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The Basis of knowledge

Surah Yusuf (108)

Say thou: "This is my way: I do invite unto Allah on evidence clear as the seeing with one's eyes I and whoever follows me: Glory to Allah! And never will I join gods with Allah!"

(Yusuf Ali Translation)

Say [O Prophet]: "This is my way: Resting upon conscious insight accessible to reason, I am calling [you all] unto God - I and they who follow me"

And [say:] "Limitless is God in His Glory; and I am not of those who ascribe divinity to aught beside Him!"

(Muhammad Asad Translation)

The challenge of the secular consensus of the West to Islam is firstly expressed in the very foundations of human understanding. What can we know? What does it make sense to accept as true? The secular consensus is that religion is essentially something we cannot know, something we cannot accept as true.

The challenges can be stated essentially as: *

Religion makes claims about reality which science has shown are factually wrong.

&

Faith is irrational. *

Knowledge in the Western mind is considered to be discovered from only two sources: observation and reasoning analysis. All other sources are considered invalid and ignored. This, coupled with the above statements on the status of religion, amounts to a complete dismissal of any religious understanding of existence.

Claims to religious knowledge are tolerated only if they seem to depend on the dubious and hence invalid source of 'spiritual' experiences. In this way the non-religious person can disregard such claims as nonsense and evade any guilt for rejecting the claims of each and every religion.

My approach in response to this is to show that the challenges set out above are factually wrong: Islamic 'faith' is rational. **Scientific fact and true Islam have never contradicted each other.** Moreover, I intend to demonstrate that belief in Islam makes much more sense than disbelief.

However, to do this we need to examine what are the sources of knowledge: Can religion fit into a framework based solely on the two defined valid sources of knowledge commonly accepted or must we move to a new (actually older¹) system of thought defined by the claims of Islam and including the processes of observation and analysis?

The present framework: What is knowledge?

In answering the questions posed I shall first discuss the widely accepted framework where only observation and analysis are considered valid sources of knowledge.

As a human being I am able to observe the world and universe around me and form concepts of what these objects are. By a concept I mean a mental model based on several observations and accepted statements. These concepts are how we understand sense perceptions. By reflecting on these concepts I can attempt to make them consistent with one another. Once they are all consistent I have gained an understanding of the world of my experiences.

The difficult step is in asserting that my understanding represents a more absolute thing - knowledge. Only then can I extend the understanding to interpretation and prediction of new observations and experiences. This step is a generalisation from my experience to the experience of anyone. It means asserting that my understanding of reality is universally accurate, or simply put - that it is true. It is only possible to know something that is true. When we talk about understanding reality as a whole however, we must extend our scope and say that it is only possible to know reality as a whole if such knowledge is universally true.

In science the popular picture is of a build-up of such knowledge. It is then passed on to new students as accepted fact. These are then used in building the concepts for deeper understanding. This picture of the development of knowledge however, is not accurate.

Limitations of scientific knowledge

Science does not claim to provide truths but rather approximations to truths. Any scientific theory or even any scientific statement has at some point an arbitrary level of acceptance. Sometimes this level is called the postulates of the theory. The theory makes no attempt to justify these postulates but accepts them as stated. This is like what we accept as truths in forming our concepts except that in science these are explicitly acknowledged not as truths but as approximations to truths. Experiment and evidence can then test the predictions and will decide whether and when the theory needs rethinking.

In classical physics, starting with Newton, a number of assumptions were made within the descriptions. These were simply accepted as facts needing no explanation. An example is the absolute and constant flow of time in Newtonian Mechanics. With the development of the theory of relativity it was shown to be quite wrong. This meant that a previously accepted 'truth' had been questioned and shown to be only an approximation to the truth. The whole of classical physics, with its accepted descriptions of reality, has received many body blows by the development of Quantum Mechanics, which comprehensively challenged the basic accepted concepts and proved to be a much more useful theory in describing reality.

Scientific understanding can only grow in areas where there is a good opportunity for gathering experimental data. The best theories are numerically very accurate such as in Quantum-Electro-Dynamics where 1 in 1000 000 000 000 accuracy is relatively easily demonstrated. The worst theories are very approximate such as in cosmology where the ultimate fate of the universe is unknown. It could be in an accelerating expansion forever, slow its expansion to reach a constant size eventually or it could collapse after expanding. So, these approximations are sometimes wide of the mark of truth. [After many years of study on this the theory has been shown to be basically flawed in a recent experiment which looked at Supernovae - the Universe is apparently expanding at an accelerating pace!]

Where we are only concerned with the quantity of something we can easily experiment with, we can rely on science to provide ever more accurate measures. These quantities, however, become increasingly inaccurate for possible experiences that are far from easy to experiment with. So, we can determine factual statements of relative quantity as true such as 'the moon has less mass than the earth which has less mass than the sun'. We can also be very accurate in saying how much more or less mass one has relative to the other. However, what is being described in terms of quality is not an area in which we can rely on physics. The difficulty in this example is explaining exactly what mass is. We can apply the concept well in areas of common experience such as understanding the motion of planets and snooker balls etc., but to explain definitively what mass is, is not achieved in science. Attempts to explain the postulates of various theories go on into greater and greater depths and the true nature of reality is something that remains elusive. It is possibly something science can never find. It may be that the true nature of reality lies in an area inaccessible to experiment.

Because of this no understanding of any part of reality can really be considered as known. It is only an approximate description, which, though numerically good, may be a totally inaccurate description of the true nature of that part of reality.

Since asserting that such understanding is true or known is not acceptable, then to assert that all reality fits our understanding is to be quite wrong. The most we can do is to see if we can apply our approximate descriptions to the rest of what we perceive of reality and, if it is still numerically good, include this new larger part of reality in our theory. It seems that all perceived reality, or more accurately that part of existence we are able to discover through our repeatable observations, obeys the same physical laws.

However, that it does so may be a condition for our perceiving it in the first place. To assert that reality ends where our perceptions end is completely unjustified. If we cannot see or otherwise perceive something it doesn't mean that it doesn't exist.

Knowing maths

In science, and especially in physics, concepts are defined in mathematical language. In this way we might say that knowing the maths of a theory is possible. However, are mathematical statements truths? Their claim to universality is based on the definition of concepts through axioms that are 'such obvious concepts' that they must be universal. However since they only describe themselves they are not in any real sense true; they do not claim to describe some universal physical existence. The role of maths is to provide abstract objects that we can use as tools in our reflections on our observations of reality. They do not of themselves provide knowledge of reality.

The use of the word 'knowledge', in the sense of knowing something means it must be true, makes the idea of a framework for the sources of knowledge seem over-ambitious or at least the sources in this framework don't seem to be genuine sources. Observation and reason are not sources of 'knowledge' but instead should be considered as routes to better understanding which only reach 'knowledge' when pursued to their ultimate. Nevertheless I shall continue to refer to observation and reason as 'the sources of knowledge' in anticipation of applying a more appropriate meaning to the word 'knowledge'.

Religious claims in the present framework

Now that this framework for the sources of knowledge has been discussed briefly it is instructive to see how to try and fit religious claims into it.

The central challenge then for the believers is to 'Prove the existence of God /Allah / Jehovah'.

The concept of proof needs to be clarified.

In maths a proof of a theorem involves showing consistency with the axioms and definitions of the maths used. Such a proof cannot be of reality in the same way that maths cannot provide knowledge of reality as I just mentioned above.

In science a practical proof consists of testing hypotheses repeatedly. However, no scientific statement can claim to be proved true in an absolute and universal sense. We can only claim that in our experience the statement has not been disproved. A useful definition of a scientific claim is that it is in principle disprovable.

There are nevertheless attempts to prove Allah's existence like a maths theorem and they resort to several statements or definitions as stepping-stones. If I were to do this, I would have to assert that those statements and definitions are more universally true than the conclusion. I would then have to proceed to derive the lesser truth of the existence of something called 'Allah'. This follows from the nature of syllogistic reasoning such as "all a is b", "some b is c" implies "some c is not a". This type of reasoning gives you always less information than what you started with. This approach can only show the 'existence' of aspects of Allah. It cannot, by virtue of its limited understanding and questionable validity, demonstrate something claiming to be infinite and the ultimate in universality i.e. claiming to be 'The Truth'. . It can only provide arguments in favour of the existence of Allah. It can never be a proof.

Any argument for the existence of Allah which uses the method 'Given that X, Y, Z is the case it can be inferred that Allah exists.'" can only amount to a neat way of conceptualising some aspect of Allah through a choice of definitions and concepts.

A practical proof may be possible of facts that confirm religious claims but the way to accept religious claims is not the same way that scientists now accept their theories. They do not assert the truth of their theories. They also do not assert the universal truth of their theories. The opposite may be the popular view but it is wrong. They used to, but no longer do so. For this reason the framework must change.

Various churches have historically set themselves up as being infallible and authoritative sources of knowledge. In the last century the theories of classical physics were proclaimed as the new truths. The religion of belief in science had begun. However the scientists' foundations have now been shown to be quite wrong. The 'new' physics has deflated the claims of scientists to know truths in the same way that the scientists previously deflated the claims of certain religious figures.

The change of framework

In conclusion, science has now retreated from its lofty position of making quasi-religious claims, providing truths and being the source for knowledge. It was a position that seemed and often claimed to imply atheism. Science now acknowledges its limits and so religion cannot seek to be derived from scientific understandings. Instead we are faced with the challenge to put science back in a religious framework, this time an Islamic one. To do so seems a gigantic task. In its broadest sense it means that all of modern knowledge would have to be re-interpreted. But this isn't the case since most of modern science fits in to an Islamic framework.

All that needs to be done is to set out the elements of the Islamic framework for knowledge by reconsidering the present, generally accepted framework.

God's laws of Nature

The idea that reality is governed by laws and order in all areas, that they do not contradict each other and that they can be understood by humans is, as mentioned earlier, the result of a now largely abandoned, God-centred world view. In this, God decrees and upholds these laws and is able to break them if He chooses. In His mercy He makes the physics of reality understandable to us and hence bestows on us such material benefits as we can gain through our new control over nature. It might be wisely remarked that the most incomprehensible thing about reality is that it can be comprehended. This order in reality is a basic belief necessary to a scientific approach. It is not in itself an obvious belief but the more we know about reality the more it seems justified.

Rationality

To be scientific one has to take a very rigorous approach to reasoning. This involves reducing the idea of causes between events to the most fundamental. To be rational means to be asking of every observation the question 'Why?' or 'How?' In being rational we search for the truth. We can think of asking about the past causes, or future causes, or ever deeper and more fundamental descriptions of reality. In being rational we are already accepting that there is some ultimate order to reality. It is a basic teaching of Islam that the ultimate truth and source of all order is Allah. In this sense being Muslim requires the assertion that we can always ask why until we would be attempting to describe Allah in answering the question, which is asking the impossible because Allah is not like any thing in His creation. A Muslim must therefore be 'super-rational', accepting the application of reason to enquire ever deeper and seeing that by doing so one must conclude the existence of Allah. This argument will be presented more fully in the next section. For now it simply illustrates that by using scientific reasoning we are assuming the unlimited scope for asking the questions 'Why?' and 'How?'. It is only through arbitrarily limiting the scope for these questions that we would be able to assert that the theories of modern science are absolute and universal truths and that hence God has no role. For example the assertion was made that Newton's laws of motion were a universal truth. This limited the scope of asking "how?" because the answer would be "It just is!"

Oneness of God

Science aims successfully to eliminate all but one cause in describing reality. This method embodies the idea, which now seems trivial, that whatever we can suppose rules the universe, it is one. There cannot be more than one God. Otherwise we would have found evidence of conflicting influences on the way reality is. Occasionally one cause and occasionally another would be the reason for a particular observation. This has not been found to be the case and the assumption holds good. We don't find the laws of nature changing in the way that criminal laws in modern states differ from one government to the next. The laws of nature are unchanging for billions of years over the vast extent of known existence they are always the same. - There is in this sense only one governor.

We see from this that scientific rational analysis makes assumptions that are consistent with Islamic articles of faith. So the reasoning element of science's framework fits within the Islamic framework.

A closer look at observation

What is an observation?.

If you know something of quantum mechanics you will know that this is not as straightforward as it appears at first. I will use an illustration that Feynman used to explain the basic problem.

When we look at a window we see some light that is reflected from it and we know that some light passes through it. However we do not know how any given photon (particle of light) decides whether to be reflected or to go through the glass. We even have to consider that for any photon, it has BOTH gone through the glass AND been reflected until we observe which way it went!

This is a dramatic departure from considering light and matter generally as having defined properties that we can, in principle, measure to any accuracy we like. Now the measurement itself has a critical influence on what is observed.

For this reason a restatement of the aims of scientific investigations called the Copenhagen interpretation is generally used. This states that science investigates not what is actually there as such but rather, that science investigates just the interactions between what is actually there.

Since all observations are interactions, this interpretation has introduced the problem of what exactly is an observation? This is a problem that is not well resolved. It is a crucial ingredient to our accepted framework of knowledge since it is a problem that is intimately related to the problem of 'what can we know?'. If observation is to be a source of knowledge and it isn't clear what amounts to an observation, then it is also not clear what amounts to knowledge.

Some might say that what can exist is only that which we can in principle know - other things being disregarded as unnecessary (as I mentioned earlier, this position is unjustified). Consequently, this opportunity to change the boundaries of what we can know has encouraged a great deal of speculation as to what actually exists. I shall avoid such speculation. Rather, I shall restrict myself to a more natural definition of the framework of knowledge to be used. Taking these concerns on board I say that whenever we refer to what we can know in principle, we should keep in mind that we are talking about human knowledge. It is therefore always a subjective knowledge. I must consider that I can know something, in this subjective sense, if I am convinced that it is true. (I intend to use the words 'knowledge' and 'know' etc., in **this** sense from now on.) This does not contest that something I know might be objectively true but to answer that question is to delve into the speculation I have denied myself.

The process of becoming convinced is deeply lodged in our nature. It is something that we may get to know better in the future. The observations through our eyes are made real in our brains. This process, of making the observation of our eyes into something that we are convinced by, is not itself known. This general problem might lead people to the statement that the strongest assertion we can make about what we know is that we know that we perceive something as true. We cannot assert that it actually is true simply because we are convinced by our perceptions. This is however in danger of going too far. We might be tempted to go into the speculation that maybe all that really exists is in ourselves. This is going in the opposite direction to materialism where all that really exists is the material external to our self-awareness. In being natural and making a balanced judgement, we must accept our own selves and natures as really existing and our observations as really existing and therefore we must accept external reality as really existing.

A good model of world thought can be built by considering the difference between man's observation of the material world and man's self-awareness. This is done well in 'Alija' Ali Izetbegovic's book "Islam between East and West".

The Islamic framework

Surah 51:Verses 20-21

On the earth are Signs for those of assured Faith

As also in your own selves: will ye not then see?

The elements of our new framework of knowledge have now been examined and compared briefly with the assumptions of the old framework. I am now in a position to describe an Islamic framework for the basis of human knowledge.

Observation and reason will convince human beings of certain things. This is in our nature. This certainty can be called knowledge in the sense that I described above. Within these limits it is possible to become convinced of the existence of Allah (i.e. we learn that something we then call Allah must exist). I will be considering two broad categories of evidence by which people become convinced. The first is through contemplating the universe in which we have been created and the second is through considering the phenomena of prophets, in particular that of the prophet Muhammad (Allah's peace and blessings be upon him) and the message he delivered - the Qur'an. Once someone is convinced of the existence of Allah, they must ask themselves what 'Allah' is and what Allah does. Since knowledge of such matters is beyond our perception we must rely on the information given to the prophets of Islam. This brings in the third source of knowledge into the Islamic framework - revelation.

The sole purpose of revelation is the guidance of human beings to good morals.

For this it is necessary to explain to humanity some of what exists beyond our perceptions. The words of revelation must however be taken from human experience and perceptions. Such explanations are therefore inevitably allegorical or metaphorical.

If someone accepts Islam and becomes a Muslim that person in essence is making only one assertion. It is that s/he accepts the Qur'an as a true revelation from Allah. This is reflected in the shahada which is the declaration of faith and which is sufficient for someone to become a Muslim under Islamic law. This declaration of faith says:

I bear witness that there is no divinity except Allah and

I bear witness that Muhammad is His messenger.

This introduction of a third source for human knowledge is the only issue which separates the Western Islamic mind from the Western non-Islamic mind.

I have already indicated the closeness of the Islamic positions to the assumptions in the existing scientific approach to human knowledge.

The evidence of Allah that convinces us comes in the form of 'signs'. The most direct form of sign is a clear miracle, which happens through a prophet. Other signs may be a discovery of something of reality or in nature that makes us consider the design in the universe. Others may be inside us: we realise that the belief in Allah and all that it implies fits perfectly with our human nature- it is like the key to fit the lock, unlocking our potential. .

Signs present people with facts of reality including facts of their own natures which make them think. They present challenges that say 'your theory of reality needs corrections'. These corrections invariably include accepting the existence of Allah and the authenticity of his prophets.

In Islam the primary piece of evidence is the Qur'an. It is a book full of signs. It claims to be internally consistent to perfection and it claims to be consistent with external reality to perfection. It claims that no human being or any collection of human beings could write a single Surah (chapter) with such merit as those of the Qur'an. All these are testable claims. That they have remained repeatedly confirmed throughout its 1400 year existence is a demonstration of the continuing miracle of the Qur'an.

It may seem that this new, third, source of knowledge - revelation - is quite different from the knowledge we have today for science, however, this is not so.. . It is useful to compare what we actually use as the method to find knowledge. We rarely go direct to the sources outlined above (reason and observation) . Instead we use the universal expedient of the written word. We simply try to make sense of what we read. This is the most common way that people absorb and have absorbed knowledge. It is this route to knowledge which is mentioned in the first words of the revelation of the Qur'an:

Surah 96: AL ALAQ (THE GERM CELL)

(1) Read in the name of thy Sustainer, who has created - (2) created man out of a germ cell!

