telephone lines (at present), and several Muslim majority nations plan to improve services.⁵ The extent to which this will open up the web for underrepresented groups in Muslim contexts is open to question. It will, for example, be interesting to observe the impact (if any) on Muslim women and their self-expression online. The UN Development Fund for Women (UNIFEM) noted that the Internet had increased activism opportunities for Muslim women, but that only 4 per cent of Internet users in the Arab world were women.⁶ The gender digital divide in Muslim contexts is a significant area for future research and observation. There is clearly a 'market' for content aimed specifically at Muslim women on the Internet: a notable example is the Pakistani scholar Farhat Hashmi placing her sermons and commentaries of the Qur'an online in her al-Huda website, including lectures made during a tour of Dubai in Ramadan 1423 AH (2002 CE).⁷ Questions might have to be raised of how 'different' such a site's content is from the 'traditional' male equivalent's site.

The growing availability of Arabic browsers and page creation tools will lead to a rapid expansion of sites, including those with Islamic identities. It has been estimated that Internet penetration in the 'Arab world', for example, will increase from 3.5 million in 2001 to 30 million people in 2005.⁸ The growth in demand for computer hardware in the Middle East has been measured as against the global trend, with a market growth rate of 20 per cent (excluding the United Arab Emirates, at 28 per cent).⁹ Although this may still be a relatively marginal figure in comparison with the population of the region, it illustrates a growing availability of and interest in computers. This pattern may be reflected in other areas and linguistic groups. The expansion of technological knowledge *may* increase the diversity of Islamic content online and improve the presentation quality of sites.

Whilst there may at present be a 'digital divide' between a minority of Internet users and others, the medium is sufficiently relevant for it to be the focus of concern, particularly in relation to how political and religious concepts are discussed, depicted and 'exported' to a (potential) global audience. Internet access, discussed in the *United Nations Human Development Report 2001*, indicates low levels and availability within non-'western' contexts.¹⁰ Such statistics are problematic on a number of levels, in particular when discussing Cyber Islamic Environments, in that there is no specific source relating directly to 'Muslim' levels of access. If the descriptor 'Muslim' is applied within the context of those nation states with Muslim majority populations, then the following statistics provide indicators of the levels of access available in the year 2000 (the most recent analysis at the time of writing): Turkey had 2.5 Internet hosts per 1,000 of the population, Malaysia 2.4, Lebanon 2.3, Oman 1.4, Kyrgyzstan 1.1, Kazakhstan 0.6, Saudi Arabia and Turkmenistan had 0.3, Jordan, Senegal and Indonesia 0.2, Albania, Egypt, Morocco, Pakistan, Tajikistan and Syria 0.1; Bangladesh and Sudan 0.0; while Yemen, Iran, Tunisia, Algeria, Uzbekistan and Libya were unclassified (for a variety of reasons). There was no reference to Bosnia. Palestine was not listed, although Israel had an index of 43.2; the highest Arab Muslim level of Internet hosts was the United Arab Emirates, with 20.9 hosts per 1,000 people. By comparison, the highest rates of Internet hosts per 1,000 people were registered in Finland (200.2), followed by Norway (193.6), the United States (179.1), New Zealand (146.7) and the Netherlands (136.0).¹¹ The population of 'Arab states' as Internet users was estimated at 0.6 per cent (compared with a world percentage of 6.7 per cent, and a US use level of 54.3 per cent).¹² Elsewhere, in 1999 it was estimated that 3–4 per cent of Turkish people and less than 0.5 per cent of the Pakistan population were Internet users.¹³

The report suggests that the 'digital divide' is not only between nations, but within them, and that there can be broad discrepancies between and within regions.¹⁴ Diversity of usage and patterns of access are influenced by a number of regional and cultural factors. The cost of using the Internet is an obvious factor influencing these levels, but may not be the only one. Mohamed A. El-Nawawy, in a discussion about the use of the Internet in Egypt, suggests a number of possible deterrents to the growth in the medium's usage, and that it is 'lower than its arithmetic and logical pro-rata share' compared with other Arab states. However, he does

not believe that infrastructure, individual income, language or cultures are necessarily primary deterrents:

The primary deterrent for Internet users' growth in Egypt is an individual awareness and education factor.¹⁵

Another important factor is the importance of 'the relationship between the government, the ISPs [Internet Service Providers], and the telecommunications service providers' in the development of Internet services.¹⁶

Even if individuals have access to the Internet (particularly in terms of many of the sites discussed in this book, whose content often emerges from 'western' Muslim authors), questions emerge relating to the constituency of readers. There are a number of unanswered questions, such as how those individuals who may describe themselves as 'Muslim' actually use the Internet. Do they visit Cyber Islamic Environments, and, if so, with what levels of frequency?

Indicators may be gleaned from the observations in this book, but substantial questions of this type require highly resourced scientific fieldwork, together with levels of access and confidence in the constituent communities of readers and users that may be difficult or impossible to obtain. The anonymity of the Internet raises issues in this regard, with readers cloaking their own identities and also their locations (for example, through 'anonymiser' software). Despite these factors, what *can* be seen is that something significant and unique is occurring in cyberspace in relation to Islam and Muslims, and that the medium has been drawn upon by substantial numbers (albeit from certain cultural, political, religious and demographic perspectives) in order to articulate and discuss issues which are deemed 'Islamic' in nature.

Clearly, there are other diversions for Muslims in cyberspace, and indeed a rapidly increasing choice of Islamic materials is on offer too. Islamic pages that simply reproduce what is available to hear within a local mosque may not be particularly relevant to an urbanised surfer. However, exposure to new ideas and concepts, or even radical notions of Islamic identity and articulation, would seem to have a place online. Pages that have dynamic designs, applying intelligent use of HTML (hypertext mark-up language), XML and other page-making tools, can offer provocative interactive 'Islamic' experiences that are deemed 'attractive' by their readership. The 'most visited' Islamic sites often provide online experiences comparable

with the major players on the World Wide Web, drawing on the principles of intelligent intuitive design and ease of navigation in order to convey their message.

Some Islamic sites are at the cutting edge of technological application, and governments, organisations and individuals have invested substantial time and capital in acquiring the skills and technologies required to present themselves on the web to their greatest advantage. Some sites may have professional staff, although dedicated volunteers produce others. There is demonstration of substantial knowledge in the technology, with a minority of players also becoming adept at encryption, evasion, disruption and 'hacking'-related activities. It is not suggested here that these are necessarily the same individuals who are creating the 'most visited' Islamic sites, and indeed there are different skills and agendas at work through the medium, as will be demonstrated in this book.

Muslim political expression online forms part of the dialogue about Islamic identities. Some ideologues make little distinction between 'religion' and 'politics' in Islam. The Internet has not superseded traditional forms of political expression, but is a means through which conventional boundaries and barriers can be transcended. Opposition voices creating websites outside the direct influence of governments have propagated their perspectives through channels that are difficult to censor or block. The investment by some governments in filtering and censoring technologies led to an increase in the ingenuity of opposition platforms. The hacking and cracking of systems have been integrated into some forms of political activism, at both individual and group levels, notably by pro-Palestinian supporters (themselves from a variety of backgrounds and with different levels of technological abilities) attacking what they perceive as targets representative or supportive of Israel. This issue is discussed in depth in Chapter 3.

Questions may emerge as to whether these activists and/or sites are 'Islamic' or 'Muslim' in nature, and how they are identified, interpreted and challenged by a diverse global readership.¹⁷ The skill of their designers in enhancing an organisation's online profile, for example through effective use of web design tools or multi-media, can even exaggerate the importance or profile of an organisation. Conversely, a poor site may have a negative impact on an organisation's profile – perhaps with other implications, such as reduced influence and attendant funding (especially where organisations have opportunities for readers to donate to their causes).

The notion of an 'online e-jihad', if the term jihad is defined within its militaristic sense, may suggest that using the sword of HTML can be more effective for some organisations than the use of a Kalashnikov. This online jihad activity could be low-level hacking or cracking by affiliates or supporters (formal or informal) of an organisation or perspective; it could be major disruptive activities, such as attacking Internet infrastructures or compromising major servers; it could also be through the rapid dissemination of propaganda. A good example of the latter was in 2000: the shooting of a young boy, Muhammad al-Durra, by the Israeli Defence Forces quickly appeared on the World Wide Web. Traumatic film of the youth's death was immediately highlighted on major Islamic e-mailing lists and featured on many websites, having a 'shelf-life' beyond its original place in broadcast news schedules.¹⁸ This augmented other media coverage and enabled organisations to place their own interpretation and analysis of the film. The film, and images from it, maintained a currency and continue to feature on a variety of sites supportive of the Palestinian cause (not all operating from an 'Islamic' perspective).

The issue of Internet censorship has become contentious in relation to the expression of Islam. Some 'Muslim' majority governments seek limitations on access, whilst some Islamic platforms seek to circumvent censorship of their own materials (whilst occasionally protesting about the content of other areas of the Internet). The non-governmental organisation Human Rights Watch reported on the ways this has been done within Middle Eastern and North African contexts, and how some regional authorities had attempted to control access, content and utility of the Internet.¹⁹ The report made a number of recommendations, including demands for the international rights of freedom of expression, facilitation of affordable access to the Internet, the control of censoring mechanisms, reducing ISP liability for page content, availability of page encryption for individual users, rights to privacy unimpaired by government surveillance, and the right to communicate and surf anonymously.²⁰ There is limited evidence to suggest that there has been any advance in these 'rights' within Muslim contexts, and indeed it is possible that whilst access levels have increased, so have the mechanisms or potential applications to control access and use of the Internet.