(3) Read - for thy lord is the Most Bountiful One (4) who has taught [man] the use of the pen- (5) taught man what he didn't know.

(Translation by Muhammad Asad)

This section has looked at what we know from the perspective of considering defined sources of knowledge: Observation, Reason and Revelation. This has meant that the concentration has been on definition of these sources in the same way as you might define objects. However, having looked at these 'sources' we can now more readily identify them as processes of the mind which lead to us arriving at conclusions and making decisions based on those conclusions. In the next section we consider the processes of reaching knowledge and the ways in which we can choose to do this well or badly. This lead us into a discussion of the 'sin of disbelief' in Islam and a good understanding of what it is.

The sin of disbelief

'Disbelief' is something that comes from the way we think. Indeed all our 'beliefs' are the result of the way we think; the way we weigh the evidence; the way we decide on which course of action to take. Our 'beliefs' are our conclusions. Consequently the 'sin of disbelief' must be equivalent to the sin that causes disbelief i.e. 'Bad thinking'.

Even though it is fairly clear what is meant here, I am generally reluctant to use the word 'belief' since it has the sense of something guessed and without foundation. The Islamic word that is most often translated into 'faith' or 'belief' is imân, which has quite a different connotation:

"Unlike the faith of Christians, the imân of Islam is truth given to the mind, not to man's credulity. The truths, or prepositions, of imân are not mysteries, stumbling blocks, unknowable and unreasonable but critical and rational. They have been subjected to doubt and emerged from the testing confirmed and established as true. No more pleading on their behalf is necessary. Whoever acknowledges them as true is reasonable; whoever persists in denying or doubting is unreasonable."

[Isma'il Raji al Faruqi, *Al Tawhid: Its Implications for Thought and Life*, IIIT Publications

1992]

Indeed the Qur'an is full of prescriptions to use the mind and presents many arguments and evidences which I shall cover in due course. This is summarised in the Qur'an in verses such as these:

"Now have come to you from your Lord proofs to open your eyes: if any will see, it will be for (the good of) his own soul; if any will be blind it will be to his own (harm): I am not (here) to watch over your doings."

[The Qur'an 6:104]

Say thou: "This is my way: I do invite unto Allah on evidence clear as the seeing with one's eyes, I and whoever follows me: Glory to Allah! And never will I join gods with Allah!"

[The Qur'an 12:108]

It is also useful to note here that the word usually translated as 'to disbelieve' is 'kafara'. This has the literal meaning of 'to cover up' the implication being that those who disbelieve are covering up something; hiding it from themselves and / or others. I will come back to this point later.

In Islam you can only be guilty of the 'sin of disbelief' if the message of Islam has been delivered to you. Bad thinking can only take hold when the evidence and arguments have been clearly presented.

. To follow on to the next stage of this explanation of the sin of disbelief we have to examine what thinking is and how we can go about reaching a workable common starting point on what constitutes good & bad thinking.

What is 'good thinking'? What is 'bad thinking'?

I wish I could answer this in a few simple sentences but it is not so easy. There are many factors that go into good thinking and into bad thinking. As a consequence there are many approaches to explaining it. My approach with this will be to try to establish common ground with the reader and progress from there. Different readers may well accept different levels of common ground. To facilitate this I will try to establish the most basic fundamental common ground. Where there is an easy step where the reader already accepts the conclusions of an argument I will try to add a link so that s/he may skip the relevant material and get on to the next argument.

Before I can start to justify saying that some thinking is good and some thinking is bad it is necessary to find an acceptable definition or explanation of what thinking is:

The basic sources of knowledge: observation and reason, should be considered in terms of processes of thinking: search and inference. The search is an attempt to use our faculties, such as our senses, to identify relevant information; the second is the process of reflecting on what we discover and drawing conclusions through using reasoning. I will use the verb 'to think' in a very general way. Not only is it the process of reflecting on what the senses perceive but it is also an interpreter of the senses. It is quite possible to hear but not to listen. Listening requires that the mind is engaged in interpreting the senses. For the purposes of this explanation I shall consider 'listening' to our senses, to be part of thinking. This is of course only a convenient definition, since certain aspects of listening or seeking information will necessitate action that could not easily be described as thinking.

Thinking can roughly be separated into 2 processes: searching and inferring. These processes are sometimes inextricably interlinked but it is often instructive to see how they can be separated. We search for 'certain objects' and then we make inferences from and about the objects we have found.² Our preconceived ideas about what we are searching for may well influence what we find as they may also influence what we infer from those objects. As it stands this definition isn't very useful this is because thinking is essentially a process of exercising free choice. Free choice to reach conclusions and free choice to make decisions about future thinking. Whatever limits I might think I have discovered enabling me to describe thinking more narrowly I can in principle think in another way beyond and outside those limits. (e.g. if I discovered that I tend to make bad decisions because I am biased towards my own ideas, then I can change that). This is very closely related to arguments surrounding free will, which I won't go into here..

For this reason the study of thinking revolves around understanding how we ought to think. The study of thinking is probably the only academic study where the words good and bad are regularly used as descriptive terms of reality(see below). Secular academic studies such as chemistry and physics are usually considered to be studying how nature works and doesn't attribute any value to any particular aspect of it. (A possible exception is Physics where some theories are preferred by some people over others because of their aesthetic value) In the study of thinking some thinking is good and some thinking is bad. This leads to a paradox that academics get themselves into, and it is this paradox that I believe lies at the heart of the flaws of current thinking. It is the understanding that says

"It is a fundamental part of good thinking that in reality it is nonsense to talk of good and bad. Reality just is." Or - put another way- "every study should be value neutral - and that is good". This is a lie and a self-contradiction at the heart of the 'modern' mind and I aim to replace it with the statement:

"Good and bad are determined by what is good thinking and what is bad thinking."

[Perceptive Muslim readers will recognise in this formulation a strong hint towards the hadith that says "All deeds are judged by intention." i.e. a deed is judged good because of its good intention.]

Good thinking is often referred to as being rational thinking. Indeed the two terms are often used synonymously. Our next step is to examine the definitions that people have tried to give for 'rational thinking' and see how adequate they are.

How can rationality be defined?

For the purposes of this discussion I will take one definition from a respected academic in this field. Jonathan Baron in his book "Thinking and Deciding" [Jonathan Baron, Thinking and Deciding, Cambridge University Press 1994] chooses to define being rational as

"the kind of thinking we would all want to do, if we were aware of our own best interests, in order to achieve our goals."

[ibid. p3]

He then goes on to categorise thinking as being about decisions, beliefs or about the goals themselves.

Language and choices of definitions of its words can of course be highly subjective matter but I find this definition particularly inadequate because the choice of goals is entirely left to irrational and subjective choice and can easily be wrong. For example my goal could be to justify the equation $1=0$ for which I would have to use very irrational arguments. If we build in the requirement that the goals are being, or have been, rationally set then we have a circular definition where any irrational goal would lead to completely irrational thinking which might, for example, be quite illogical. Then, this type of thinking would reinforce the irrational goal!

We cannot use this as a definition- at least until we have some clear refinement of it. Baron acknowledges this further on

"When I argue that certain kinds of thinking are "most rational" I mean that these help people fulfil their goals. Such arguments could be wrong. If so, some other kind of thinking is most rational."

[ibid. p17]

If we are to understand from this that 'people' means any person and therefore any goal then we still have the same problem. However, his arguments make sense because they appeal to the fulfilment of goals that people generally have. In other words if he uses the word people here to mean 'people in general' then rational thinking is defined (at least in so far as goals are set) as being what people generally do.

This is a fairly major weakness in this attempt to define rationality in purely objective terms. You cannot describe rational thinking and forget that the criteria are themselves a matter of value judgement, such as the judgements made when setting goals. If one leaves the subjectivity of such value judgements in place then the objective approach fails.

Taking Baron's definition of rational from a different angle we could well ask what does it mean to be "aware of our own best interests"? This, in contrast to the above description, presupposes that there is such a thing as 'best interests', which for all intents and purposes we can take to include the goals we set. This is closer to the position I shall take. There are such things as our own best interests, which include what our goals should be. We may not know perfectly what they are but we must assume that they are there, for without them any attempt to define rationality is self-defeating.

The goals we set, and therefore the very definition of rationality is governed by moral choices - by what our goals should be.

"Unlike many other fields of psychology, such as the study of perception where the emphasis is on "how it works", Much of the study of thinking is concerned with how we ought to think, or with comparing the way we usually think with some ideal."

[Ibid. p16]

The study of thinking is the area in which the 'Is-Ought' problem is closest to being resolved. For to study thinking we must study what is 'good thinking'. The Is-Ought problem can be stated as "It is impossible to infer, by any logical means, a normative statement from a descriptive statement." i.e. you cannot infer from any statement of the form "A is the case" the conclusion that "John ought to do X." i.e. "Is" and "Ought to" . If we want to break out of this we must make value judgements. Using statements of value we can infer normative statements. For example, If I said "It is raining outside. Therefore you ought to take an umbrella." it would be an illogical inference. However, if I say "It is raining outside. It is good for you to avoid getting wet by taking an umbrella. Therefore you ought to take an umbrella." it is clear that the 3rd statement follows from the first two. The Is-Ought problem can therefore be seen as a matter of value judgements; how do we judge that something is good for someone - or for ourselves?

In these pages I am attempting to map out the solution to this problem by asserting that there are aspects of the way we think which we are morally responsible for - there is good thinking and there is bad thinking. There are ways of thinking that you ought not to indulge in and ways of thinking that you ought to adhere to. Once we have an 'ought to' statement accepted then it is possible to derive many other 'ought to' statements and we have a consistent 'rational' framework for a system of moral guidance.

Some examples of aspects of good thinking.

Returning to the description I brought up earlier, thinking broadly consists of two essential processes: searching and reflecting. Good thinking requires that we do enough searching and reflection about what we have found in order to guide our actions towards what is good for us. Good thinking also requires that we do not think so much that we don't act enough.

There are various ways in which we try to prioritise the searches we make and ways in which we choose to reflect or infer from those searches. How we prioritise these searches is of critical importance in determining whether the thinking is good or not.

In the Qur'an we find a very important verse through which we can draw the parallels firstly between the search element of thinking and 'listening' and secondly between reflecting or inferring and 'using our reason':

They will further say: "Had we but listened or used our reason we should not (now) be
among the Companions of the Blazing Fire!"

Surah 67 Verse 10.

As I mentioned earlier, good thinking cannot be defined in terms of being successful at achieving goals that are in contradiction with reality. So we can start our description of good thinking by saying that one of the most important elements of good thinking is that it results in best knowledge of reality. Another way this could be put is that the overriding priority in the way we choose to search ought to be to seek the truth.

Related to this is intellectual honesty.

Standards and beliefs are useless unless a student has the goal of discovering the truth and making good decisions. Surely just about everyone has these goals to some extent, but the real issue is the strength of these goals relative to others. For example, good thinkers frequently find themselves reaching conclusions that they or their peers do not like; a strong commitment to "intellectual honesty" is required if standards of thinking are to be maintained.

[Jonathan Baron, Thinking and Deciding, pp131]

To say that you do not like the conclusions you reach reflects that you would have liked to reach a different conclusion – that is, your goals were at some level to reach a different conclusion. This dislike reflects a preference for previous beliefs about what would be concluded. This bias for previous beliefs is a very important issue in judging good or bad thinking and will be discussed in more detail later. To hold such biases is easier than having to remember new conclusions - it is a more lazy approach to thinking. To attempt to eliminate such biases is a more active approach to thinking. Lazy thinking is bad thinking so we must attempt to be active in considering new possibilities with an open mind.

Rejecting old beliefs can also have social costs, which I might call a political investment such as when someone makes a claim so that writing off the claim has a political cost. Someone could be overly concerned about what others think about them so that they may be tempted to be thought of as not making mistakes rather than someone who makes mistakes (though they learn from them). This is often a serious block to intellectual honesty. It is much easier to exist in an environment with like-minded people (i.e.

people with the same beliefs) than to stand out for the conclusions you reach and attempt to convince others of them. To stand out in such a way requires strong intellectual honesty.

Before I go on to discuss Baron's formulation of this aspect of good thinking, I should like to mention a common attitude with regard to intellectual honesty that may result in atheism . Instead of realising that not liking the conclusions one reaches is from a healthy albeit wrong set of previous goals, they conclude that to have any goals in your thinking leads to intellectual dishonesty. This attitude gives us the equation of true intellectual honesty with the complete absence of goals. This is not true. Goals are always present in thinking and have driven the most brilliant thinking that human beings have ever achieved, it is only when those goals are wrong that they hinder good thinking. Some examples of this are inconsistencies and lack of symmetry in existing theories of physics which led physicists to seek a more symmetric and beautiful theory. The study of chemistry began by trying to find the various properties of materials so as to bring benefit to people. Indeed much research in science has been and is directed at the possible benefits new knowledge may bring.

The next thing to look at is what makes a good search?

What makes a good search?

Active open mindedness

Baron's criteria include allocating importance and searching in accordance with this, confidence appropriate to the amount & quality of thinking done, fairness to other possibilities than the one we initially favour. The search needs to be active rather than passive: we ought to be active in seeking out knowledge and we ought to be open minded in considering new possibilities, new goals etc.

To illustrate one aspect of the way we search, consider the nine dots problem.



Draw these dots onto paper. The task is to join all nine dots together without removing the pen from the paper using no more than 4 straight lines. (Drawing back over the same line counts as drawing another line.)

Give it a try. If after 5 minutes or so you still don't get it turn the page for a clue:

The clue is:

You can draw the lines outside of the box. To see the solution turn to the end of the book.

Justifying active open mindedness as part of rational or good thinking is done easily from the perspective of Islam and I will return to this further on. From an academic's point of view they will probably recognise the elements of active open mindedness as continually being taught indirectly within their (scientific) institutions. Quite simply within the realm of seeking verifiable knowledge of reality these principles are generally found to work. Whether they work for goals that aren't as noble as the seeking of knowledge is not so clear.

If you are not 'actively open minded' in your thinking your thinking may well become quite bad. Examples to the opposite of 'active open mindedness' include:

- Biases in the search. *
- Inactivity in the search *
- Searching not in accordance to the importance of what the search is for *
- Confidence in the results, not appropriate to the amount and quality of thinking that has gone into reaching them. *

It is useful, now, to examine these in some more detail and how they relate to morals concerning thinking.

What makes a bad search?

Biases in the search.

In the thinking processes where we are searching for evidence, we may be searching for clues and evidence by our actions or by searching our memories for something that may shed light on our investigations. There may be a number of biases in the way we think. We often search in a way that favours finding results that appeal to us already. A good example is in thinking about history. People sometimes want to demonstrate, for nationalist purposes, that their nation or people or culture is the best and so in searching for evidence, they look only for evidence and arguments that support their case and conveniently leave out searches that might yield evidence against their positions. To recognise this as bad thinking one has to recognise the goal of demonstrating that one nation is better than another (whatever better means). The search should really be concentrated in what is thought to bring the most decisive evidence, whether or not it is pleasing to the thinker. However this again depends on the goals of the thinker. Why should the thinker have intellectual honesty as the driving force? Where this becomes bad thinking is where intellectual honesty is compromised. It is of course a matter of degree and the more compromised the more serious this is (as part of the sin of disbelief)

Inactivity in the search

Inactivity in the search is really just another form of bias in our thinking. It results from trying to maintain intellectual honesty at the same time as keeping cherished beliefs, beliefs that are in possible danger if the search is too thorough. However, searching takes time and effort and you may have other priorities in life to spend your efforts on. There is a perception in this of diminishing returns, i.e. that the more you search the less significant the results will be. However, bad thinking in this respect will be in proportion to the degree of self-delusion about how whether the returns are diminishing or not. What these returns are and how well they fit into intellectual honesty is of course a value judgement decisive in the way we think and in what good thinking is.

Searching not in accordance to the importance of what the search is for

What is important is very much a value judgement; the importance will depend on what your goals are. If good thinking is to imply that you search in proportion to the importance of what the search is for, then it is first essential that the goals themselves are right; we must first search for our goals. What is important? I mean what is REALLY important? This is the most important question. The question can be asked as "what is good and what is bad?" or "What is the criterion for deciding good or bad?". If there is no absolute good and no absolute bad then what is important? Nothing. And if nothing is important then no thinking can be good and no thinking can be bad. (I will return to this theme in depth later) What is really important is whether anything is really important? Whether there is a single judge who determines what is good, useful, important and what is bad, damaging and useless, or just unimportant. This is the most important question: Does the judge exist, does God exist? - It is this question above all that deserves time and effort spent searching.

Confidence in the results, not appropriate to the amount and quality of thinking that has gone into reaching them.

As far as this relates specifically to future searches it manifests itself either as arrogance or as timidity. Arrogant people say, "I know - therefore I don't need to listen". Such an attitude prevents the search process before it even starts. Timid people say, "there's no point listening - I couldn't understand". Both these approaches make thinking bad, though arrogance is usually worse because timid people tend to follow arrogant people.

The next section goes on to discuss the part of thinking through which we reflect on the results of the searches. Of course the split is not clean between these two processes but it is helpful to use these splits in explaining good thinking.

What makes good reasoning?

Often the thing that comes to mind when we think about reasoning is logic. Logic has many systems generally stemming from the Greek philosopher Aristotle. We can talk of categorical or propositional or predicate logic. Here are some typical examples

of categorical logic: *

All A's are B's and all B's are C's - Therefore all A's are C's

Some A are B. No B are C. - Therefore some A are not C.

of propositional logic: *

If there is an F on the sheet of paper there is an L. If there is not an L on the paper there is a V. Therefore there is an F or there is a V.