The projection of 'religious authority' via the Internet may be associated with governmental perspectives on religion or from

sources not necessarily fixed within a geographical or cultural-linguistic framework. Muslim organisations or 'authorities' may not identify themselves with national geopolitical borders or frames of reference. 'Authorities' themselves may not be recognised within national geopolitical borders, and at times can even be ostracised. Some countries prefer to have 'official' religious websites.

Websites associated with diverse notions of Islamic authority have been dominated by English-language content, although the 2001–2 period saw a profusion of new Arabic and other language content. Whether this represents a challenge to the influence of the pronouncements originating from minority contexts is open to question, especially given the fluidity of site identities and interconnectivity between organisations and individuals. Having said that, areas and organisations, which were not traditional centres of scholarship or Muslim authority, entered the information marketplace with the advent of the Internet, and perhaps are themselves influencing traditional regions of Islamic learning. *Virtually Islamic* explored how this presented a number of challenges to traditional authority: the 'qualifications' of a scholar can be fluid, with ownership of an *ijazza* (degree from an Islamic university) not necessarily being a prerequisite for being an online authority.

The area of authority has also been one of interest to Islamic interests and centres with an interest in *da'wa*, particularly Saudi Arabia. The Internet offers individual or minority views an opportunity to present themselves to a wide audience internationally, if they have access to the appropriate technology; sermons can be broadcast in 'live' or recorded formats, or transcribed and circulated by e-mail, discussion rooms and the web. What makes a website 'authoritative' and 'Islamic' is a key question to consider, particularly for readers who may not be familiar with the nuances and various shades of meaning that exist between diverse Muslim interests.²¹ This issue is approached in Chapter 7's discussion on online *fatwas*.

ANALYSING CYBER ISLAMIC ENVIRONMENTS

Acquiring knowledge about the relevance of the Internet in Muslim frameworks requires the methodological integration of traditional Islamic Studies-related disciplinary approaches with new techniques required to analyse cyberspace. Academics and writers have been formulating approaches to the subjects associated with Islam in

cyberspace. These illustrate some of the diverse disciplinary approaches relating to Muslims, Islam and the Internet.

The anthropologist Jon Anderson wrote about the impact of the Internet on 'transnational communities', particularly Arabs, and has discussed the influence of the 'media explosion' on Islamic discourse.²² In 1997, he evaluated the impact of the Internet on Iraqis, and suggested that '[T]he Internet facilitates but does not determine a process of rethinking Islam's social reach, which is already underway.'²³ It may now be necessary to re-evaluate this construct, especially given the new forms of discourse, electronic dissemination and information-gathering that have emerged. Anderson's themes are related to issues developed by (and which he has worked in conjunction with) Dale Eickelman. Particularly relevant is Eickelman's analysis of media, such as that contained in his collaborative work with Anderson, and separately with James Piscatori, which have considered the impact of various forms of media on diverse Muslim settings and historical frameworks.²⁴ Other important research associated with Islam and cyberspace includes work by the Arab Information Project, Georgetown, which produced a website linking to a series of detailed and technologically centred regional case studies on Internet development in the Middle East. Some of these are class assignments for students at the University of Georgetown, whilst there are also hyperlinks to other materials, including academic papers by subject specialists from outside the institution.²⁵ The impact of the Internet on Arab societies has also been a theme contained in the work of Jon Alterman. He has introduced commentaries associated with the impact of the Internet on Arab diaspora societies, including Muslims. Factors such as the increased information flow, the impact on state censorship and how US interests can engage with the Arab media in order to influence public opinion have been covered in his work.²⁶

In terms of academic studies of Islam and the Internet, since the publication of *Virtually Islamic*, the writer has become aware of ongoing research which has been published or presented and which has made a substantial contribution to the field(s). Peter Mandaville has explored aspects of Islam and cyberspace from the angle of globalisation, and is concerned with the ways in which the technology allows 'greater numbers of people to take Islam into their own hands, opening new spaces for debate and critical dialogue'. He also sees the technology (in its many forms) as offering a means through which 'it also furnishes Islam with a mirror to hold up to

itself and an opportunity to gaze upon its many diverse faces'.²⁷ Mandaville discussed the issue of control in relation to a 'virtual *ummah*', or Muslim community, and what he described as a 'shared normative framework ... whose discursive norms derive from an Islamic framework'.²⁸ These are significant issues, which were also approached in *Virtually Islamic* and this writer's other work.²⁹ Questions emerge as to how those discursive norms have now evolved in reaction to new media developments and a changing world order, especially as the Internet becomes less of a 'novelty' and more of a cohesive and coherent element binding dispersed individuals and communities together.