Predicate logic combines these two and as we get deeper into the study of the logical use of language we come to semantics where we are no longer explaining the use of language but the meanings of words become restricted by limiting their use to meanings consistent formal definitions.

This type of reasoning, which I will call 'formal' logic, is only concerned with reaching conclusions with certainty from certain accepted statements. It is not nearly enough to describe the process of reflection because most evidence we get is not absolutely certain. To think logically in such a way that you follow the formal logical constructs mentioned here would also not be enough because it doesn't cover the search process. Good thinking is as much about finding the evidence in the first place as it is about deriving conclusions from it.

All of scientific knowledge is based on reasoning from imperfect knowledge; indeed none of what we know is 100% certain. We have to deal with probabilities and hypotheses. This gets close to a related issue, which is whether we can ever be confident that any statement we make about reality is absolutely true. We cannot. - Human knowledge is inherently imperfect and formal logic doesn't consider this.

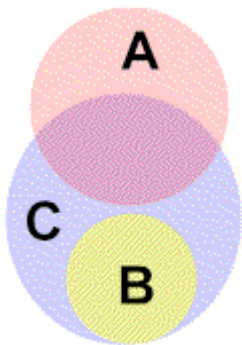
Our 'beliefs' are generally formed by hypothesis testing and on the balance of probabilities. This can become subject to more rigorous tests than simple guidelines for good thinking in a search process. Sometimes a judgement on the balance of probabilities is clearly dependent on definite factual observations that frequency determines the probability or that the events are logically exchangeable. (e.g. tossing a coin and getting heads or getting tails). However, often judgement of the weight given to individual items of evidence may be a matter of personal opinion or choice. This latter situation is the case in most everyday situations; we justify our probability judgements based on the weight we give to certain pieces of evidence.

Whether this aspect of thinking is good or bad is dependent on a number of ways that our reasoning can go astray.

What makes bad reasoning?

There are a number of ways that formal logic reasoning can go astray. These tend to have the same essential traits as the failings people have in their searches. These problems are usually to do with not thinking carefully or patiently enough.

An example of this is given here: No A are B. All B are C. What is the relation between A and C? Many people say that no A are C. However this is wrong. More careful thought reveals the possibility that we can only say that 'some C are not A'. The easiest way I know to understand these syllogisms is to think of sets as represented by shapes:



It is now clearer what is being said. This is fully analogous to insufficient search. The difference here is that in principle there is a clear limit to the search in formal logic where you can be clearly convinced that you have deduced accurately all that can be deduced from the statements given.

However, bad forms of apparently formal logical reasoning can often come from having a difficulty in separating previously held convictions from the process of reasoning.

An example of this is trying to reach the logical conclusion here:

Some ruthless men deserve a violent death. Since one of the most ruthless men was Heydrich, the Nazi hangman:

- . Heydrich, the Nazi hangman deserved a violent death
- . Heydrich, the Nazi hangman may have deserved a violent death
- . Heydrich, the Nazi hangman did not deserve a violent death
- . Heydrich, the Nazi hangman might not have deserved a violent death
- . None of the given conclusions seems to follow logically.

People tend to answer this in accordance with their beliefs and not to hold to the strict logical interpretations. The real answer to the above problem is #5. But most people choose 1.

Aristotle who developed this form of abstract formal logic also identified common logical fallacies that are still used in much of the current political talk and other areas. They all flow from mixing into the logic preconceived ideas of reality to give the appearance of a sound argument when in fact it isn't an argument at all. I will highlight only a few to identify the sort of thing that happens.

Ad hominem is where the argument is directed 'at the person' for example saying that the Nazis supported eugenics therefore eugenics is bad. This argument is flawed if we are to consider it strictly in terms of logic.

Terrible people sometimes have good ideas. The flaw however here is only in the choice of mode of expression. It is not a logical argument but is put in those terms. For example, I might note that the Nazis also developed highways in Germany for the first time and developed the economy well in the early years, but does this mean I can use this to assert that building highways is bad? Of course not. The key to understand the difference is that the former argument makes the assumption that eugenics is already a bad thing. These types of argument use such built-in assumptions and put them in a way that the argument is loaded as in the question: "Have you stopped beating your wife?"

The 'Appeal to force' builds in the assumption that 'might makes right'. I lose count of the number of times that foreign policy is justified on grounds which if the names were changed to some other people then the argument would be completely rejected. Consider the labelling of Sudan as a terrorist-supporting nation allowing the imposition of sanctions. Though no evidence has been brought forward that Sudan has ever supported terrorism the charge sticks because it is made by the big and mighty US. But what of the US itself? Is it not in the US that the IRA freely and openly collected almost all of the funds it used in buying its weapons for terrorist acts? Should not the Europeans have put sanctions on the US for what they did? This is more than simply a logical fallacy it is a completely immoral deception and falls squarely inside the area of what can be called bad reasoning. The underlying perceptions of reality, which allow people to get away with such transparently false arguments, are really a problem. In the case just cited the assumption being forced on the audience amounts to 'the US is always right'.

Another is the argument from ignorance. This is where a lack of evidence is used as proof of something. This forces the assumption that there has been an exhaustive search and there is no more evidence to find. This is a key example of the kind of arguments used sometimes by people trying to disprove evolution theory. But when the evidence is found their arguments fall apart. It is more accurate to consider what the actual search has yielded and to offer a qualified argument based on that.

Another is the 'appeal to multitude' e.g. " Most people smoke brand X. Therefore it is the best brand." Here the conclusion does not follow because most people might have bad taste. The assumption being forced here is that most people will always choose the best option. I remember being asked in school if I believed in God and if so why. I answered that I believed because so many others believed in God. It was the realisation of the fallacy in this argument that made me start to question my intellectual foundations more closely.

These types of arguments, as I mentioned earlier, depend upon accepting the statements (or forced assumptions) as unquestionably true and this is not usually the case. Usually, the premises of the way we reason are to varying degrees uncertain.

In what ways can probabilistic reasoning be bad?

Almost all the real reasoning we do is based on imperfect knowledge. It is rare that we are dealing with situations in which we can have only given statements accepted as true as is the case in formal logic. Indeed even when trying to reason in purely formal logic people often bring in their imperfect knowledge of reality. We reach conclusions from our reasoning in a number of ways. Sometimes we have anecdotal evidence, sometimes we hear about surveys, sometimes we listen to people we trust. All these routes are used in everyday life in how we make decisions about what we believe and in what we choose to do. They also figure strongly in science, although science has a more earnest debate and can often rely on experimental evidence that is beyond dispute.

We weigh up the evidence in front of us and see where the balance of evidence lies. Sometimes it is a marginal issue. Sometimes there is a clear winner. In this process however there are a number of ways that we can combine the various bits of evidence in mistaken ways.

One way that people make mistakes can be called the 'gamblers mistake' since many gamblers make it. It is to assume that the outcome of an event is dependent on previous events when it isn't. For example if the roulette wheel comes up black three times then the mistaken gambler thinks that there is a higher chance that it will come up red than black on the next spin (actually of course it remains a 50/50 chance). This invents a dependency and hence causal relationship between events where there is none. I suppose this might be termed a superstitious mentality. Other errors of this sort can be attributed to taking short cuts in working out the maths of combining probabilities. This can be seen another manifestation of insufficient search.

Another aspect of bad thinking people commonly make when weighing up the evidence is to put too much weight on evidence that confirms existing beliefs. Sometimes this is shown in the choice of tests made. Tests are made so as to provide evidence of existing beliefs where tests that might provide evidence of alternatives are not chosen. A good way of avoiding this mistake is to stay remote from the issue that is being considered. There may be good reasons why you don't want to consider the alternatives thoroughly and equally - change is difficult and has a cost. However, for the moral ideal of discovering what the truth is; what is going to be the best final result; what is the best solution for everyone, you need to ignore the changes that you must yourself make: The cost to you of changing your thinking and habits on a given matter is negligible by comparison to the total good for all by sticking to a pure detached search for truth.

Thinking about Morals

When we try to think about morals we often find ourselves in difficulty. Morals are often passed down from generation to generation as traditions or maxims of lessons learnt. However, we face problems when we try to understand whether they are accurate or not. Before I tackle that, we must be clear on what a moral is. Morals describe how we as individuals or as groups should act in certain circumstances. A moral is moreover universal. What is right for someone to do in given circumstances is also right for someone else in similar circumstances. A moral can be stated in terms of 'If circumstances are X you should do Y.

However this explanation of what morals are leaves us with a significant problem. Can we logically derive any morals? Well many people argue we cannot. Formal logic doesn't allow drawing conclusions of the sort 'you should do Y' from any statement describing reality as described in terms of the categorisation that formal logic uses. This 'Is-Ought problem' was mentioned earlier when discussing definitions of rationality. However, we become able to talk sensibly and logically about moral statements only if we accept the reality of value statements.

The remainder of this section is concentrated on trying to bridge the is-ought problem by asserting the real value of certain ways of thinking such as 'Logical thinking is good'. This 'real value' implies that there is some true value to our actions; something universal to how we behave that makes our actions worthwhile. It is this that makes an action morally virtuous.

These assertions have their limits, indeed they could be rejected out of hand if someone takes a stand that asserts that such values aren't real. Such a person has a point. We did not reach statements such as 'Logical thinking is good' from within the framework of formal logical reasoning. It was in fact an assertion from the outset. It is made because it is probably going to be accepted by most people with sound minds. However, I will now add to that general statement the assertion that value judgements are real and important. Instead of thinking in terms of abstract categories of things, as formal logic requires, we should become comfortable with values associated with things. Instead of saying 'logical thinking is good', we can say that 'good thinking includes using formal logical reasoning'.

How this can lead us to a more general set of morals should become clear in the following pages.

Moral relativism is a recent development, which asserts that the only reality to values is the reality to the holder of those values. This is however a complete misuse of the word 'moral', since (as is mentioned above) a moral has a universal implication. If I believe a moral then I believe that it is true for all people who are in similar circumstances. I may not agree with others on this or that moral but the disagreement must be put down to imperfect knowledge. It is certainly not the same as saying that both our judgements are right. In moral relativism, values are asserted to be completely subjective - they have no objective reality other than their manifestation in the choices people make.

If we accept the ideas of moral relativism we must admit frankly that there is no such thing as good thinking - I might like deceiving myself and paradoxical illogical thinking. Would it then be the morally right thing for me to do?!

How can I debate and discuss any matter with someone who believes and talks nonsense half the time and feels there is nothing wrong in doing so?

If values aren't real then there are no morals and there is no good thinking, there is no particular right choice of sources of knowledge and there is no real knowledge only assertion. Of course this argument could be rejected but to do so is nonsense.

The ultimate

There is a very important consequence of dealing with real values. If what you're doing has real value then your life has (potentially at least) real value and then so does humanity and existence in general. That which is good fulfils the purpose of creation and that which is bad opposes it. This means that what you do in life matters; how you live matters. You can either live in such a way that your life contributes in some way to the benefit of your life, humanity, life in general, existence, or you don't.

If there were no purpose to existence then everything you do would be utterly worthless and futile. At the end of it all, whatever you did with your life, whatever you became is completely irrelevant; nothing you did was worthwhile.

You may as well have never existed.

If on the other hand there is purpose to existence then what you do and what you are is important. You can make a real difference. There needs to be a judgement of the fulfilment of this purpose, of the real value of your role in existence. That judgement must be by God - no one else is qualified.

It is worthwhile being alive.

We have now reached the topic of belief in God. Many people in the West have already got well-developed concepts of what God is - though this is changing with people in Europe, where religion itself is almost taboo as a serious subject. The arguments that have been presented so far are really concerning God as the ultimate source of all real value. Anything that is really good flows from God's compassion and mercy: in Arabic one would say God is Ar-Rahman.

Disbelief in God therefore has the primary implication of disbelief in morals and values. If you disbelieve in God in the sense of Ar-Rahman then you assert that none of your deeds can have real value.

The sin of disbelief in God then is a profoundly important one since it is profoundly tied up with sin in general. The subject of the concept of sin in general will be dealt with later, but for now let us consider the evidence which is relevant for this belief. The sin of disbelief in a particular revelation will also be considered later.

The strength of the argument so far lies in appealing to what makes sense to human beings. Human beings need to value and be valued and it makes sense to us that those values are real.. There is nothing weak in making such an appeal; indeed the appeal to good thinking is similarly an appeal to part of human nature. An appeal for good thinking includes an appeal for consistency with what is already accepted and for the acceptance of clear evidence. Muslims commonly know Islam as the natural way of life (din ul-fitra) because it fits this human nature perfectly. Another aspect of this argument flows from the in-built sense of justice in human nature, which requires that there are right and wrong deeds and that we are accountable for them, though to discuss this now in depth would take us off the track.

The nature of evidence which convinces us of the existence of real value is the type of evidence which brings about in us a sense of awe; of appreciation; a recognition of beauty and the conviction that all this cannot be here for no purpose; it cannot be just an accident of no consequence; it cannot ultimately be worthless like an idle game.

The design argument

The design argument is often presented in a fairly confused way. It often seems little more than a declaration of being closed minded : " I cannot understand how natural selection could have made such wonderful creatures!" How could this have come about through chance?"

Once an explanation is given, the person putting forward the design argument generally fails to accept the explanation although many people are willing to concede that it offers at least a plausible explanation if not a quite powerful explanation of how creatures came into existence.

To make things clear: There is nothing in the Qur'an which contradicts the explanations of the origins of life and its evolution that are found in contemporary evolutionary theory. In fact there are some statements that confirm parts of that theory such as

.... - and [that] we made from water every living thing? Will they not then [begin to] believe?

Surah 21, Verse 30:

When I look at the wonderful forms of life around, I appreciate their beauty and their design. Evolution is reasonable and based on some solid evidence. It is, however, more difficult to prove because it is hard to contrive experiments that take place on a reasonable time scale.

The design evident in life is even more impressive when we can start to understand how it happens. We can then appreciate the design process as well. If we appreciate something we value it. As we study the life around us we see the design process of natural selection at work making life forms embody survival lessons from their environments more and more, we find it more and more impressive & more and more beautiful. We then exclaim that all this could not have happened for it simply to end in nothing; that existence should be more than a cruel joke or an idle game signifying nothing.

This point is at the heart of the design argument. A design is such not only because it has a designer but because that designer has some good purpose for his design.

Life's purpose is to learn about reality. The lessons are embodied largely in its genetics.

Man's purpose is to learn about reality, think about it, appreciate it & hence come to know and adore its ultimate source and destiny - i.e. to worship and serve Allah.

Ultimate explanations

An important part of good thinking is to understand the point at which something requires no further explanation. Most people are aware of the series of questions that a child may ask as explanations of the world are given to him or her. The child continually asks "Why?" no matter what answer is given. Usually the parent runs out of answers at some point and says something like "It just is!" or "Because I say so!". These are not good answers. They are, in the first case, unreasonable and in the second case a bold-faced lie. It is much more accurate and reasonable to say "I don't know" once you reach the point at which you have no more answers.

We should always expect that answers exist to the question 'Why?' (or 'How?') - it is an essential part of our reasoning nature. If at any stage in the explanation I answered by saying 'It just is.' I would rightly be accused of being unreasonable. No one could reason with me because I would be stating that there is no reason for the explanation I have just given. To take such a position is to assert that your explanation is the truth. This, besides being unreasonable, is very arrogant. It doesn't recognise the limitations of human knowledge as mentioned in the section on the basis of knowledge. In Islam the first characteristic of the faithful (muttaqin) is belief in the unseen (al-ghaib). This stresses that the first characteristic of a Muslim is acknowledgement that his knowledge is in principle limited and that part of reality is always unknown because it is unseen.

Asking 'why?' can be split into 2 meanings. The first is to mean 'How?'. This question digs ever deeper into understanding the causes and descriptions of reality. The second meaning is 'So What?!' and boils down to asking what is the value of something. I have partially dealt with this element earlier. The ultimate answer to the 'So What?!' type of question is the purpose of all existence. It is why we exist.

In searching for ever better explanations of how existence behaves we always expect a deeper level of description. Whatever answer I give to describe some aspect of reality, it is always rational to ask why in the sense of how. For example, Why is this piece of paper white? - Because the molecules in it scatter the light. Why? Because the chemicals in the paper reflect all wavelengths of light so that on average all wavelengths combine to make the reflected light white. Why do the molecules reflect light?.... and on and on and on. There are still many, many unanswered questions in science.

The point at which our reasoning comes to a stop is where our knowledge ends. Asking for explanations beyond that must yield the answer "I don't know". However, you may still theorise and ask 'what if ...' type questions. The point at which this questioning could end would be the point at which the concepts are beyond human understanding; when the explanation lies outside of human experience and therefore is in essence inexpressible in human language. This is the thing of which we cannot rationally ask 'how?'; it is that which, by its nature, we have to say we can't know.

This point in our explanations is the ultimate explanation of reality. It is the ultimate metaphysical reality.

You may have other names for it but it is the same thing - the truth - the beginning and end of everything - God - Jehovah- Allah.

Revelation

So far we have only dealt with the sin of disbelief in God and with the general framework of the basis of knowledge in terms of good and bad thinking. The sin of disbelief in God is essentially the product of rejecting the effort to do what is morally right. This applies to general actions and in particular to exercising good thinking as it would inevitably lead to belief in God as the ultimate explanation of reality in both the senses of the question "Why?" i.e. "So What?" and "How?".