Amongst other work in the field, to which this book seeks to make a contribution, Peter Wolcott and Seymour E. Goodman of Stanford University provided sophisticated comparative technical analysis on applications of the Internet in Pakistan and Turkey, although much of the technical content is beyond the remit of this current work.³⁰ Yves Gonzalez-Qijano has provided an analysis of the Internet in the Lebanon.³¹ Rizwan Mawani researched identity issues associated with Ismaili webspace.³² Lenie Brouwer explored the role of e-mail in engendering Muslim identities in minority European contexts.³³ Debbie Wheeler conducted fieldwork on the impact of the Internet in the Middle East, including a study of its role on Kuwait, and the readiness of Egypt to 'embrace' the Internet age.³⁴ Matthias Brückner discussed aspects of online *fatwas* in relation to the consumption of alcohol, and evaluated the role of *muftis* on the Internet.³⁵ Rüdiger Lohlker wrote about the Qur'an and its representation in cyberspace.³⁶ Henner Kirchner has provided overviews of 'digital jihad' and 'cyber-interfada'.³⁷ Jonah Blank referred to the application of the Internet in his research on Dawoodi Bohra Shi'a communities.³⁸ A University of Birmingham project explored how diverse communications tools, including the Internet, have been used to develop and maintain cohesion within a dispersed Sufi order.³⁹

Naturally, it is not just scholars of Islam and the Internet who can inform discussions about the media and its application. The influences of writers such as Marshall McLuhan, Howard Rheingold and Manuel Castells – early pioneers of discussions and theories about networks, computers and communities – combine as subtexts to this volume with those of Edward Said, in particular his writings about understandings of Orientalism, and Islam and the media.⁴⁰ General works about Islam and the media have also been important, although

in existing publications their (understandable) focus on global mass media generally pre-dates the influence of the Internet.⁴¹

These and other sources are useful in reaching an understanding of Cyber Islamic Environments, and for improving our initial 'snapshot'. The outputs of these and other scholars make a formative contribution to this developing field. It is important to emphasise that studies of Islam and cyberspace must transcend the so-called 'Arab world' and be representative of a broad range of Muslim sources and Islamic interests, drawing on different beliefs and academic interests. Particularly important are the pronouncements generated from within a minority context; the Internet has alerted the 'wider Muslim world' to minority groups and their ideologues, and generated interest and affiliations which have evolved at a rapid rate through the digital medium. Some of these groups have created a 'safety zone' in which to operate, which would not necessarily be viable in their geographical place of ideological and/or ancestral origin. Following the events of 11 September 2001, some of these avenues of expression and activity have been closed or become more discreet.

This book has been designed so that it can be read separately and independently from *Virtually Islamic* and the writer's other work in the field. It does not have to be read sequentially (rather like hypertext). *Virtually Islamic* introduced some formative influences, discussions and factors that are not repeated within this volume. There is a shift in emphasis in this book from *Virtually Islamic*, which was more of an overview, and indeed many of the issues have changed in a rapidly compressed historical period. Changes in the technical and Islamic equation have naturally adjusted the writer's outlook in the period between books. Ideally, *Virtually Islamic* and this present book will complement one another to provide a detailed picture of Cyber Islamic Environments and their evolution.

RESEARCHING CYBER ISLAMIC ENVIRONMENTS

This book, as technical experts will quickly ascertain, is *not a technical* guide to hacking, cracking, viruses, firewalls and/or Internet security in relation to Cyber Islamic Environments. There are several methodological and technical issues that are relevant to the research, which should be mentioned here. Several references to Whois (and related services) are made: Whois is one of several online services that can provide details of an Internet domain's ownership, together with technical data from which a computer's location and operating

system can be ascertained. Whilst these data can be manipulated, they are incorporated where feasible into the discussion when reference is required to a site's owner or location of 'origin'.⁴²

One significant factor that this research has revealed is that there is no single archive of material relating to Cyber Islamic Environments. It is not possible to visit all previous incarnations of a site, as few site managers preserve their old pages. This raises problems, if a researcher is attempting to track down a site from a particular date and time. The writer has kept records of the majority of sites he visited: these take the form of screen shots, printouts and saved HTML pages. Clearly, it is not possible to preserve everything, given the number of sites in cyberspace, but it is intended to create in the future a more rigid and structured archive for researchers to use. It may be that security agencies have held copies of certain sites along with their monitoring of e-mail traffic, but these resources were not available to the writer (who has no connection with such services), and indeed he is aware that many agencies did not keep full records themselves. There are a number of ways in which old page impressions can be located, although the techniques are not necessarily reliable or scientific: the search engine Google keeps a cached copy of pages it has recorded, so if a researcher has specific details, on occasions the cache can provide an impression of 'missing pages' and sites.