What makes good thinking is at the core a question of sincerity and when one rejects good thinking one is essentially undergoing self-deception of one form or another. It is not necessary to be intelligent to have good thinking - though good thinking may well lead to greater intelligence. What matters is sincerity; wanting to do what is morally right. Someone who practices good thinking is essentially someone with a clear conscience. Insincerity and self-deception are core to the concept in Islam of the disbeliever. The word used for disbeliever in Islam is "kafir" and has the literal meaning of someone who covers up. I could go into many quotes from the Qur'an of the nature of kafir but I'll leave that to the reader to discover for themselves. What I will quote here is the essentials of belief which apply to all people:

...any who believe in Allah and the Last Day, and work righteousness, shall have their reward with their Lord; on them shall be no fear, nor shall they grieve.

Surah 2 Verse 62

This brings in the subject of the last day or judgement day. The need for judgement day can easily be understood once moral teachings are recognised as having real meaning. Moral laws are like physical laws. If I am in a state of self-deception as to the laws of physics I might decide to punch my hand into a concrete wall. It would hurt me a lot but that is the natural law. It is the same way with morals. If I refuse to acknowledge that which is evident to me and I do something to spite it, I am only going to cause harm to myself in the long run. If I deliberately do wrong it is no different from me punching my fist into the concrete I should expect it to hurt and I have no excuse. The difference with morals is that the consequences are sometimes well into the future whereas punching concrete has an immediate consequence.

However, all this only gets us so far. Morals relate to how we should act over such issues as the use of drugs, sexual morals, use of violence etc and this concerns much more than the general principles we have been discussing so far. Morals can be learned to some degree through life's experiences, cultural traditions can get passed on through the generations and sciences can come to some sort of conclusions. However, morals are often considered to be different from descriptions of the physical reality around us and indeed they are. This is the 'Is / Ought' problem again. In the earlier pages I have in a way partially bridged this divide by tackling the very categorisation: we only have 'Is statements' because we keep to a foundation of good thinking which results in our knowledge. That said, we still don't have a firm basis for deriving morals; we have really only asserted the integral and essential nature of moral intent in the way we observe and think about reality in general. How can we approach, for example, the question of the morality of drinking alcohol? To judge an act to be morally right or wrong, we need to know the ultimate consequences of its effects. This we are in principle not able to do, because such knowledge is beyond our ability to know. We can only know a few of the effects. Morals also are not subject to experimentation as are purely non-living phenomena. We cannot morally justify forcing people to behave in certain ways to see the effects. Indeed any forced behaviour cannot be moral because it is not freely chosen. The only real source of legitimate knowledge on this subject is history. History tells us that no culture has ever maintained morality over time without having a strong religious underpinning. This is because the only source of suitably qualified moral

teachings is the ultimate cause and explanation of reality, who is therefore all-knowing and the one who knows the ultimate outcomes - Allah.

From this we see that revelation has been the source of moral guidance throughout history. The question that is critical though is to distinguish between genuine revelation and fake. How are we to know what is true revelation from Allah? To answer this I shall return to the concepts described before in the sin of disbelief. To really resolve the 'Is / Ought' problem we use the principles of good thinking to analyse the evidence that some scripture claiming to be revelation actually is revelation. First we must consider what kind of evidence would demonstrate the truth of a revelation.

The nature of signs of revelation

The nature of signs that demonstrate a source of revelation from God to humanity have changed over time, but have all been to convince people in accordance to the science of their day. In the time of Moses the science of the day was the trickery of sorcery. To know how to impress people with such things was the highest form of knowledge. Moses was given many miracles but among them were that his staff turned into a snake and that his hand shone bright white. In the time of Jesus the miracles he brought were similarly in tune with the best science of the day - he healed people in miraculous ways. These things were all convincing to the people in the sciences of their day. If you had been healed by Jesus or seen the staff turned into a snake you would have had no reasonable excuse to reject the revelation brought by these people. Another thing has always been critical in sciences thought out history, and that is the prediction of the future which is the basis of the usefulness of all science, indeed this is the common meaning of the word prophet in English.

So where is the evidence of revelation today? What would be the nature of such evidence today, which would be convincing to the sciences around now? For that matter what would be convincing to future scientists?

The nature of the evidence is that of the scripture itself - its meanings its style, its knowledge. It claims to be a text that cannot be explained away: - for many reasons the evidence points to the convincing conclusion that it was not composed by any one person or by any group of people. This is known as the *ijaz* of the Qur'an.

The Qur'an had a huge impact on the world. It transformed the Arabs from a bunch of warring tribes into leaders of the most powerful empire that had ever existed. It was the reason why the classical Arabic language has been preserved to an extent incomparable to any other classical language. It was a completely new style of literature that had no precedent and has had no text approach its unique poetic prose with powerful meanings. Although it is sometimes hard to put the meanings into English I will attempt to bring some of this across in a discussion on the opening surah of the Qur'an which is a mere seven verses but which is packed with profound meaning. I will also introduce a couple of examples of remarkable subtlety.

To directly appreciate the signs of the Qur'an it is necessary to know Arabic, because only then can you really see the full range of meanings of the words employed. You can then apply your knowledge of reality to those meanings and appreciate more fully the accuracy and eloquence of the text. To the Arabs of the time its power as a text was profound and a few verses were able to transform the lives of people. This occasionally was partly the result of the context and timing of the revelation which gave a clear meaning to the verses sometimes giving accurate predictions of otherwise unexpected events, but often the listener recognised the text as speaking directly to them and from a position of knowing them intimately as only God could have.

It is sometimes said that you cannot simply read the Qur'an, rather you have to answer it - it challenges you directly from a position of completely unquestionable authority. You must answer. Many people who would like to consider themselves balanced and fair minded are unnerved by the text. They simply don't like to be challenged. It is hard to really read it and earnestly seek to understand the meanings without reflecting on what it means for you.

These things await the earnest seeker of truth when they read the Qur'an, however for now, I would like to consider the evidence which I can easily relate to someone who doesn't speak Arabic. This must inevitably depend on my knowledge of Arabic, which is somewhat limited. I have, however, studied some Arabic in the key areas, which I cover in the following pages. The principal evidence of the Qur'an which I aim to present

is of remarkably accurate descriptions of phenomena found in the Qur'an which have been discovered only recently many centuries after the Qur'an was written as well as the beginnings of some discoveries in the numerical structures in the Qur'an which have become available since the complete concordance of the Qur'an was first compiled in the middle of this century.

These are part of the perfection of the Qur'an is evidence of the perfection of its author. My knowledge is imperfect and any errors I may make in this are mine alone. The Qur'an makes the powerful and important challenge that if the Qur'an were by other than Allah then there would be much error in it. Indeed if you look at any text contemporary with the Qur'an you will find in it many things which when looking back with hindsight we recognise as errors. It is indeed remarkable that none of these have found their way into the Qur'an. To prove there is no error in the Qur'an would require me to go through the whole Qur'an explaining every verse - even then this doesn't prove it against future discoveries. All I attempt to do here is highlight the remarkably accurate statements and impressive structure in the Qur'an and refute some things that could be mistaken for errors. I leave the rest to you.

When I first thought seriously about becoming a Muslim I made a point of reading the whole Qur'an to see if there was anything which I would find intellectually unacceptable. I found nothing of the sort. On the contrary, I found several things that strongly confirmed my tentative newly forming belief.

The sin of disbelief as far as revelation is concerned is closely related to that of disbelief in God. However, there is an important distinction: Disbelief in God is the equivalent of bad thinking. Belief in God is essential for good thinking: it provides the ultimate rationalisation which makes the believer's perspective on reality a 'rational' one and the ultimate goal to what makes thinking really good. Disbelief in revelation, on the other hand is the consequence of bad thinking when encountering revelation. It is possible to believe in God and not accept the Qur'an as genuine revelation. If someone disbelieves in the revelation of the Qur'an then it is not necessarily a sin. It will depend on how good their thinking is, given the knowledge that has reached them. Good thinking implies that the search made was a reasonable one. It is no excuse not to gain knowledge that may be vital for you when it is at your fingertips or even if you need to put some significant effort in. A reasonable search will of course correspond to your estimations of success in the search. For example there is no reason to expect to find banana trees growing at the North Pole. If your expectations are genuinely very low of finding something important, and your perception of the risks of not finding something is not high then you are not guilty for not putting much effort into the search. Your estimations are based on your knowledge. Allah knows what you know to be a reasonable effort. You will only be judged as sinful in your not accepting some particular piece of revelation if your thinking was bad; if you had some lack of sincerity in seeking the truth as to the claims of the Qur'an.

"Ad-din an-nasiha" - the religion (Islam) is sincerity

Saying of Prophet Muhammad (peace and blessings be upon him)

The general concept of sin in Islam

So far we have concentrated on the sin of disbelief in Islam. To wrap up that discussion it is necessary to put it into context within the general concept of sin in Islam. A sin is an act in contrast to the will of Allah. We can act following His will, this is the meaning of the word Islam, or we can fail to pay attention to His will or we can deliberately act against His will. Islam is submission to the will of Allah. The purpose of our existence as Human beings is to worship and serve Allah - to do His will.

This is made clear in the Qur'an:

"I have only created Jinns and men, that they may serve Me."

Surah 51 Verse 56

Yusuf Ali Translation:

"I created the jinn and humankind only that they might worship Me." Pickthall Translation:

The most important names of Allah are ones expressing His compassion towards creation - Ar-Rahmaan and Ar-Raheem. These mean the most full of compassion and mercy (Ar-Rahmaan) and the most giving in that compassion and mercy (Ar-Raheem). The foundation of worship / service to Allah is to become humbly grateful for the great gifts we already have from Allah and as a result to seek to please Allah through serving Him. This happens through gaining knowledge of creation and recognition of the revelation sent by Allah to Mankind and learning to value and appreciate it. We then serve Allah by building in and on that creation to add ever more real value to it.

To serve Allah our intentions must reflect His intentions; our wills must be consciously submitted to His will. The basic principle for us then is to reflect Allah's 'rahma' by showing compassion and mercy towards Allah's creation in the hope, and with the assurance, that Allah will show compassion and mercy towards us.

One of Allah's greatest gifts is the gift of moral guidance through revelation. If we follow it, it brings the greatest benefits in this life and the next. It is in trying to do this that our intentions are purified and it is by our intentions that we are judged.

A fundamental precept of Islam is that Human nature is essentially good. There are many elements to Human nature and each one has the potential to bring benefits.

In general we can say that a sin is committed when someone causes harm to themselves or to others or to any part of creation. The guilt depends on the intention of the sinner. In its most extreme form someone does deliberately harmful and destructive acts rejecting any appeals to do what is for their own benefit never mind what is beneficial for others. They may claim that it makes no difference anyway since existence is pointless and therefore have no gratitude for the benefits they have in life.

The contrast to this is someone who tries to improve himself, others and all of creation. They believe in God and are always grateful to Him for all they have in life. Their works to improve creation flow from their will to please God.

Human beings have the capacity to sin largely as a result of having the capacity to plan. When someone plans their efforts, they need to be able to suppress their natural desires for a time. This is quite different from animals that live from moment to moment obeying their perceptions of the present and their instinctive drives. This is indeed a dramatic difference. Human beings are able to look to the future -

conceptualise it and form an intention to act. This conscious intention can override even the most powerful of our instincts. Through it we have capacity to cause ourselves harm in the short term in order to realise the greater good in the long term. As an inevitable part of this we gain the potential to cause ourselves harm, i.e. the potential to sin.

We cannot see clearly into the future. What we do instead is to believe in some future circumstances and direct our actions accordingly. Taking planning to its logical limits we would try to do what is for the good over all time and certainly for our entire life (in this world and the next). This is the core of trying to do what is morally right. It is trying to do what is for the ultimate good. It is trying to do what Allah wills.

Problems with Christianity

Islam's view of Christianity is that it started off as a religion based in Jewish tradition but accepting Jesus as a prophet and teacher. In time these teachings got replaced by corrupted teachings that Islam rejects: Jesus was not God incarnate and he was not God's begotten son. Islam's view of other religions generally is based on them having received, at some point, prophets which taught the pure monotheism of Islam along with fundamental concepts of the religion such as the nature of sin and forgiveness. These religious teachings have become forgotten and corrupted over time and so God renews His revelation again and again until in the final revelation the message is preserved intact. This is taken to be the revelation given to Muhammad primarily in the form of the Qur'an.

There is much more to Islam's view of Christianity than I shall detail here, however my concern is only to identify the sin of disbelief in Christianity and to compare and contrast this with Islam.

It is quite hard to speak of Christian beliefs without being inaccurate because there is a large variety of sects. What I am referring to here is the form(s) of Christianity that I am most familiar with: namely mainstream Catholic and Protestant Christianity.

In Christianity the disbelief in God and disbelief in revelation are also key sins. They are however somewhat secondary to disbelief in the resurrection of Christ. As a Muslim, I believe Jesus to be a prophet and a great teacher who brought great evidence in the form of miracles. I try to follow what he taught in so far as I trust the sources through which I find out what he taught. This, however, does not make me a Christian. To be a Christian I have to believe that Jesus died on the cross to save Mankind from their sins; that Jesus was God incarnated as a man and that God is Trinity rather than Unity.

It is the acceptance of these doctrinal points that makes one a Christian. If you don't accept these you are not a Christian. (This at least is the definition of Christian that I shall be using.)

Historically many people called themselves Christians who did not accept these doctrinal points and today many people consider themselves Christians but have never really thought about these points. How these doctrinal points came to be part of mainstream Christianity is not my concern here. What matters is that they are incompatible with the sin of disbelief as it has been set out in the previous pages.

The aspect of the sin of disbelief in God connected to the purposiveness of existence (i.e. if existence is purposeless then everything you do is futile and worthless) is a line of argument that still applies with Christianity because in broad terms Christians consider themselves monotheists and believe that there is only one judge. Some Christians, however, may think of God as essentially two judges or maybe three with Jesus playing the role of lawyer who needs to be persuaded of your case before he appeals to God on your behalf. In Catholicism the graves and images of Saints were and are worshipped and asked for favours etc., These things pollute otherwise pure intentions by appealing to different judges, who in principle may judge by different criteria. This damages or destroys the idea of universal morality and absolute rights and wrongs. If there are many criteria there are many purposes of the universe and you choose which purpose to work towards. No deed of someone who believes in many judges can be said to be good or bad in absolute terms.

This is strongly connected to the concept of salvation through Jesus dying on the cross. By this act all the sins of Christians are supposed to be forgiven. This great act must have changed something about the way to salvation, i.e. that before the act people had a certain route to salvation and that after the act the route to salvation is profoundly different. However, if God fundamentally changes the way he judges people in different times from being harsh to being easier, then this can hardly be justice! Is this a change in God's justice or is it rather two judges: God the father and God the Son. On the other hand, if there is no

fundamental change in the route to salvation, then why all the fuss? -it doesn't really matter whether Jesus died on the cross or not; there has always been one justice and one judge.

The aspect of the sin of disbelief in God being the ultimate explanation of existence is a line of argument that might apply to Christians but generally doesn't. The problems again lie in the paradoxes of the Trinity.

Essentially both religions assert that they believe in a God whose nature is beyond the human mind to comprehend fully. There is however a significant difference in the perspectives of why God cannot be fully comprehended by man. In the Islamic perspective the metaphysical existence believed in which includes as its core God is called 'al-ghaib' which basically means 'the unseen'. This specifically refers to observation rather than the sense of "I don't see that" meaning, "I don't understand that". For example it could be said that the sun, when it is not visible to us at night, is part of 'al-ghaib'. Metaphysics in Islam is unknown essentially because of the limitations in our sense perception. In contrast to this Metaphysics in Christianity is unknown largely because our natural reason cannot understand it. God is 'above' logic.

At the heart of Christian doctrine is a profound mystery of paradoxes (e.g. everything belongs to God, He has complete power over everything. So in what sense can God sacrifice something? What does He give up? How can God be all knowing and at the same time not know what is going to happen? How can God become a man? See also "God made flesh?")

The effect of this is that the sin of disbelief in Christianity can't use a deliberate breakage of basic logical reasoning as a foundational element in the sin of disbelief. Christians don't merely 'not always expect better explanations' to their questions about reality, they also have no problems with explanations that are logically self -contradictory or paradoxes.

In conclusion the sin of disbelief in Christianity, because of its doctrinal beliefs, is far from the description set out above. Believing Christians can be very bad thinkers and people well informed about Christianity and extremely good thinkers may never become Christians. To illustrate the point I'll relate an incident that I heard about recently:

A woman brought up as a Christian accepted Islam and after some time decided to tell her mother of her decision. Her Christian mother asked why she had become a Muslim and she replied "Islam makes more sense" to which her astonished mother replied:

"But religion is not supposed to make sense!"

The Amazing Qur'an

The basic question one must ask oneself is "Could this Qur'an be the words of any other than God." In reaching your conclusions there are a number of factors to bring into your judgement. Firstly we must consider how this object came into existence and how reliable is the description offered of how it came into existence. Then we need to begin our investigation of the object in question. Through doing this we begin to notice certain characteristics about the text and start to study it in detail, noticing certain subtleties. The establishment of general consistency with our knowledge is of primary importance since if we find things in it which contradict what we know, it will immediately be making demands on our credulity rather than challenging our conscience to accept it as true, so that we would feel guilty not accepting it. Further investigation shows consistency with current knowledge that is quite amazing. Coincidence also plays an interesting role in discovering curiosities about the Qur'an which show some amazing aspects of the structure. In the process we continually consider whether there is any credible alternative explanation of the origins of the Qur'an and ask ourselves, is it too hard for us to accept any other explanation with a clear conscience that our thinking remains good? What are our doubts about the explanation that this amazing Qur'an comes from other than God? Are these doubts reasonable?

This section takes you through the above process and the next section will try to tackle some of the important questions about the moral teachings of Islam which amount to doubts that prevent people from accepting Islam. These doubts are usually down to lack of knowledge about the correct teachings of Islam and in answering them I shall try to explain the relevant details of Islamic teachings to clarify the misunderstandings.

The Proclaiming of the Qur'an

The word Qur'an means a proclamation - something read out. The role of Muhammad (pbuh)*1 in this was that of the messenger. He was commanded to read in the first verse revealed of the Qur'an.

Proclaim! (or Read!) in the name of thy Lord and Cherisher Who created

Created man out of a (mere) clot of congealed blood*2

Proclaim! And thy Lord is Most Bountiful

He Who taught (the use of) the Pen

Taught man that which he knew not.

A crucial part of understanding the Qur'an is considering the role of Muhammad (pbuh). Who was he? What did he do during his life? Why should Muhammad (pbuh) have been chosen? What was his level of education? What environment did he grow up in? Once these questions are tackled we can keep the answers in mind when reading the pages ahead and consider whether any of these details can offer some credible alternative explanation of the origins of the Qur'an than that it was divinely revealed.

Muhammad (pbuh) was born 570 years after the birth of Christ (pbuh) a few weeks after his father had died. As was the customary practice in Makkah at the time Muhammad was given to a Bedouin wet-nurse to take care of him for a number of years. His mother died when Muhammad (pbuh) was 6 years old. He was raised by his paternal grandfather 'Abd al Muttalib (Shaybah) until the age of eight and, after his grandfather's death, by Abu Talib, his paternal uncle. Under the guardianship of Abu Talib, Muhammad (pbuh) began to earn a living as a shepherd, then as a trader. At the age of twelve, he accompanied Abu Talib with a merchant caravan as far as Bosra in Syria. He worked as a trader for several years, gained an excellent reputation for honesty and became known as "al-amin" which means "the trustworthy one". At the age of 25 a rich merchant widow called Khadijah heard of his credentials and proposed marriage to Muhammad through a relative. He accepted despite her being 15 years older than him. Khadijah and Muhammad (pbuh) were the parents of six children - four daughters and two sons, although both the sons died in infancy. Importantly Muhammad was known to be illiterate - he couldn't read nor could he write. He was however, known to be very eloquent in his speech.

Muhammad was descended from Ishmael who was the first born son of Abraham. Originally built by Abraham and Ishmael, the Ka'bah had become largely corrupted. When it was first built, it was for the worship God alone but now this was known only as a sort of holy centre, for all kinds of pagan beliefs and idolatry. The Ka'bah had at that time 360 idols which the pagans would worship. These were statues of various sorts and even included statues of Jesus (pbuh) and images of Mary. There was still a group of Makkans who tried to follow the true teachings of Abraham. They were known as the Hanafi. The main cultural pursuit of the Arabs was poetry. Competitions would be held and the language blossomed into a deeply expressive form. It became, at that time, a language with a highly sophisticated grammar and great subtlety of expression.

Muhammad (pbuh) was born into the leading clan of Mecca who were the "Quraish". His position in society was very well respected. At around the age of 40 he began to take to meditation and prayer in a cave on a mountain overlooking Makkah. He would fast and spend long hours in contemplation and prayer. It was during one of these visits to the cave that he received the first words of revelation from the Archangel Jibril (Gabriel). On this first appearance, Gabriel (as) said to Muhammad: "Iqraa," meaning Read or Recite. Muhammad replied, "I cannot read,". The Angel Gabriel then embraced him until he reached the limit of his

endurance and after releasing said: "Iqraa." Muhammad's answer was the same as before. Gabriel repeated the embrace for the third time, asked him to repeat after him and said the verses that are mentioned above.

Muhammad (pbuh) was terrified by the whole experience of the revelation and rushed home to his wife. He told his wife to cover him with a blanket. After his shock had calmed down, his wife Khadijah asked him about the reason his distressed state. After hearing his account she reassured him by saying: "Allah will not let you down because you are kind to relatives, you speak only the truth, you help the poor, the orphan and the needy, and you are an honest man." Khadijah then became the first person to accept Islam.

Initially the Qur'an won converts to Islam through the message being given to friends and family of the prophet. After some time in this phase the message began to be proclaimed publicly. Soon enough the people in power started to oppose this message since it clearly threatened their authority to make law based on the authority of 'the gods' (the idols). The small band of Muslims was severely oppressed and several killed. But they persisted in teaching this new revelation to others. Finally after an economic boycott and the theft of their possessions which reduced the Muslims to near starvation, Muhammad was given the position of a judge in the city of Yathrib partly as a way that the tribes could in that city could find a way out of their feuding, but also largely a result of many people accepting Islam, taught by companions of Muhammad (pbuh). Following the establishment of the Islamic State a number of battles took place between the Muslims and the Makkans who were attempting to eliminate the Muslims and their "dangerous ideas". Eventually the Muslims were able to march into Makkah without any resistance because of their overwhelming forces and announced a general amnesty. Within 100 years the Islamic State had spread into Spain and India defeating both the Persian Empire and the Romans and was the largest 'empire' yet to have been seen on Earth.

Muhammad's life and example span a whole range of circumstances and therefore the study of his example and his judgements provides a rich and comprehensive precedent which is used in deriving Islamic law.

Those who wish to reject Muhammad as a prophet have two basic positions. They either assert that he was a liar or that he was mad. The first is flatly contradicted by all the reports of his life and that he was deeply convinced of the message he had to deliver. If he were a liar, would he have risked his life and the life of his dearest companions many times? Would he have been so confident in what he said and did? The next alternative that he was mad is thrown into doubt by the careful planning that he went through in all that he did. Madness shows a lack of grip on reality yet Muhammad was known to be highly realistic in all that he did. We know this, for example, from the councils of war he conducted. Islam made perfect sense to Muhammad as it makes perfect sense today.

This only captures a few of the alternative, and in the majority wholly unreasonable, perspectives of who Muhammad was. The evidence that the Qur'an is an accurate record of the words he proclaimed as direct revelation from God is however largely beyond dispute. This is the subject of the next chapter..

Nevertheless, some will always come up with the most ludicrous alternative explanations. As they see no need for the moral of good thinking they see nothing wrong in making such suggestions. It is fairly pointless discussing them.

The crucial question to consider in the following sections is whether it is reasonable to say that Muhammad could have written (or thought up) the Qur'an.

The writing of the Qur'an

*1 - Muslims usually refer to Muhammad, as to all prophets, with a phrase like 'peace be upon him' following the mention of his name. This is abbreviated to (pbuh).

*2 - the word in Arabic is 'alaq and shall be explained fully in a later section.

The Writing of the Qur'an

Muhammad recited this Qur'an to others and in his prayers. Others have done the same ever since, some memorising parts of the Qur'an and others memorising the Qur'an in its entirety. This helped the Qur'an to become unrivalled as a work of its time in terms of the care and effort which were employed to ensure that it would be preserved for all mankind.

Once a part of the Qur'an had been revealed to the prophet (pbuh) he would dictate it to scribes who would make written records of every word recited. These writings would then be read back to the prophet to ensure that they had been correctly recorded. Others around at the time would make their own copies for their private use.

These fragments of revelation came together and were linked into a specific sequence. The sequence defined what is the current ordering of verses in the Qur'an and the prophet (pbuh) affirmed that it was given to him as part of the revelation he received. This sequence was set out through the recitation of Qur'an during prayers and in particular during the month of Ramadan when the prophet (pbuh) would recite the whole of the Qur'an in its correct order.

A year after the prophet's death, it was entrusted to a main scribe Zaid ibn Thaabit to assemble these scattered documents on which the verses of the Qur'an were written. He was especially qualified since not only was he a scribe, but he had also memorised the Qur'an completely and was present during the final & complete recitation of the Qur'an by the prophet.

Zaid established and applied a rigorous method of work: he would not accept any writing that was not certified by at least 2 witnesses. The witnesses would have to have seen it being written down, not from memory, but at the very dictation of the prophet (pbuh).

Having completed this task, the collection was given to Abu Bakr - the immediate successor to Muhammad (pbuh) as head of state.

After the collection was made, it was kept & guarded by Abu Bakr and then the following head of state Umar. The next head of state, Uthman, decided to publish it so as to have copies available at the now remote frontiers of the Islamic State. He did this by having four copies made. These copies became the standard against which all other fragments which people possessed were checked. At least one of these Uthmanic copies still exists today.

This compilation of the Qur'an was unanimously recognised as authoritative by the companions of the prophet at the time. It is a strong evidence that for the authenticity of the Qur'an that no other compilation has been used for the 1400+ years since then no matter how implacable certain sections of the Muslims were toward one another.

Variations do exist however in the readings of the text even though there is no dispute about the basic form of the text. These variations come through slight differences in the words due to the old form of written Arabic where diacritical marks (including for example short vowels) were not marked in the written text. This means that there is more than one reading that can fit the text. The prophet explicitly accepted some of these variations as equally valid and acceptable. The exact reading of the text as well as any differing readings were set through oral transmission of the recitation of the Qur'an and through the choice of readings being obvious from the context. The difference in meaning that these differences in readings have is very slight.

The question arises of how reliable the historical reports are. This is not a new question by any standards. Islam had a distinct advantage over previous religions in terms of the ability that the Early Muslims had to preserve the original teachings. The Qur'an was completed in an environment that could not be more different from that of the material that now makes up the Bible. Muslims were not a persecuted community but the rulers of a state that was having military successes on all fronts. This made collection of historical data much easier and establishing the authenticity of various texts clearer.

The laws of the state that emerged from Muhammad's great success as political leader were firmly based on the teachings of Islam. This meant that a great deal of effort went into establishing what the teachings actually were. Indeed this effort was often inspired by a strong religious intention to identify the truth of such matters. This motivation also ensured that clear honesty and objectivity is evident in how the studies were carried out. Whole sciences grew up about which sayings of Muhammad (pbuh) were authentic and which were doubtful. The reports were traced back through the people who narrated them. Some reports were taken from what was written down at the time of Muhammad (pbuh); others proved to be more dubious (the science to identify which were which is called 'uloom ul-hadith). The narrators of the reports of what Muhammad said were investigated to see what their reputation was. For example, it was asked of narrators whether they were ever known to have lied (the study of narrators' reputations is called 'uloom ar-rijaal). Only chains of reporters (isnad) containing just the names of 100% trustworthy narrators were considered reliable enough to use in law making. Hadiths (sayings or narrations) were categorised depending on various criteria including this and many others, which influence the authenticity. Much effort went into this and there is a vast body of literature on the subject.

Of course establishing the exact authenticity of any particular hadith is never 100% possible but at some point the sources are judged to be reasonably sound and reliable and to reject a well-authenticated hadith would be judged unreasonable and therefore wrong.

As for the Qur'an. There has never been any doubt about its authenticity. So many people memorised it by heart and there was from the time of Muhammad a great deal of written material which contained the text of the Qur'an. In all the history of the Qur'an, since Uthman commissioned written copies in the form of Books, there has been one, and only one Qur'an and there have been no changes in it. It is accepted by all Muslims as the exact word of God.

One of the effects of the Qur'an is that huge efforts were also made to preserve the meanings of the Arabic language so that the sources of Islamic law would not get lost through the evolution of the language. This has meant that the classical Arabic can be studied today and modern Arabic is very close indeed to its classical ancestor. The extent to which the Arabic language has remained unchanged for 1400 years show just how significant the source texts of Islam were to the early Muslim generations. These all contribute to proving beyond reasonable doubt that the Qur'an is the same Qur'an that was revealed to Muhammad and that the accounts of his life and his saying are generally very well authenticated and reliable - to an extent probably unlike the accounts of any other character in history.

People bent on denying Islam sometimes try to make challenges to this account of events. However, to do so basically means believing that most if not all the Muslims around throughout the history of Islam were liars - is this reasonable?

The Consistency of the Qur'an

The Qur'an is truly remarkable in many ways, many of these are in the power, subtlety and clarity of the language itself. However, for someone who doesn't know Arabic these subtleties are not easy to appreciate so I shall concentrate on bringing to light aspects that don't depend on a great knowledge of Arabic. Firstly I shall consider the consistency of the Qur'an:

Surah 4 Verse 82

Do they not consider the Qur'an (with care)? Had it been from other than Allah they would surely have found therein much discrepancy.

There are a number of important aspects of this consistency. Firstly, it is consistent within itself -i.e. it doesn't contradict itself. Secondly it confirms the essential teachings of previous revelation. Thirdly and most impressive is that it is consistent with known scientific facts - including the facts that have only recently been recognised. It would be impressive enough if there were simply no errors considering the facts known at the time because there were many things which people believed and fully accepted as facts which have been proven wrong. That none of these things got into the Qur'an is quite remarkable.

To demonstrate the internal consistency would require me to go through the whole of the Qur'an and consider all the verses and their relation to one another. This would be too much for the current effort and I leave it up to the reader to do that on their own. The confirmation of previous revelation is also a subject where to demonstrate the case would require a great deal of work in identifying all the basic teachings of previous revelations. This would require a critical analysis of the teachings of previous revelations (including for example a disproof of the teachings of Christianity on Trinity). To show the Qur'an is consistent with known scientific facts is in principle also hard to do since that would require a thorough search through the Qur'an for anything contradicting scientific fact. What can be done however, is to identify a number of passages in the Qur'an where there is surprising consistency with relatively recent scientific discoveries.

The Qur'an is a book which contains several references to natural phenomena but these references have clear purpose in explaining the deeper meaning to life and existence in general. The Qur'an leaves room for a variety of interpretations but the consistency with recent science within those acceptable interpretations is still astounding.

The Big Bang

Surah 21, Verse 30:

ARE THEN, they who are bent on denying the truth not aware that the heavens and the earth were [once] one single entity, which We then Parted Asunder? - and [that] we made from water every living thing? Will they not then [begin to] believe?

This verse should be re-read a couple of times. In it we see that the whole of material existence was once as one thing before it was exploded apart. This appears to be a clear reference to the "Big Bang" - the widely accepted theory of the origins of the universe. In the very same verse we see a reference to the origins of life being in water (see also origins of life section). This is also a key finding of science. Both of these points must have been somewhat puzzling to the early readers of the Qur'an. Now these statements are seen in the full light of modern knowledge and are recognised as astonishingly accurate. Moreover, the last question of the verse is now doubly potent.

The Story of Creation

There are several places where the Qur'an describes aspects of the creation.

The Bible describes the creation as having taken place in six days followed by a day of rest. In the Bible a 'day' is explicitly the interval between two successive sunrises or sunsets. There can be no question that this story is wrong. The very mechanism of the Earth rotating around its axis was not fixed in the earliest stages of creation as were described in the Bible.

In contrast to this the Qur'an while also describing creation as taking place in 6 'days' never connects this word with a set period. In fact, in the Qur'an a day in the sight of Allah (in this instance judgement day) is described as 50,000 human years. (Surah 70: Verse 4) The use of the word yawm in Arabic can equally well 'mean period of time' as it can mean 'day'.

A significant passage of the Qur'an is Surah 41, Verses 9 to 12:

(Muhammad Asad translation)

"Say: Would you indeed deny Him who has created the earth in two aeons? And do you claim that there is any power that could rival Him, The Sustainer of all the worlds?"

For He [it is who after creating the earth,] placed firm Mountains on it [towering] above its surface, and bestowed [so many] blessings on it, and equitably apportioned its means of subsistence to all who would seek it: [and all this He created] in four aeons.

And He [it is who] applied His design to the skies, which were [yet but] smoke; and He [it is who] said to them and to the earth, "come willingly or unwillingly!" - to which both responded, We do come in obedience."

To me this is obviously a reference to the fact that we are in the second cycle of solar evolution. The earth is made up of material that resulted from the first life cycle of a sun and our sun is a 'second generation' sun-two periods. The last of the verses quoted above confirms this point by referring to the what the sky and earth was made from - smoke. A simple but absolutely accurate description of the remains of the burnt out first generation sun! This description of the coming together of matter in forming the solar system is a very fundamental part of the concept of the current understanding of how it actually happened.

The expansion of the universe

Surah 51, Verse 47:

And it is We who have built the universe with [Our creative] power; and verily, it is We who are expanding it.

The expansion of the universe was only discovered in the last few decades and the theories that describe the universe in cosmology only began to be developed after Einstein discovered General Relativity Early in the 20th century. This verse is from a book that was completed 1400 years ago. How could Muhammad have known this if he wasn't receiving revelation from the All-Knowing?

The origins of life

Are, then, they who are bent on denying the truth not aware that the heavens and the earth were [once] one single entity, which We then Parted Asunder? - and [that] we made from water every living thing? Will they not then [begin to] believe?

(see Also Big Bang section)This quote clearly says that all life comes from water. There are two possible meanings to this and both agree exactly with scientific knowledge. One is that every living thing is made

from Water (as its essential ingredient) and the other that all life originates from Water. The first meaning is true since in all living cells water is the major component. The latter is true since all life known about had its origins in water.

The exploration of space

Surah 55, Verse 33

O assembly of Jinns and Men, if you can penetrate regions of the heavens and the earth then penetrate them! You will not penetrate them save with a power.

This verse needs a little explanation. In Arabic, there are different words for 'if'. One expresses the possibility, another expresses an achievable hypothesis and another expresses an unachievable hypothesis. In this case the 'if' is for an achievable hypothesis. Man will penetrate through into the heavens 'if' he has the power to do so!

Descriptions of the foetus

This is one of the most remarkable areas of description in the Qur'an. The development of the foetus is spoken of in the Qur'an in some detail. The early stages of which could not have been known at the time of the prophet Muhammad (peace be upon him) because the size of the foetus at these stages is too small to see with the naked eye, rather a microscope is needed.

Surah 71 Verses 13-14

What is the matter with you, that ye are not conscious of Allah's majesty, Seeing that it is He who has created you in successive stages?