There is no single archive of Islam and the Internet; ideally, there would be a searchable interface and sequential copies of significant sites. Research into Islam and cyberspace has identified the need for the development of systems for recording and analysing online digital content, relating to Cyber Islamic Environments. The dramatic and substantial shifts in content during compressed time periods cannot always be recorded or observed in a scientific and systematic way by academics – and there is no single resource or institution that undertakes this task. The bulk of online material is one inhibiting factor, frequently encountered by this writer. The result is that, at a critical time in the development of 'digital Islam', coupled with the radical shifts in Muslim networks responding in various ways to post-9-11 contexts, there is no formal archive source of Islamic websites.

Critical data in a variety of languages and formats have been lost for subsequent study. In order for a coherent understanding of digital Islam, it is proposed that in the future discussions and research are undertaken with a view to establishing a methodological approach for recording these sites, especially those in relation to Islam, the Internet

and the West. These would include the identification of appropriate software for automatic recording, and research into the development of an appropriate interface through which these data could be located and classified. The data would be kept in a digital content archive and be accessible to researchers.⁴³ Whilst there are media archives for television, radio, film and newspapers in relation to Islam, for example, there is no archive relating to Islam on the Internet.

Fortunately, there are resources available which have a limited selection of recorded Cyber Islamic Environments available. The success of such preservation is dependent on the type of site being archived. An increasingly useful source is the Internet Archive Wayback Machine, organised by Alexa, which started archiving the Internet in 1996; its database does contain records (in the form of digital copies) of some of the sites that have otherwise disappeared.⁴⁴ For example, through this resource, the writer was able to locate 88 versions of the Azzam.com site (discussed in Chapter 4), including a sequence of post 9-11 daily versions of the site (16 September–17 December 2001 inclusive). Azzam was frequently closed, hacked, disrupted or relocated online, so this makes the archive helpful for researchers; it also provides a useful resource for supporters of the site's objectives, which perhaps raises an ethical issue for archivists. It was noted by the writer that some pro-Osama bin Laden material was not included in the archive, such as the al-Neda site, which was allegedly 'taken over' by an American message board discussing the implications of 9-11. (It was interesting to see that many of the al-Qaeda-related pages were 'missing' from the archive.)⁴⁵ Al-Neda supporters subsequently hacked into other sites, and placed their content 'discreetly' into folders to provide alternative routes of access to information, albeit for a limited time.⁴⁶

'Hacked' sites were preserved on other archive sites, such as Alldas.de and Attrition.org, although these were overwhelmed by the sheer amount of activity.⁴⁷ Outside the actual sites discussed in this book, news of such activity was derived from a number of specialist and other sources, including Moreover, SANS Institute, Wired, al-Jazeera, al-Bawaba, The Register, mi2g and general news services with Technology pages.⁴⁸ Groups with specific political, religious and social agendas, such as the Israeli International Policy Institute for Counter Terrorism, the Middle East Media Research Institute (MEMRI), the Jewish Internet Association and latterly (in terms of the writing process for this book) the Anti-Defamation League, the Jewish Federation of Southern Illinois, Southeast Missouri

& Western Kentucky (Simoky Fed), also became sources of data for this project, although as with any source, caution was applied in relation to the implicit value judgements contained in these sites.⁴⁹

A network of personal contacts, many of which require anonymity, also provided information. Formal interviews with those involved in disruptive online activities were impossible. Individual web administrators were contacted during the preparation of this book. However, especially in the post 9-11 context, the writer noted a reluctance (with a few exceptions) to engage in discussions relating to this research. In future work, it is anticipated that users and creators of Cyber Islamic Environments will be interviewed. This present work consists primarily of the writer's personal observations and analysis.

BOOK STRUCTURE

Two significant applications of the Internet are considered in this volume: 'electronic jihad' and online *fatwas*.

Chapters 2–5, focus on 'electronic jihad', in its various embodiments and understandings; Chapter 2, "'The Digital Sword' and Defining 'E-Jihad'", includes an introduction to perspectives associated with the term 'jihad'; Chapter 3, 'Hacktivism, Hacking and Cracking in the Name of Islam', explores the integration of e-jihad into online activism, and the ways in which forms of jihad have appeared in relation to computer-mediated communication. These include hacktivism, cracking and other major and minor forms of online disruption. Reference is also made to forms of encryption.

Chapters 4, 5 and 6 provide a discussion of Cyber Islamic reactions to 9-11 in the forms of: 'Mujahideen in Cyberspace' (Chapter 4), 'The "Inter-fada" and Global E-jihad' (Chapter 5) and 'Jihad for Peace' (Chapter 6). These chapters offer an opportunity to consider various Muslim statements and opinions emerging from 'western' and other contexts (from all 'sides') in terms of how they appeared online, especially those Muslim perspectives who were *opposed* to al-Qaeda, who sought to represent themselves on the Internet.