Surah 23 Verses 12-14

We did create human beings out of the essence of clay, and thereafter We cause him to remain as a drop of sperm in [the womb's] firm keeping. Thereafter we fashioned the sperm into something that clings (Alaqah), which we then fashioned into a chewed lump (Modgha). The chewed lump is then fashioned into bones that are then covered with flesh. Then we nurse him unto another act of creation. Blessed is God, the best of artisans.

The use of 'essence of clay' here is to say in other words that what we are made of comes from the earth. The word used for semen here literally means a 'small drop'.

The description of the next stage as 'something that clings' accurately represents the stage where the fertilised cell attaches itself to the inner most layer of the uterus by hair-like projections. Another meaning for the word alaqah is 'leech like'. This describes the process of implantation in the first few days entirely correctly and is so concise as to use just one word.

The word "Alaqa" has been translated as 'something that clings'. This only identifies part of the descriptive accuracy of this word. The word has a number of meanings, which I shall now elaborate. It's root meaning is from the verb 'aliqa which means "to hang, be suspended, dangle; to stick, cling, cleave adhere to; to catch, get caught or stuck; to be attached, affixed, subjoined" Other forms of the verb have related meanings such as to be affectionately attached to someone. (dictionary definitions from Hans Wehr)

The meanings apply ideally to the process through which the fertilised ovum becomes lodged in the womb.

If we look at the noun 'alaqa we find this meanings of "medical leech" and "blood clot". The leech is an interesting little creature. The creature is a parasite, which lives on blood, which it sucks out of the body of,

it's host. Not only is this a similar process to what happens to an embryo in the earliest stages, but also a leech looks remarkably like the earliest stages of the embryo. The meaning of a clinging thing can easily be seen in this use of the verbal noun. As for blood clot it is first necessary to point out that it is the process of clotting or coagulating which brings the idea of clinging to this word and not blood. There is a quite different word for blood in Arabic 'damm' and this is not meant. When blood coagulates the material is primarily known to be sticky which explains the use of 'alaqa for this material. What we have is also a living fluid half way to becoming a soft solid which is an accurate description of the embryo as the cells which have multiplied until they form a fluid now begin to form tissue structures.

The description of the chewed flesh implies something like teeth marks. This accurately describes the Somite development. The Somites as Hamilton Boyd and Mossman say " are conspicuous features of embryos in the period under consideration and are readily seen in the surface contour. They are bases from which the greater part of the axial skeleton and musculature are developed". The age of the embryo is referred to by the number of these Somites since "they form one of its characteristic external features" these features along with the pharyngeal arches which also appear at this period (4 weeks) give the embryo the clear appearance of a chewed lump in which the indentations of teeth are present.

The structure of the embryo as it develops and gains its form is primarily skeletal at and before 5 weeks. That is - what you see in pictures of embryos this age is the bones and a number of semi-translucent organs. The bones at this stage have structure and form and are easily the most marked and visible feature of the embryo but they are of course not fully calcified (many bones are still in the final calcifying stage through into adulthood). Over the next couple of weeks a quite definite change takes place in the way that an embryo looks. Instead of seeing bones and organs, all that can be seen now, is (the flesh of) a naked body. The embryo begins to look much more human. It is a reference to this, which to me seems most fitting with the general tone and meaning of (this part of) the verse: "we clothed the bone with flesh "

Other bits for you to investigate ...

Geology of mountains (78:6-7, 31:10++) The gender of worker bees (16:68) Near death experiences (50:19) The nerves being in the skin (4:56) Life on other planets? (42:29) The Water Cycle (23:18-19, 15:22, 35:9, 30:48) ++ more which depend on specialist knowledge.

This gives a number of key indications which, together with a more thorough investigation establishing the consistency of all statements in the Qur'an, show that the Qur'an is a remarkably accurate book when it comes to describing reality. In the next section on structure of the Qur'an I consider some evidence where the whole of the Qur'an is discussed and therefore the evidence is doubly clear since there is no excuse of saying "but somewhere in the Qur'an there might be a verse that says ..."

The Structure of the Qur'an

The numerical structure of the Qur'an is a relatively new study and began when the first full indexes of the Qur'an were composed through putting the text on to computers.

Surah 11, Verse 1

This is a scripture whose verses are perfected and then explained.

This verse indicates that no words are wasted in the Qur'an, it could not be in a better form. One could not use fewer words to say the same thing. To do so would add unnecessary information. One way to look for structure is to look, not to the meanings of the words, but to treat them as abstract logical terms (programmers would call them parameters or variables) which are used in phrases that could be understood as formulas or equations. To make this clear consider the difference between

"London is a large city"

and

"London has 6 letters"

In one phrase I am referring to the city and in the other to the name 'London'.

In the Qur'an we have several statements that could be thought to be equations. Specifically this is where the phrase "the likeness of A is as the likeness of B" ('mathal A kamathal B' in Arabic). But in what sense are A and B alike in an abstract way? Well the answer is that their number is the same, i.e. the number of times that the noun words or noun phrases occur is the same.

The occurrences of this include: Surah 3 Verse 59

The likeness of Jesus before Allah is as the likeness of Adam.

Both the Name "Adam" and "Jesus" occur in the Qur'an 25 times each.

Surah 7, Verse 176

The likeness of those who reject Our signs is as the likeness of the dog.

Both the Phrase "Those who reject our signs" and the word "dog" occur in the Qur'an 5 times. Surah 29, Verse 41

The likeness of those who take protectors other than Allah is as the likeness of the spider

In this case both A and B only occur twice.

Another expression in Arabic which can be understood as an equation, is the inequality statement expressed directly as "A is not equal to B" (la yastawee A wa B). This is sometimes stated as a question "Is A equal to B?" (hal yastawee A wa B) the indication invariably is that they are not equal. So we would expect that the number of occurrences of these 2 words are not the same. Nothing amazing in that, you may think it is indeed quite likely that the occurrences would be different. However, what we find is that the occurrence of the two unequal words differs by one exactly.

In 4:96 those who sit around are declared as not equal to those who strive in the cause of Allah. The former term has 2 forms for the same word in the Qur'an "al-qa-idoon" and "al-qa-ideen" . These different forms are exactly the same word but their ending is changed because of the grammatical case (nominative and

accusative respectively). The latter term for strivers also has 2 forms "al-mujahidoon" and "al-mujahideen". When we compare occurrences of these words we find "al-qa-idoon"=2, "al-mujahidoon"=1, "al-qa-ideen"=4, "al-mujahideen"=3. In each form the difference in the occurrence of the 2 words is 1. In 6:50 the blind (Al-a'maa) and the seeing (al-Baseer) are set as unequal. The word for the blind occurs 8 times and the word for the seer occurs 9 times - 1 more. In 13:16 the depths of darkness (Al-dhulumaat) and the light (al-noor) are set as unequal. The occurrences of these two words are 14 and 13 respectively. There is one exception to this pattern. In 5:100 the good (al-tayib) and the bad (al-khabeeth) are said to be unequal, but we find the occurrence of both words is 7. The explanation is found in the verse that sets the equation, which immediately goes on to say that you will be dazzled by the amount of the bad. In another verse (8:37) God explains that he piles the bad one on another together so as to separate it from the good. This is also reflected in the Qur'an - the occurrences of 'the good' are scattered throughout the Qur'an but the occurrences of 'the bad' are sometimes 'piled together' two in one verse.

Other words have more direct numerical meanings.

The Arabic word for month is shahr. It occurs 12 times.

This is counting only the definite and indefinite articles: 'the month' and 'a month' There are also occurrences of other forms of this word which are in the plural. The total number of the occurrences in the plural is nine which is the length of a human pregnancy and perhaps the next most obvious period of time measured in months after a year.

The Arabic word for Day is yawm and you will find it occurs 365 times in the Qur'an.

This is also only counting the definite and indefinite articles: 'the day' and 'a day'. There are other occurrences of the word day in the plural and forms where they are tied together to pronouns, which make one word such as 'their day'. Interestingly enough the number of occurrences of the word day in the plural forms is 30 - the closest whole number of days in a lunar month and the average number of days in a solar month.

The word for year is sana and that occurs 19 times.

The significance of 19 here is that each period of 19 years is a repetition of all the relative positions of the Earth and the moon. This cycle was discovered by a Greek called Meton and is known as the Metonic Cycle.

This is counting the definite and indefinite articles 'the year' and 'a year' but also the plurals. The word occurs 12 times in the plural form and 7 times in the singular form. There are no other occurrences. The fact that this calculation takes into account plurals whereas when considering the word for month I ignored plurals has caused people to level the charge that the number relationships were fudged. I also saw the weakness in the pattern. However, I believed there was still something there. Maybe it was to do with the type of plural (broken and unbroken)? This is what was put on my web site for several months. But I discovered that that reasoning was wrong since both plurals are really broken plurals. Looking again for the significance of 12 and 7 we find what must be the answer:

Meton of Athens (ca. 440 BC) noticed that 235 lunar months made up almost exactly 19 solar years. Using modern measurements,

1 year is	365.2425 days;
1 lunar month is	29.53059 days
19 years	= 365.2425 / 29.53059
	= 234.997 lunar months

This 19-year Lunar Cycle became known as the Metonic cycle, and was the basis for the Greek calendar until the Julian calendar was introduced in 46 BC. Since 12 lunar months equal 354.367 days, about 11 days less than a solar year, an additional $235 - 19(12) = 7$ lunar months were added to synchronise the cycle. These were added in years 3, 5, 8, 11, 13, 16, and 19 of the cycle.

So, almost certainly, we have here the importance of the numbers 12 and 7 (the occurrence of the plural and the single of 'sanat' (year) respectively). The metonic cycle is 19 solar years pretty exactly or in lunar years it is 19 and 7/12ths!!

The remaining words you might think of related to time are "week" which doesn't occur at all, and hour. The word hour occurs in the Qur'an not, as might be expected, 24 times but 48 times! This is still a bit of a puzzle to me but there is something that might be noted here. A given calendar day e.g. 19th of January 1998 exists for exactly 48 hours. How is this? Well, it begins existing at the international dateline when the whole world is momentarily on 18th of January 1998. After 12 hours half the world is 19th of January 1998 and the other half is 18th of January 1998 after 24 hours the whole world is momentarily 19th of January 1998. After 36 hours half the world is 19th of January 1998 and half the world is 20th of January 1998 and after 48 hours 19th of January 1998 ceases to exist and momentarily the whole world is 20th of January 1998. From this we see that a day lasts not 24 hours but 48 hours!!!!

Another example of structure is spotted in Surah 15, Verse 33

For no statement do they bring you but We reveal the Truth to thee and the best explanation

In the Qur'an the word for 'they said' is qalu and this occurs 332 times. The replies Allah gives to the reader of the Qur'an are commands to 'Say!'. The Arabic word for 'say!' in the imperative is qul and this occurs in the Qur'an 332 times.

Another example is that the Muslim should try to keep a balance between wanting the good in this life "dunya" and wanting the good in the next life "akhira". When we look for balance between these two words in the Qur'an we find it: Both the word "dunya" and "Akhira" occur 115 times.

One more thing I noticed was the result of an email dispute between a couple of people. The first was pointing out that the word Trinity never occurs in the Bible. The reply to this was that the word Tawhid never occurs in the Qur'an. The word Tawhid is an emphatic form of the meaning of oneness, which means aloneness (i.e. without partners) and is a very important term in Islamic theology. I checked this out and it is true that the word "Tawhid" doesn't occur in the Qur'an. This is somewhat contrary to what one might naively expect given the importance of the concept of God's oneness in Islam. However, I did notice that the word "wahid" meaning "alone" did occur in the Qur'an. What would you expect for this word, how many times is the word "alone" in the Qur'an? The answer is once. It is alone.

These are just starting points and I'm sure there is much more to discover. It deserves further investigation and I for one shall investigate this more as time permits. If you think that ignoring the remaining forms of the words (e.g. not considering the plurals for each word) is inconsistent then see Appendix 2 at the end of the book for the apparent consistency of these forms to the patterns spotted.

Please note that I have personally verified these through my study of the concordance of the Qur'an. This book is in Arabic and is called "al-muhjam al-mufahris li alfaadh al-Qur'an al-kareem" it was compiled by Muhammad Abdel Baaqee. In the introduction he explains how he validated the concordance by reading through the entire Qur'an and checking that every occurrence of every word was mentioned in the concordance. He found 14 omissions only and these have been included in the copy I now own as an appendix and integrated in later editions. It was only after he compiled this concordance that these discoveries were made and this concordance was compiled and published earlier this century (1940's). You

must ask yourself, 'Could Muhammad have put this structure in the Qur'an?' Even if he could what would have been his aim seeing that the structure was not known about for 1350 years? Would it have justified the effort for any material gain of Muhammad?

If you make a balanced and objective analysis of the evidence you may well realise that to deny that the Qur'an is revelation from God, is to be quite unreasonable, a self deception and therefore a sin of disbelief that you will have to answer for on Judgement day. At such a point your choice is clear. If you never reach such a point despite your good thinking then it will be due to the lack of knowledge that you have been able to find. This will then be the fault of the Muslims in not delivering the message adequately. Muslims may be at fault both in terms of not providing exemplary behaviour because our conduct does not follow the teachings of Islam closely enough or it may be through us not communicating the message effectively. If this is the case you have some valid excuse on Judgement day for not accepting Islam.

The Opening of the Qur'an

The Qur'an starts with the Surah (chapter) called "Al-Fatihah" which means "the opener" as it opens the Qur'an it is sometimes also able to open people's hearts.

1 In the name of Allah Most Gracious Most Merciful.

2 Praise be to Allah the Cherisher and Sustainer of the Worlds.

3 Most Gracious Most Merciful.

4 Master of the Day of Judgement.

5 It is you we worship and serve and it is you we seek help from.

6 Show us the straight way.

7 The way of those upon whom You bestowed Your Grace, not those upon whom is anger, nor those who go astray.

The importance of these verses to the practising Muslim is very great. The closest comparable thing in Christianity is 'The Lord's Prayer' (Our father, who art in heaven, give us our daily bread....). These verses of the Qur'an are a prayer that forms the core of the obligatory and non-obligatory formal prayers of all Muslims. They recite it and reflection it at least 17 times a day. It sets the state of the mind, heart and soul at the beginning of each prayer and therefore sets the outlook on the day and hence indicates the whole perspective on life of a Muslim. It contains, in a few short verses, all the basic principles of Islam.

Verse 1

The phrase "bismillahi-Rahmani-Rahim" - In the name of Allah the most Gracious the Most Merciful - is a key part of the everyday life of Muslims. Muslims are encouraged to start every act with these words since by doing so, that act becomes a direct 'ibadah' (worship & service) of Allah provided that what is being done is in accordance with Islamic law. It therefore helps to develop in Muslims a good habit of reflecting on the moral value of all their actions at the point they are about to do them. Indeed, all permissible acts in Islam can be a form of worship of Allah - including sex with your spouse.

If we look a little more closely at the Arabic words we might give the following clarification. Firstly, the words that are Allah's names are in an intensive form. The basic word of rahman is an adjective meaning showing kindness and giving benefits. The intensive form implies that you can basically ignore all other rahman in comparison. Al-Rahman means THE Gracious - the one whose grace totally eclipses the grace of others. Al Rahim is a very similar word but implies definite action taking place. So Allah is the one who is actively bestowing of grace so much more than any other that the others are negligible by comparison.

The name Allah is also of this form. It literally means "The god" in comparison to which all other (would be) gods are as nothing.

Verse 2

Verse 1 has the effect of saying "now we begin". After it is said, we start the actual prayer:

Alhamdu lillah - literally: "the praise is for Allah" This is very fundamental to Islam - God is the source of all good and consequently when we appreciate anything of His creation, we exclaim praise to He who is responsible - Allah. This exclamation contains the driving idea of Islam and ties in exactly to the value argument presented earlier in the section on the Sin of Disbelief. The exclamation forms a key part in the Muslim outlook on life. When Muslims are happy at some good thing happening they exclaim alhamdu lillah - praise be to God. This helps prevent arrogance from thinking that this good is from yourself rather than from the source of all good. If things happen that to you seem bad you should also say "alhamdu lillah!" to counter the idea that Allah causes bad to happen to you. This has the effect of turning perceived problems into opportunities. It reminds one to show moral virtues like patience and trying to learn how to solve the problem. It put one in the frame of mind that looks towards how to achieve good deeds out of this situation.

After the exclamation the explanation comes in a superbly condensed form. "Rabb al-'alamin" - the lord of the worlds. The word meaning 'worlds' implies all possible worlds known to exist. This was interpreted at the time to mean the spirit world, the world of the heavens, the world of human beings. Essentially each realm of known existence. (the word in fact comes from the root verb "to know"). A modern interpretation might consider the worlds to mean different planets or even parallel universes as in the 'many worlds' theory which some physicists seem to like at the moment.

The word Rabb means primarily the person in charge - the authority figure. The person who makes the decisions. This goes to the heart of the argument made earlier about seeking deeper explanations. The ultimate explanation behind all of the ways that existence functions is the decision of Allah. The word Rabb also has the implicit meaning of cherishing, sustaining and bringing to maturity. Allah cares for all the worlds He has created.

This verse sets the initial perspective of the reader or person praying towards the ultimates of existence: the ultimate authority behind existence and the ultimate good of existence.

Verse 3

This re-iterates the meaning from verse 1 and guides the perspective more towards the relationship of humans to Allah. The primary reality of this relationship is authority of Allah over His creation as expressed in the word "Rabb". This relationship however must never be thought of as an arbitrary authority. It is authority with a purpose. The authority is used for the good; it is used for "rahma" and this is verse three that brings this point home. It the recognition of the grace of Allah towards His creation.