Chapter 7, 'Islamic Decision-Making and Advice Online', considers *fatwas* and other forms of decision-making and authority in Cyber Islamic Environments; in introducing the subsequent two chapters, it pays particular attention to databases and interactive fora disseminating notions of interpretation and understanding, drawn from

diverse perspectives and 'schools' of thought, including new 'western' Muslim models.

Chapters 8 and 9, 'Sunni Religious Authority on the Internet I and II', discuss notions of online authority that have a connection with the numerically superior proportion of the Muslim world(s), which falls under the broad Sunni orthodox banner in majority (Chapter 8) and minority (Chapter 9) contexts. These sites have substantial content and facilities, necessitating within this section separate headings for designated online 'key players', who have been selected on criteria including site format, site content, projected influence and their affiliations.

Chapter 10, 'The Online Mujtahid: Islamic Diversity and Authority Online', offers a sketch of other online approaches to Islamic knowledge, especially Shi'a Islam and Sufism. Whilst these sectors of cyberspace are often not as extensive as their Sunni equivalent, they represent significant and individual understandings that are essential in formulating an effective and responsive overview of religious authority online.

Chapter 11, 'Islam and the Digital Age', concludes the volume by considering new Islamic interfaces and paradigms online. It draws together the essential points of the book, and seeks to chart a way forward for further detailed study of Islam, Muslims and the Internet.

The book contains Notes, a Bibliography (including URLs), a Glossary and an Index. Unless otherwise stated, all Internet references were correct and links functioned at the time of going to press.

To counter 'disappearing' websites or changing addresses, references to this book will be updated on the book's related website, as part of the online bibliography:

VIRTUALLY ISLAMIC

<http://www.virtuallyislamic.com>

The site will also contain related screen-shots of significant sites. Through this website, readers are welcome to contact the writer with observations, information and comments.

TRANSLITERATION

It was decided for this volume not to burden the reader with a complex system of transliteration of 'Islamic' and other terminology from Arabic and other languages into English. However, appropriate

transliteration is provided in the Glossary. The general principles contained in the *Encyclopedia of Islam: New Edition* (Leiden: E.J. Brill, 1960) have been adhered to, with the popular model featured in Ian Richard Netton's *A Popular Dictionary of Islam* (London: Curzon Press, 1991) also applied. Quotations from Internet and textual sources retain their original transliterations; proper names maintain locally applied personal spellings and transliterations; Anglicised Islamic–Arabic terminology is applied where possible, i.e. ‘mosque’ for *masjid*. Where an Islamic term is contained in a quotation, the writer has given a general definition in parenthesis, i.e. *masjid* [mosque].

NOTES

1. See Edward W. Lane, *An Account of the Manners and Customs of the Modern Egyptians* (London, 1836).
2. Gary R. Bunt, *Virtually Islamic: Computer-mediated Communication and Cyber Islamic Environments* (Cardiff: University of Wales Press, 2000), pp. 66–103.
3. *Ibid.*, p. 7.
4. David Gauntlett (ed.), *Web.Studies: Rewiring Media Studies for the Digital Age* (London: Arnold, 2000), p. 227.
5. *Al-Bawaba*, ‘Algeria Hopes to Improve Telecommunications by 2010’, 10 April, 2001; ‘Egypt to Serve Less Privileged Areas with 100 Youth Centers Yearly’, 27 July 2001, www.al-bawaba.com/news.
6. *UNESCO Webworld News*, ‘Only 4% of Internet Users in the Arab World are Women’, 5 June 2000, www.unesco.org/webworld/news/000605_beijing.shtml.
7. *Al-Huda*, www.alhudapk.com.
8. Wissam El Solh, Netakeoff, Beirut, quoted in Steve Kettman, ‘1,001 Arabian Nights of Sex’, *Wired*, 24 April, 2001, www.wired.com/news/print/0,1294,43243,00.html. Netakeoff is a Lebanon-based company developing and investing in Internet and technology firms. See www.netakeoff.com.
9. Such a figure is not necessarily indicative of trends throughout global Muslim contexts. See *al-Bawaba*, ‘Expert: Rising Mideast PC Demand Bucks Global Trend’, 15 August 2001, www.al-bawaba.com/news.
10. United Nations Development Project, *Making New Technologies Work for Human Development* (United Nations Development Project, 2001).
11. *Ibid.*, pp. 60–62, www.undp.org/hdr2001/. An early version of this element of the discussion in relation to Mediterranean contexts is contained in Gary Bunt, ‘Islam Interactive: Mediterranean Islamic Expression on the World Wide Web’, in *Islam and the Shaping of the Current Islamic Reformation*, Barbara Allen Roberson (ed.) (London: Frank Cass, 2003).
12. United Nations Development Project, *Making New Technologies Work for Human Development*, p. 40.