Verse 4

The Qur'an now brings the focus Humanity's relation to Allah. Human beings, unlike any other part of Allah's creation have free will. They can be part of the divine purpose of rahma or they can oppose it.

This leads to man's responsibility, which flows towards Allah and the consequences of this responsibility. There is a judgement of a person's efforts and implicitly rewards and punishments depending on how well that person has done. If they have tried to be part of the divine purpose, if they have tried to do what is right, then they are rewarded. If they have opposed the divine purpose they are punished before Allah then shows mercy on all who have had even as little as a mustard seed of trust in Allah and puts them into paradise. (Sahih Bukhari Hadith 8.565)

From this recognition flows gratitude and from this gratitude flows the desire to please the object of your gratitude. The Muslim tries to please Allah primarily out of gratitude for the grace he has bestowed on him / her. Islam literally means willingly seeking to do what Allah wills by submitting to His will and thereby pleasing Him.

Verse 5

This is now very directly the relationship between Allah and human beings. We are made by Allah and we are subject to His laws. We owe all that we have to Allah since He gave us all we have. Our lives are indebted to His grace and we continually recognise this through worship and through seeking Allah's pleasure through serving Him. In exchange to what we do we receive help from Him in abundance. The emphasis here implies 'only', so that it means that a Muslim only worships and serves Allah and only seeks help from Allah. No matter how Muslims receive help they attribute it to Allah as being in control of all things. The emphasis also quashes the thought that Allah might in any sense need our help by stressing that the relation is the other way round.

Verse 6

This is the essential form of help that Allah provides in answer to our asking for help. He provides guidance. the word 'show' <YA comment>

'straight' the meaning of the root word also includes 'stand up' and has profound meaning connected to ideas of upholding virtues etc which in English require many words. Part of the structure of Arabic where verbs are the centre and each verb has many forms and each form has many nouns that can be made from it. It allows huge flexibility and yet the words remain tied together giving resonances of meanings that can't be achieved in English.

Verse 7: The path is in front of you. You have the choice. The path of those Allah has given comfort and blessing and ease (all implied by "an'ama"). This is those who deliberately go for the straight path with definite intention. The next option is those who have anger on them. These are those who deliberately do the opposite of going for the straight path. The last option defines a midway position where there is no deliberate intention either way and so the person goes astray

This puts the Muslim in the right frame of mind to receive guidance and to follow it and therefore is the perfect "opener" opening the heart and mind.

(To read further see Qur'an, though there are as yet few commentaries on the internet. Abdullah Yusuf Ali's translation is widely regarded as one of the best in English but all translations have their problems of one form or another.)

The Teachings of Islam

The teachings of Islam have been distorted in the Western world ever since the time of Muhammad. Christian attacks on Islam date from the Crusades during which 'Western culture' found its first real sense of identity. This identity was defined as being fundamentally hostile to Islam. Not Islam as it really is but a completely unapologetic pack of lies about Islam. To mention such things may seem a bit strange because it is so far in the past. However, the level of ignorance about Islam continues to astonish, and part of this ignorance is due to the persistence of this Christian reaction to Islam - to lie about it. The type of lie has moved on of course because truth eventually prevails. Although some Christians still use them, the charges that Muslims worship Al-Lut (a pre-Islamic pagan god for the moon), or that the use of the honorific title "we" in the Qur'an implies a plurality or trinity of God, or that Muslims are sexually promiscuous, or that Muhammad was the chief idol they worshipped are no longer even remotely tenable. The allegations made to try and discredit Islam these days focus on a number of things none of which stand up to any serious scrutiny. I do not wish to imply that everyone who makes these allegations is a liar - this is certainly not the case. Rather I suppose what typically happens is that someone is all too keen to find something vaguely discrediting and jumps to ignorant conclusions. Either that or they deliberately hide something of what they know so as to present only half the picture. These allegations then get repeated without enough concern for investigating them properly at that stage.

The 'Christian' West criticised Islam's moral teachings firstly on the basic grounds that it was way too liberal - it allowed freedom of thought, polygamy, even Divorce!!! These days the criticism is the other way round - Islam is way too strict. It insists on no sex outside marriage: it has no concept of gay rights, etc. This is fairly ironic but shows just how things have gone in the West. Islam has not changed its teachings.

Today the main concept people in the West have about Islam is from its media image. This is driven by the relevant companies seeking to make an exciting story. Unfortunately this means all too often little more than demonising Islam. Many Muslims see the Zionists behind this and indeed the Jews are the great storytellers in the media, particularly in Hollywood. Recent movies such as "True Lies" and "The Peacemaker" tell exciting nonsense stories about mad Muslims about to blow up the US with nuclear weapons. These stories serve to obscure the facts of the real situation: It is Israel that has the nuclear weapons, has continually shown aggressive expansionist aims since its foundation, and disregard for the human rights of their neighbouring Arab population - not to say hatred. These considerations makes it more likely that any nuclear attack would be from Israel than from any Muslim country.

Anyway, the situation is not so simple and it is probably much closer to the truth to attribute these distorting attacks on Islam to a mixture of motives of money, nationalism, racism (Zionism is just one form of this) and ambition on the part of a number of "experts" who quietly retire when they are shown to be rather unbalanced and unqualified.

These images of Islam must be forgotten since they are largely, if not entirely, fictional. However the questions that arise out of them need to be tackled. Each little lie created by these stories has to be responded to. 'Oppression of Women', 'Terrorism', 'intolerance', 'barbaric punishments' and more are routinely wheeled out. This section will try to answer most of these points and explain what Islam really teaches.

Where the teachings come from

Before I delve into what the teachings of Islam are it is necessary to note that in Islam there is no Church with any authority to pronounce judgements on matters of moral law. There are no priests, bishops, popes, rabbis, etc. It is recognised as a basic teaching of Islam that only Allah has the right to make something forbidden for all time and only Allah has the right to make something allowed for all time. So to find Islam's teachings we need to go to the material sources. This provides a framework of permanent law within which people can act. The Islamic State may make temporary laws so long as they don't contradict this framework.

If we look at the history of shari'ah (Islamic Moral Law), it started with the laws enacted by Muhammad and it is his precedent and the precedent of the immediate successors to Muhammad (called the Khulafa al-Rashidoon) that provide the best examples of how shar'iah should be implemented. This period only lasted a few decades after which rulers came to power who were motivated more by self interest than by setting a moral example and more crucially were not scholars of Islam. This had the effect that the jurists and scholars no longer trusted the head of state with law making. The heads of state were generally quite happy to operate in the framework provided by Islam and hand over the development of laws to the scholars and jurists. Where they deviated by making unislamic decrees they were eventually persuaded to return to the law as defined by the scholars.

A key aspect of this was the lack of a simple resolution to scholarly disputes about what the law should be (for example a judgement by the head of state). This resulted in great efforts being made by scholars of Islamic law to find ways of reaching agreement through establishing agreed methods for asserting the authenticity of various potential sources of shari'ah and to develop agreed methods for deriving and elaborating the moral law of Islam from these sources.

At a certain point in the history of the Muslim world, despite these methods, the disagreements became too many and people became confused as to what they should really be doing. Instead of trying to follow what the sources said, they began to simply follow the more established scholars. This was the beginning of a period called "Taqlid" meaning "imitation" where people followed without understanding. This caused a deadening of the Muslims' intellect and the general decline that reached its lowest point when the whole Muslim world was colonised except for Arabia.

What has always been needed is a political authority that takes responsibility for making law and to be an example and who has the trust of the jurists and scholars to do so. Then the obedience required of Muslims to that leader should override following the judgement of any particular scholar since the leader would be the arbiter in scholarly disputes about what the law should be. This, however, is not the current situation and so, for the time being, we must navigate our way through the varied understandings and teachings of Islam, picking those things which are most reliable.

There are many important principles and classifications that I could explain to you here but I shall introduce them as they are needed in the following sections.

Rights and Responsibilities

Traditionally Islam is explained in terms of the moral value of actions ranging from prohibited to obligatory. These descriptions apply to both the ruler and the ruled. Islam doesn't therefore start from the concept of a constitution, which is a means of binding the rulers to obey certain rules. Rather Islam is the law for everyone - the same rule for the ruler as for the ruled.

For the sake of argument many of these moral rules can be phrased in terms of rights and responsibilities when we consider who is involved. For example the duty to consult people on who should be the next political leader can be put in terms of the right to be consulted. A duty of the husband to provide for the wife can be described as the right of the wife for provisions.

In general a prohibition may amount to a right of some form not to have that act happen (e.g. do not steal - the right to property) and a duty may amount to a right that it does happen (e.g. the duty to look after the sick, poor and elderly amounts to a right of these people over the rest of the population).

Some of these rights and responsibilities are expressed very explicitly through original sources; others have been derived more indirectly. The state has a role of implementing justice and this means that the rights and responsibilities are recognised between people and between groups of various forms. There has been a general agreement among Muslims scholars on the rights that apply to all people regardless of religion and on the matter that there are rights and responsibilities that are internal to your particular religion.

It is the duty of the ruler of an Islamic state to maintain 5 basic universal rights among the people:

#life #property #freedom of conscience #freedom of religion #honour

These need a little explanation:

1. Life

This is the right that your body as an individual or any one of your bodies as a group is safe from harm.

2. Property

This is the right to own property safe from any attempts to force it away from you or to defraud you.

3. Freedom of conscience

This right is the right that no one can try to force you into having any opinion or belief and is closely related to 4.

4. Freedom of religion

This is a lot more than freedom of conscience. It implies that you are able to follow the teachings of your religion so long as it doesn't infringe on the freedom of others to do likewise. An Islamic state would try to ensure that each religious group could have its own laws and own legal system for matters of distinctive religious laws (e.g. marriage, divorce, inheritance etc.)

5. Honour

This is the right not to be defamed and libelled in public.

These rights were recognised as universal rights of every human being living in the Islamic state. This preceded any concept of universal rights in the Western world and may well have been the source of the

concept entering Western thought in the first place as with many foundational ideas of Western civilisation which came through contact with the Muslims in the time leading up to the renaissance and during it.

This is all background material though. The misconceptions held in the West about Islam are basically related to what makes Islam a good story in the media - Sex and Violence. So this is what is tackled next.

Sexual morals

The topic that most motivates people in discussing Islam is the headscarf. This is a generally acknowledged requirement of women's modesty in Islam. For some reason people in the west see this as an oppression of women - that it somehow means they are dominated by the men. In Islam there are a number of codes of behaviour regarding modesty and men are similarly subject to these codes. Men for example should not wear silk or gold. Women are quite able to study and to work etc with a headscarf on and in fact because they remain modest; they are not so pressurised to look good - at work.

Women in Islam have always had very definite rights and responsibilities and so have men. They are the same in general with the very important exception of the rights and responsibilities in marriage. Here women have more rights e.g. for provision of all their needs, for custody of the children if a divorce happens and the husband has the right basically that the wife doesn't start flirting or worse with other men. The final decisions in matters of the family come down to the husband and because of his duty to provide for the family he has extra inheritance rights in general.

Islam essentially distinguishes between men and women in their roles within marriage granting each gender certain rights and certain responsibilities appropriate to their natures. Islam does not consider women in any way to be second class.

Polygamy is another intriguing subject to the Westerner when investigating Islam. According to Islamic law it is permissible for a man to marry up to 4 women. This can be beneficial in a number of circumstances. After the first world war for example, there were many single women but the number of available men was considerably less. Arguably this was a key factor in encouraging adultery. If the men were allowed to marry more than one woman in such circumstances it would prevent a general corruption in society's sexual morals and fulfil the needs of all those single women.

Leaving other equally important considerations as to when this could be useful, we might look towards the basic nature of people's instincts that have recently confirmed this teaching is consistent with human nature. Whereas the primeval drives of men lead them to look for many women at the same time, the drives of women lead them to look for one man after the next.

Another hot topic is homosexuality. Homosexuality as far as Islam is concerned is a profound mistake (as are all sins if they are not intending to do wrong). Humans are not homosexuals by nature. I would say that people become homosexuals because of their environments. Particularly critical is the environment during puberty. Suggestions, ideas and strange dreams are symptoms of confused attempts to understand new and blunt sexual desires and are rashly interpreted as defining someone as being one sexuality or another. If these conclusions are accompanied by actual homosexual acts they are even more strongly reinforced.

Human instincts can be subjected to acts of will. Sexuality is a choice of identity that follows choices of action, which follow from choices of what to have sexual fantasies about. Human beings are especially able to control their thoughts, entertaining some and dismissing others. However, if this free will is not recognised it is easy to get into a cycle of thinking which starts from accepting a hypothesis about yourself as true rather than as a possible choice (even if the options are sometimes difficult). For example: "I am lazy " could be supposed true by someone. When the person who thinks this lies around in bed in the morning he observes this inaction as evidence of the statement "I am lazy." As he repeatedly chooses to do so the evidence mounts and the idea becomes fixed in his identity. It may even have physical manifestations and change his physiology and psychology. This process can easily occur for any idea good or bad about the self that is based largely on evidence resulting from ones own action. The idea may be "I am 'gay'" or "I am content" or "I love eating lots of food". The truth is - you are what you choose to be; you do what you

choose to do; you think what you choose to think. There may be long time delays between the causing choices and the effects but anyone can change himself or herself. There are reformed ex-drug addicts, reformed ex-compulsive gamblers and ex-homosexuals. In all these sins prevention is 1000 times better than cure and much easier.

It has been suggested that homosexuality is genetically inherited and that those who have this 'predisposition' are victims of it, not sinners of any sort. However, there are other things which are probably genetically influenced to give predispositions to for example gambling or alcoholism. It could also be argued (and has been) that it is programmed into men's genetics for them to be unfaithful to their partner. All these things don't make it the right thing to do, nor does it prevent these things from being regarded as sinful. Drinking alcohol will still be regarded as sinful in Islam even if you have a predisposition to be an alcoholic. The trick, as every past alcoholic will tell you, is never to touch another drop after you quit - it is a long slippery slope - your life is better without it. Once a certain desire is connected to your identity strongly and you get in some way hooked on it, it will always be easy to return to it - you are unable to forget the satisfaction. The difficult task is remembering the bad side of the desire, such as hangovers, lost money, self-loathing or a simply sense of loss because of what you missed out on. But if you are to change for the better, you must remember this and the past desires you bound up with your identity can become disconnected from what you choose to become.

... And just to complete the picture - masturbation:

Islam teaches that it is better not to masturbate. Instead you should fast regularly, since it reduces sexual desire and helps you build up self - discipline in controlling your desires. The majority of scholars consider it wrong to masturbate based on the following verse:

Qur'an 23: Verses 1-7

The believers must (eventually) win through, - Those who humble themselves in their prayers; Who avoid vain talk; Who are active in deeds of charity; Who abstain from sex, Except with those joined to them in the marriage bond, or (the captives) whom their right hands possess, - for (in their case) they are free from blame, But those whose desires exceed those limits are transgressors; -

This is a general ruling that you should avoid desiring other than the sex with your spouse.

That said, some scholars consider masturbation a kind of medicinal relief of sexual desires, which prevents one from committing adultery or some other worse sin.

The above verse raises the question about slavery in Islam:

What is the Islamic view about slavery?

At the time when Muhammad taught Islam to the Arabs, slavery was a deeply entrenched institution worldwide. Rather than ban outright the institution of slavery, reforms were introduced to wipe it out over a period of time. The main reform was to ban enslaving people except as a way of keeping prisoners of war. (Whether this is used or not is up to the decision of the military commanders, and even here the preference is for ransoming or setting free prisoners). Slaves already had the right to property. To this was added the right to have their masters agree a price by which they could buy their own freedom.

Buying the freedom of slaves was then set as the price of atonement for various sins and set as a major objective of state redistribution of wealth through compulsory alms (charity)-giving. The children of a slave are not born as slaves - they are always born free. If the child is the result of sex between a free man and his slave, the slave must be married to the free man and she becomes a free woman on his death.

A slave was considered as the dependant of the Master and had rights over the master like other dependants. These included that they should be housed to the same standards as the master, clothed to the same standards as the master and fed to the same standards as the master. For these reasons some of the soldiers who were captured in the early battles which Muslims fought were released because their captors couldn't afford to keep them!!!

These things I think you'll agree contrast sharply with the slavery that took place in the US before the civil war.

The use of force

War

Islam as a religion that is comprehensive in its prescriptions and proscriptions also gives rulings as to when the use of force is justified. Primarily this is of importance when considering war and peace.

Firstly Jihad does not mean 'Holy War' rather it means to strive for something. This striving may take the form of fighting (qital) or it may take a myriad of other forms including writing, working in a field or going on pilgrimage.

Islam permits war in self-defence and in removing oppression. The primary meaning of oppression is the denial of the right to life and/ or property and / or freedom of religion.

All the battles that took place during the Prophet's lifetime, under the guidance of the Qur'an and the Prophet, have been surveyed and it has been shown that they were for no other justification than for self-defence or pre-empting an imminent attack. For more than ten years in Makkah, Muslims were persecuted, but before permission was given to fight they were instructed to restrain themselves (4:77) and endure with patience and fortitude:

There are restrictions on who should be fought and civilians are not a legitimate target. Also a 'scorched earth' strategy is against Islamic teachings. A key restriction is that there should be reasonable prospects of success. Further, if the enemy fighting the Muslims offers peace then the Muslims should accept.

Surah 8:Verse 61-2

And if they incline to peace, do so and put your trust in Allah. Even if they intend to deceive you, remember that Allah is sufficient for you.

Today the image of Islam that is put out by Hollywood is of mad Muslim terrorists.

Terrorism means bringing terror to a population, as such it is totally unislamic. It is unislamic because it brings about an extreme fear of people. To have such an intention has nothing to do with Islam. In Islam Muslims seek to instil in people a fear³ of God only and NOT of people.