13. Peter Wolcott and Seymour Goodman, *The Internet in Turkey and Pakistan: A Comparative Analysis* (Stanford: Center for International Security and Co-operation, Stanford University, 2000), p. xii, http://mosaic.unomaha.edu/TurkPak_2000.pdf.
14. UNDP, *Making New Technologies Work for Human Development*, p. 41. The term 'digital divide' is explored by Pippa Norris, *Digital Divide: Civic Engagement, Information Poverty, and the Internet* (Cambridge: Cambridge University Press, 2001).
15. Mohamed A. El-Nawawy, 'Profiling Internet Users in Egypt: Understanding the Primary Deterrent against Their Growth in Number', Internet Society (2000), www.isoc.org/inet2000/cdproceedings/8d/s8.
16. Ibid.
17. The writer has raised this issue at conferences since the publication of *Virtually Islamic*, in particular at the Duke University Center for the Study of Muslim Networks 'Muslim Networks: Medium, Methodology & Metaphor' workshop, March 2001, 'Islamic Inter-connectivity in a Virtual World: e-jihad, e-ijtihad and online fatwas'.
18. For example, see Intifadat El-Aqsa, www.islamiccenterforstudies.org/aqsa/dra.html [URL subsequently not functional]. Muhammad al-Durrah website, www.al-sham.net/al_quds.html.
19. Human Rights Watch, 'The Internet in the Mideast and North Africa', (Human Rights Watch, 1999), www.hrw.org/advocacy/Internet/mena/.
20. Human Rights Watch, 'Recommendations' (1999), www.hrw.org/advocacy/Internet/mena/reco.htm.
21. Discussed in detail in *Virtually Islamic*, pp. 104–31.
22. See Jon W. Anderson, 'Technology, Media, and the Next Generation in the Middle East', *New Media and Information Technology Working Papers* (Georgetown: NMIT, 1999), <http://nmit.georgetown.edu/papers/jwanderson.htm>; 'Arabizing the Internet', *The Emirates Occasional Papers*, No. 30 (1998); and Dale F. Eickelman (ed.), *New Media in the Muslim World: The Emerging Public Sphere* (Bloomington: Indiana University Press, 1999); 'New Media in the Muslim World: The Emerging Public Sphere', *ISIM Newsletter*, 5, www.isim.nl/newsletter/5/media/1.html.
23. Jon Anderson, 'Is the Internet Islam's "Third Wave" or the "End of Civilization"?' , *Journal of Electronic Publishing* (1997), www.press.umich.edu/jep/archive/Anderson.html.
24. Dale F. Eickelman and James Piscatori, *Muslim Politics* (Princeton, NJ: Princeton University Press, 1996).
25. Arab Information Project, www.georgetown.edu/research/arabtech/. Similar class assignment work was being introduced in 2002 by George Mason University, in a course on 'Islam and the Internet', although it was too early at the time of writing to determine the validity of the findings.
26. Jon B. Alterman, 'New Media, New Politics? From Satellite Television to the Internet in the Arab World', summarised in *Policywatch*, 356, Washington Institute for Near East Policy, 11 December 1998, www.washingtoninstitute.org/watch/Policywatch/policywatch1998/356.htm.
27. Peter Mandaville, 'Reimagining the Ummah? Information Technology and the Changing Boundaries of Political Islam', in *Islam Encountering*

- Globalisation*, Ali Mohammadi (ed.), (London: RoutledgeCurzon, 2002), p. 88.
28. *Ibid.*, p. 86.
 29. For example, see Gary Bunt, 'Islam in Cyberspace: Islamic Studies Resources on the World Wide Web', *Muslim World Book Review*, Vol. 18, No. 1 (1997), pp. 3–13.
 30. Wolcott and Goodman, *The Internet in Turkey and Pakistan*.
 31. Yves Gonzalez-Quijano, 'Essai De Cartographie de l'Information sur Internet Au Liban', www.pisweb.net/mmm/3_quijano/3-quijano.html.
 32. Rizwan Mawani, 'Community, Identity and the Internet: The Case of the Ismaili Muslims'. 'The Ismaili Community and the Internet: Exploring an Encounter', n.d., unpublished papers.
 33. Lenie Brouwer, 'Muslimmail in the Netherlands', paper presented at the 'Writing Diasporas' conference, Virtual Diasporas strand, University of Wales, Swansea, 22 September 2000.
 34. Debbie Wheeler, 'Islam, Community and the Internet: New Possibilities in the Digital Age', *Journal of Education, Community and Values*, No. 3 (2002), <http://bcis.pacificu.edu/journal/2002/03/islam.php>; 'New Media, Globalization and Kuwaiti National Identity', *The Middle East Journal*, Vol. 54, No. 3 (2000), 'Living At E.Speed: A Look at Egypt's E Readiness', in *Economic Challenges and Opportunities in the MENA Region* (Cairo: Economic Research Forum Publications, AUC Press, 2002).
 35. Matthias Brückner, *Fatwas zum Alkohol unter dem Einfluss neuer Medien im 20. Jhd* (Würzburg: Ergon-Verlag, 2000); 'Der Mufti im Netz', in Rüdiger Lohlker (ed.), *Islam im Internet, Neue Formen der Religion im Cyberspace* (Hamburg: Deutsches Orient-Institut, CD-Rom); 'IslamiCity – Creating an Islamic Cybersociety', *ISIM (International Institute for the Study of Islam in the Modern World) Newsletter*, No. 8 (2001) www.isim.nl/newsletter/8/bruckner.htm; Cyberfatwa: Index zu Fatwas und Muftis im Internet, www.cyberfatwa.de.
 36. Rüdiger Lohlker, 'Der Koran im Internet', www.sub.uni-goettingen.de/ebene_1/orient/koran1.htm#Anmerkung_1a.
 37. Henner Kirchner, 'Digital Jihad – Islam im Internet', *Quartalszeitschrift der Arbeitsgemeinschaft Kirchlicher Entwicklungsdienst*, No. 32 (1996) 4, 19–22, www.henner-kirchner.de/studies/cybermus.htm.
 38. Jonah Blank, *Mullahs on the Mainframe: Islam and Modernity among the Daudi Bohras* (Chicago and London: The University of Chicago Press, 2001).
 39. This was the Naqshabandi Sufi *tariqa* (order) led by Shaykh Nazim al-Qubrusi al-Haqqani, which has strong links with Lebanon. The Naqshabandis are also discussed in Bunt, *Virtually Islamic*, pp. 59–60. Sufism and the Internet are also considered in Gary R. Bunt, 'Surfing Islam: Ayatollahs, Shayks and Hajjis on the Superhighway', in Jeffrey K. Hadden and Douglas E. Cowan (eds.), *Religion on the Internet: Research Prospects and Promises* (New York: Elsevier Science, 2000), pp. 143–5. Results of the Transnational Sufism project had not been published at the time of writing. For a description of the project, see <http://artsWeb.bham.ac.uk/mdraper/transnatsufi/projectdesc.htm>.

40. Manuel Castells, *The Rise of the Network Society* (Oxford and Malden: Blackwell, 1996). Marshall McLuhan and Bruce R. Powers, *The Global Village: Transformations in World Life and Media in the 21st Century* (New York and Oxford: Oxford University Press, 1989); and Quentin Fiore, *The Medium is the Message: An Inventory of Effects* (London: Random House, 1967). Edward W. Said, *Orientalism* (London: Routledge & Kegan Paul, 1978); *Covering Islam: How the Media and the Experts Determine How We See the Rest of the World* (London: Vintage, revised edition, 1997).
41. See Kai Hafez (ed.), *Islam and the West in the Mass Media* (Cresskill, NJ: Hampton Press, 2000).
42. Whois. www.whois.org. Related services used in this research include: Sam Spade, www.samspace.org, Allwhois, www.allwhois.com, Betterwhois, www.betterwhois.com.
43. For a discussion on digital archiving, see Digital Preservation Coalition, www.dpconline.org, and Maggie Jones and Neil Beagrie, *Preservation Management of Digital Materials: A Handbook* (London: British Library, 2002).
44. Alexa Internet Archive Wayback Machine, <http://web.archive.org>.
45. Al-Neda, www.alneda.com. There were claims the new 'owner' of the domain was associated with the generation of pornographic websites. This confusing situation was not resolved by the time of publication. See discussion at <http://cryptome.org/al-neda.htm> and <http://cryptome.org/alneda-wet.htm> – suggesting the site was being monitored by US intelligence services in order to determine the origins of traffic to the site. Al-Neda content re-emerged in December 2002.
46. 'Al-Qaeda Hackers Hijack Sites', *The Age*, 27 October 2002, www.theage.com.au.
47. Alldas.de had been disrupted by a Denial of Service attack in September 2002, and had not resumed its service by November 2002. Attrition.org continued to function: www.attrition.org/mirror/attrition/.
48. *Moreover*, www.moreover.com, SANS Institute, www.sans.org, *Wired*, www.wired.com, *al-Jazeera*, www.aljazeera.com, *al-Bawaba*, www.albawaba.com, *The Register*, www.theregister.co.uk, *mi2g*, www.mi2g.com, *News Now*, www.newsnow.co.uk See the writer's news feeds at Virtually Islamic News and Islamic Studies Pathways, both linked at www.virtuallyislamic.com.
49. International Policy Institute for Counter-Terrorism, www.ict.org.il, Middle East Media Research Institute (MEMRI), www.memri.org, Anti-Defamation League, 'Jihad Online: Islamic Terrorists and the Internet', www.adl.org/internet/jihad.asp, 2002, Jewish Internet Association www.jewishinternetassociation.org, Simoky Fed, www.simokyfed.com (in late 2002, these pages became part of Internet Haganah, <http://haganah.org.il>).