There are some who hate that people should fear God only. They set themselves up as enemies of God and the Muslims. They may try to force people to fear something else. By doing so they are themselves at least mild terrorists. If they do so then Muslims have a duty to oppose this force - with force if necessary and if it will be effective and decisive. In this way only those who are themselves 'terrorist' have cause to fear the use of force by Muslims.

It is the complete incompatibility of only fearing God, with fear of people, which is referred to in

Surah 2 Verse 256

Let there be no compulsion in religion: Truth stands out Clear from Error: whoever Rejects Evil and Believes In Allah hath grasped The Most trustworthy Handhold that never breaks.

³ Actually the word is taqwa which is only very poorly translated as fear. It means a state of being conscious of God so that you take heed and obey His guidance. This may be through a combination of fear, admiration, love, gratitude etc.,.

The ignorant or the liars may stand up proclaiming that there is such a thing as an Islamic terrorist. There isn't. The Muslims don't want you to fear them. They only hope that you will learn to fear Allah, and to fear only Allah.

This is all very fine, but what about the various organisations that do terrorist acts and claim to do so in the name of Islam? Well, in Algeria what is actually happening is almost certainly the responsibility of the government and so what has been attributed to "Islamic Militants" is actually a complete lie. In Egypt where there were recently attacks against tourists the groups was a splinter group of a splinter group and was therefore potentially influenced by the same forces that instigate the violence in Algeria. They were teenage boys with a great deal of anger about the torture and oppression that the Egyptian government was responsible for. They were also out of control of any mainstream Islamic movement and quite ignorant of Islam's teachings. Their actions stand condemned in the light of Islam. Israel is another and quite different case. The only justification I have heard for the attacks there is that every Israeli citizen is a fully trained soldier and as such part of an occupying army- they are therefore legitimate targets. I am not sure how true this is, but in any case they are pushing the law to its limits by targeting "civilian" areas even if the civilians are in reality fully trained soldiers.

Internal Law and Order

Force is necessarily used to implement justice internal to the state. This may take many forms depending on the crime.

If people violate the rights of others, the victims of those violations have a right to take 'an eye for an eye', or 'a tooth for a tooth' or whatever compensation the transgressor is willing to give. However, it is more virtuous for the victim to forgive and forget, by such action God forgives and forgets some of the sins of the victim.

If the victims choose to claim their right, the state has a duty to enforce their claim. This is not barbaric; it is justice. Currently legal systems in the West consider many crimes, including the crime of murder, to be "crimes against society" and so the families of the victims get no say in the punishment and no compensation is given them in any form except perhaps some kind of satisfaction in seeing punishment being meted out to the criminal.

In Islam the victims have the right to demand retaliation like for like. This is nothing more than granting full rights to the victim. Physical punishments can, therefore, be just. They can also be a better deterrent to crime and they are more equal towards the transgressors than fines (which the rich don't feel as much as the poor) or imprisonment (which also punishes the taxpayers, the family and rarely reforms the criminal's character).

There are certain punishments for particular crimes prescribed by Islam. For example, to cut off the hand of the thief. These are to be understood as only applying under conditions where there is no excuse for the crime (e.g. hunger and poverty are a possible excuses for theft) and act primarily as a deterrent. They are called collectively the "hudud" punishments. This literally means the limits. They are limits that no one should transgress and which if transgressed are strongly punished.

Family Discipline

Islam also allows the use of force to a limited extent within a family, for example to discipline children. However, the example of the prophet in all these cases is the guide to follow. He never hit his wife and he never hit any child - if we were all as wise as he was in matters of moral guidance, then we would be able to guide our spouses and children likewise and never need to resort to even a token use of force.

Islam and Secularism

Secular law can be defined as law, which does not depend on the religious beliefs of the parties involved. The question immediately begged by such a statement is, 'Who decides what such laws should be or that there should even be laws which don't depend on the religious beliefs of the parties involved?'

The ardent pro-secularist will say that the majority decides what such laws are and what their extent is. The Muslim should say that Islam prescribes such laws and to what extent they are implemented in society depends on the influence and power of the Muslim community and or other communities who also want those particular secular laws implemented.

What those secular laws are which Islam prescribes relate to a number of areas but in broad terms they are the 5 basic universal rights that have been outlined above : life, property, freedom of conscience, freedom of religion and honour.

The next question that arises is whether a state can implement some secular laws and some non-secular laws. A good example of a non-secular law is the law on marriage. In some countries this law still has very Christian overtones and everyone regardless of their religion must go through the ceremony to be recognised in law as married. Generally the West has muddled the two types of law and starting from a position of very Christian law have diluted it into less and less Christian forms.

In contrast, Islam makes a clear distinction between secular law and non-secular or religious law and to as great an extent as possible it prescribes enforcing both types. The Christians have their own marriage law in Islamic countries and that is what is enforced for them, the Jews have another marriage law and the Muslims another. Each religious group has in principle its own distinct non-secular laws and as far as is it wanted by each group and as far as is practically possible they are all enforced by the Islamic State. Each religious group builds their own judicial system and reaches agreement with the state on how their laws will or won't be enforced.

Communism has had a set of secular laws. The West has a set of secular laws. Islam has a set of secular laws. Out of these three Islam's set of secular laws gives the greatest meaning to freedom of religion and freedom of conscience, communism's set of laws gives the least (if any) meaning to freedom of conscience or freedom of religion and the West's set of secular laws is somewhere in between.

One key area in which an Islamic state would change the way a country works is through the laws on trade. An Islamic state would manage the property rights of people (at least the Muslims) according to some key principles of moral economics. This forms the important field of Islamic economics.

Islamic Economics

The role of the state in Islam is modelled on the way that the early companions implemented the affairs of state. Islam requires the authority of the state to act in the public interest, to maintain justice, to promote Islam internationally, and to redistribute wealth. The extent to which the state should rule people's affairs depends on the needs of the people. Sometimes large government involvement may be needed and sometimes only a little. Islam does not prescribe anything like a state with huge control over industry but it is responsible for taking control of such basic utilities such as water rights if it is necessary to ensure that the basic needs of the population are met. The Islamic economy is a very free market economy restricted by the morals of the Muslims involved in the trading and general concerns over distortions to that freedom to trade. For example the existence of monopolies or other forms of attempts to deceive people as to the would-be free market prices is something an Islamic government would attempt to eradicate. One key aspect of Islamic economics is the prohibition of interest. Discussing this brings out a number of the moral teachings of Islam with regard to economics.

This has to be taken into consideration along with the prohibition of gambling and discouraging of hoarding supplies or money. These things are all closely related. An efficient economy is characterised by a swift and general balance of supply and demand. Hoarding distorts the free flow of goods if it is done for the purpose of storing wealth. (Keeping collections of things that are used in some way for benefit doesn't have that effect.) Hoarding is also a kind of speculation based on the idea that what is hoarded will go up in value or at least stay constant in value. Speculation is wrong to the extent that it is like gambling. Let us consider the market for wheat. In an efficient market, the buyers of wheat are the people who will then make bread and other foods and sell it, the price will adjust depending on the supply and demand and will reflect what people are willing to pay for it in order to use it. Hoarding amounts to betting on an increased value. Speculation on an increased value would mean buying the wheat in order to sell it at a time in the future with the expectation that its price is going up. This kind of action distorts the matching of real demand (for the use of some product) and real supply. In the most extreme circumstances where most of the trade is speculative then most purchases are because people expect an increase in price. The act of buying pushes the price up and so encourages more people to buy. This positive feedback is the opposite of what should happen in an efficient economy where the rules of supply and demand are a negative feedback and push prices to a dynamic equilibrium.

If I expect the price to change I can, however, make a contract in which future liabilities are clearly fixed which may well take this expected change into account. Such contracts have inherent risks in them built into the liabilities. However, in dealing with the risk we have a contract between a user and a supplier and these are the people best suited to mitigate that risk by finding ways around it. What shouldn't be done is to begin trading risk to people who have little or no ability to mitigate it, for example insuring the risk. To do any such trading in risk is essentially a form of gambling. In general Islam therefore tackles risks by strategies for risk mitigation rather than insurance. For example for risks where short-term temporary loss can be damaging what is needed is short-term loans or payouts from an organisation with considerable liquidity. Such mitigation can be achieved by collective mutual assistance groups. In these groups people deposit funds according to their abilities and on the basis of mutual assistance. This fund is then given out to those in the most need if the dangers come to pass. Such a mechanism removes the connection between the amount put in to the fund and the amount paid out and is therefore no longer a form of gambling. These collectives should ultimately be the responsibility of the state to implement as acting in the interests of the public good. A fine example of such a scheme in practice is the universal health cover provided by governments in various countries including the UK. Such organisations acting for the collective are then in a position to mitigate related common risks much more effectively.

Interest is explicitly forbidden in Islam. The essential problem with interest is that interest divorces the lender from any moral responsibility for the use of money lent. The return is guaranteed no matter what the changed circumstances of the borrower are. The possession of money doesn't of itself cause any increase. It is only when the money is put to some use that it can yield a profit. By divorcing the lender from any responsibility over the use of the money what is introduced is a problem called a moral hazard. The lender doesn't care where the money is lent so long as the returns are guaranteed. This encourages not merely immoral lending (e.g. . lending to encourage a build up of weapons for a war), but it also encourages continually more reckless lending. The real profitability of the use of the borrowed money is hidden from the financial system.

We consider an analogy here: The financial system is like a farmer living through the productivity of the physical economy - the man's farm. The man takes some of the produce from the farm for his own needs. However, the farmer should also consider the needs of the farm and must not overwork the land or act carelessly about the potential of the land to carry on producing. Carelessness will inevitably cause problems, in the worst case the farm will be destroyed and so will the farmer. The existence of interest in an economy amounts to the same thing as the farmer (financial system) not caring about the farm (the physical economy) and it is bound to lead to problems. On a microcosm we see the problem in the case when money is lent to people who then find themselves in difficulty are pushed ever further into debt because they are unable to pay the debt - eventually they are ruined.

By banning interest, Islam forces the linking of lending with the moral responsibility for its use.

The role of financing organisations is crucial to an economy, ideally they distribute the wealth from those who don't know how to put it to productive use to those who do know. This is essentially the role of investment agencies and it requires some knowledge of how to invest effectively in productive enterprises. This input of knowledge is (in our analogy) like the farmer's work to make the land productive. The current banking system however started on quite a different way of making money which required no specific investment skills - only rigid enforcement that interest be paid on their loans.

A brief history and prediction of the life of banks:

Banks started life not as vehicles for investment but as secure places to store wealth. At some point some one noticed that only very rarely did people take out all their money and there was always money locked away in their bank. The banker decided to lend out some of the money, which belonged to the depositors on interest. The loan would be repaid with interest and the depositors would never have noticed. The profit is the interest on the loan. This practice became established and is used globally as the basic way banks make their money. This is known as fractional reserve banking and has proven extremely lucrative for the banks.

Firstly it is clear from Islam that fractional reserves are wrong because they are a deception. However, using fractional reserves circumvents some of the bad effects of hoarding money and releases it instead for use in the economy. This is initially a good thing - it is similar to the depositor stopping to hoard money and instead investing it. However, all deceptions eventually have their cost. Fractional reserve banking exacerbates the moral hazard problem mentioned above since it inevitably involves hiding the risk of investment, which is taking place with the depositor's money. Moreover, for every unit of currency deposited a bank may be able to lend out much more than is deposited. The effect of this wrenches up the moral hazard problem by increasing the risk of banks. This works as following:

I deposit \$100 in the bank. The bank then lends \$90 to someone who uses the money to buy something from a third person. This person then puts his money in the bank. The bank is then able to lend out \$81 of this deposit, and so on around the cycle. Thus for an initial deposit of \$100 and a reserve level of 1/20 the bank

can effectively lend out \$2000. The lower the level of reserves needed the higher the potential profits of the banks. The problem only arises when people think that the Bank doesn't have enough money to give them their money back. This is true- the bank doesn't have the money and is quite unable to return it.

In order to overcome this problem, banks clubbed together so that if one bank lost the confidence of its depositors the others would lend it enough money to return the deposits until the confidence returned. This worked for a while but banks operate in a competitive environment and to make more profit there was great pressure to lower the level of reserves needed and therefore increase the profits. The use of state power was the next required step to add strength to the assertion that people would get their guaranteed interest and their guaranteed deposits back. When people got worried about their deposits being unsafe, the government would declare a "bank holiday" allowing the banks to close and reopen only when the 'panic' subsided. This use (abuse) of state power led to the creation of national central banks which in exchange for this power enabling more effective guarantees of the deposits in the banks, lent to the government with guaranteed returns. This step gave greater credibility to the guarantee of deposits. This guarantee though just exacerbates further the moral hazard problem of interest. The government has to maintain the confidence of the depositors and is therefore heavily involved not only in distributing cash to banks in trouble but also making as sure as possible that people don't lose confidence in the system generally. For if one bank collapses it damages (potentially fatally) the confidence in another bank and a domino effect is feared. This led then to international co-operation to establish the International Monetary Fund and World Bank to try to save national central banks when investors/ depositors lost confidence in that country's economy. This worked for a while however, this is still not enough for the bankers now deep in to the moral hazard problem. Banks that were deregulated and able to trade internationally were able to make more profits than those who were in heavily regulated markets. Over the last few decades the regulation of banking has been dismantled to allow the banks to make yet more profits. A new market has been introduced where risks are traded in a myriad of forms and is the ultimate in giving banks liquidity to pay back depositors. The volume of trade on this "Futures" market is huge and dwarfs the size of whole national economies. The moral hazard problem is also getting larger and larger as the financial world demands ever more returns from the physical economy. The problem isn't just like one farmer not caring what his land can produce; it is a global situation. If it isn't stopped, it will result in the global physical economy being wrecked - sooner or later. The financial system must be reformed to prevent this - the reform is to introduce Islamic economics, the heart of which is the ban on interest.

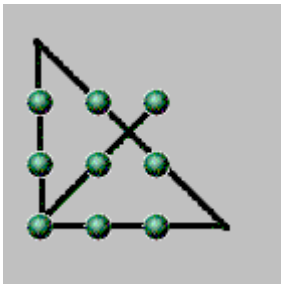
Conclusions

I considered writing a section on conclusions but I leave it to the reader to draw their own conclusions. Islam is there for you to investigate, I encourage you to do so: it is really in your best interests if only you knew!

"Now have come to you from your Lord proofs to open your eyes: if any will see, it will be for (the good of) his own soul; if any will be blind it will be to his own (harm): I am not (here) to watch over your doings."

[The Qur'an 6:104]

Appendix 1 - Solution to the nine dots problem:



The interesting thing about this problem is that most people when they first encounter it put an artificial limit on the possible solutions they search for. Namely, they think of the nine dots as a square within which the lines must be drawn. This is done quite often and the lesson we learn from it is that we must actively challenge the limits we put on our searching, and actively open our minds to new possibilities.

Appendix 2 - Further details on the word occurrence in the Qur'an

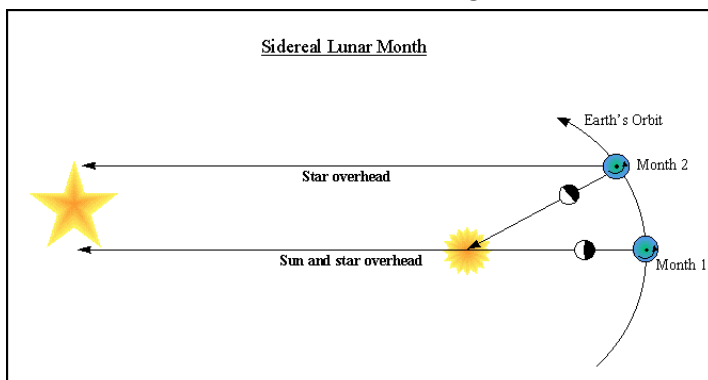
Following on from considering that the forms of these words other than the singular some notable things can be seen about the occurrence of all the forms:

		"Day" *
a day / the day	365 times	
days (ayawm)	27 times	
two days (yawmein)	3 times	
their day (yawmahum)	5 times	
your day (yawmakum)	5 times	
that day (yawma-ithin)	70 times	

The total number of plural form occurrences is 30 (27+3) which is the closest round number to the number of days in a lunar month (29.53 days) and the closest round number to the average number of days in the solar calendar - (30.41 days). Another type of month might be noted here - the time of a Sidereal lunar month. This is the time it takes for the moon to rotate around the earth as measured against the fixed stars. A normal lunar month between full moon and full moon is a rotation of the moon around the earth as measured against the position of the sun.

The length of a sidereal lunar month is 27.321662 days.

The number of plural form occurrences of the word day (not including the dual form) is 27 - again the closest round number to a recognised astronomical period.



The other forms of the occurrences of the word "day" can be grouped into 2 types - merged with words indicating possession i.e. your day / their day and merged with the word meaning a particular one i.e. "that day" the ratio of these forms is 7 (70 / 5+5) which is the number of days in a week.

To complete the picture these should all tie together in some way so that each number has its own particular purpose. This is found very easily by taking one number from each form other than the singular: We take “their day”, “that day” and “two days”) we have $5 \times (70+3) = 365$. We now have again the number of days in a year!

“Month” *

The word month occurs in various forms the following number of times :

a month / the month	12 times
the months (ash-shuhur)	once
months (ash-haar)	6 times
two months (shahreïn)	twice

We can see that the total number of plural form occurrences is 9 (1 + 2 + 3). This is a well known time period for the length of a human pregnancy. (If you think about it no other number of months has a similarly significant meaning). It might also be noted that the result of multiplying the various forms of plurals we reach again 12 months for the year ($1 \times 2 \times 6 = 12$).