My approach to research

Our world today is increasingly complex and multifaceted; this calls for an inter-disciplinary and trans-disciplinary approach to research. The amount of information now available constitutes a deluge of which the researcher needs to make sense rather than drown in. In particular, it is important to be able to ascertain what is true and what is false, what is reliable and what is not, what is relevant and what is a red herring.

In order to address these fundamental issues, I have therefore developed a research methodology that is based on the management of information. For research today is rarely a question of digging out a single nugget but of handling a large and complex body of information which is probably variable in quality but abundant in quantity.

I believe that my research methodology can be applied and adapted to a wide variety of areas of research. I trust that my method would always be the servant of the researcher and not itself become the force that directs and drives the research, as is sometimes seen with other research methodologies that force the researcher to remain in a "silo", sealed off from other factors that could directly or indirectly influence the research topic.

I believe such research silos are inadvertently created for many different reasons. For example, it is natural that most researchers would closely identify with their own academic department and be less aware of or even less open to what is going on in other departments, unless they make a deliberate effort to find out. Even the fact that departments are often housed in different buildings, so that members of different departments do not tend to meet casually in the corridor or at the water-cooler is a hindrance to the exchange of ideas between departments and thus contributes to the fact that an individual researcher becomes trapped in their own silo, unable to see out.

Similarly many subject fields have developed their own favoured research methodology, and researchers have sometimes been criticised if they choose, for whatever reason, not to utilise their department's preferred research methodology. They are accused of "stepping outside their field of study". I believe that a rigid insistence on all researchers in a given department using the same research methodology, whatever their subject matter, could stifle genuine research and advances in knowledge. It would tend to result in successive researchers arriving at roughly the same conclusions, rather than truly challenge the information available.

My own research methodology tries to avoid the pitfalls of the over-rigid and prescriptive approach. It is based on the management of information and on combining elements of a wide range of research methodologies. Rather than being treated as separate contributions, these elements are fused or synthesised into a whole research methodology. Some of these elements are:

1. Historical research – the systematic and objective positioning and combining of evidence in order to establish facts and draw conclusions about the past. Where did it take place? Who was involved? When did it take place?

2. Comparative research – comparing people's experience in the past with parallel situations in the present, at both the macro and the micro level.
3. Descriptive research – examining situations in order to establish what is normal, and what can be predicted. This can be direct human observation or indirect.
4. Correlation research in a relational and predictive manner – although this is primarily quantitative research, predictions of possible behaviour or events are possible where correlations are already known. (See below on effects and consequences of effects.)
5. Evaluation research – deals with complex social issues and the meaningful constructions which groups create to make sense of situations they find themselves in.
6. Cultural research – language and cultural interpretation. An important part of this is ethnogenic research: what do the subjects of the research say about themselves or how do they justify their own behaviour? It is vital for the researcher to recognise what the subjects say and not impose the researcher's own external or subjective theory to explain their subjects' behaviour or actions

My approach to information

My research methodology is based on the following approach to information.

1. **The source of the information**. I consider that one of the most important issues is the source of any piece of information, whether it is a single source or multiple sources, and if multiple whether they are independent from each other. Secondly, it is important to consider whether the source or sources is reliable and trustworthy.
2. **The analysis of the information**. Both situational analysis and problem analysis are required. Here I apply what I call my Plato and Aristotle approach. Plato sees the big picture, Aristotle drills down into detail. Both are essential for the analysis of any piece of information. It is important to look at the past to consider what the original meaning was, how the geopolitical situation at the time may have shaped thinking then, as well as the present, and how the past has impacted on the present.
3. **The interpretation of the information**. Any piece of information always has multiple possible interpretations, and these can be influenced by culture, background, training, ethnicity, prejudices and more. In theology, I have found that researchers often neglect the Christian traditions that may be less familiar to them, for example, Protestants rarely seem to remember the many Orthodox denominations which have a very different perspective in many areas.
4. **The application of the information**. By this I mean how the information can be used and the purpose for which it can be directed. These too can be subject to personal prejudices and all the factors listed in 3. above, plus the influence of the conclusion that we may be seeking to arrive at. In other words, there is a danger of applying the information, either consciously or subconsciously, to buttress our existing aims.
5. **The effects of the application of the information**. This is the consideration of what will be achieved (the immediate result) by applying the information in the way that has been determined.

6. **The consequences of the effects of the application of the information**. It is vital also to consider what may be the impact of the application further down the line, in other words, what will follow from the immediate effects? I call these further ripples the consequences.

I believe that this approach to research can be applied in many fields of academia, including theoretical, biblical and comparative studies of religion, both Christian and other. Stages 1 and 2 in the list above are the most important and I will discuss them in detail below.

The source

Transmission of information through gatekeepers

I consider that it is essential to trace back through the chain of transmission as far as possible, preferably to the original piece of information. Every time that a piece of information is forwarded, there is the possibility of it being degraded, either by loss of information or by introduction of error. Each gatekeeper in the chain of transmission has power to introduce either kind of error, whether deliberately or inadvertently. This is especially true every time the original source is paraphrased or, worse still, summarised.

The following are ways in which information is commonly degraded along a chain of gatekeepers:

1. **Tidying up**
   Details that are apparently unnecessary, or "dead-ends" in the story that seem to lead nowhere, may have been omitted in the interests of making a neat and coherent narrative.
2. **Face-saving omissions or additions**
   Where full information could cause reputational damage (shame) to the narrator or someone or a religion or ideology they admire, some details may have been omitted. Alternatively, spurious additional material may have been added with the same aim. It is noticeable that 19th century scholars gave fuller and franker accounts than did their 20th century counterparts.
3. **Desire to dramatise**
   Some gatekeepers have a vested interest in a sensational story. Journalists are a prime example, and some very reputable journalists have been caught out inventing quotations or even persons and events. Academics, too, are prone to this temptation and the desire to make a name for themselves by a sensational discovery or to generate another research grant can be strong motivators.
4. **Desire to believe**
   It is often the case that people want to believe a certain thing is true (or untrue) and this will influence their gatekeeping.

5. **Desire to please**

   In some cultures, good manners require that a person gives the answer that they believe the questioner wants. This means that completely erroneous information may be imparted as a courtesy, and accepted by someone from another culture as first-hand reporting from a local source.

6. **Desire to appear knowledgeable**

   The same effect occurs in cultures where it is considered shameful to admit ignorance. If a question is asked, a confident answer will be given, even if it is complete invention.

7. **Gullibility and naiveté**

   When a piece of information is transmitted through a chain that includes individuals unfamiliar with the context and of a generally trusting disposition, it is often the case that incorrect information is passed on that other gatekeepers might have recognised as false. In fact, the trusting disposition is not essential for this scenario as even hard-nosed journalists can be easily misled when reporting on an unfamiliar context. If a gullible and/or ignorant reporter is interacting with someone who has a cultural desire to please, the result can be a spectacularly wrong piece of information, despite the best intentions of both parties.

8. **Genuine forgetfulness**

   Law-courts are familiar with the fact that truthful eye-witnesses may give somewhat different versions of the same event that each has seen with their own eyes.. Sincerity is not a guarantee of accuracy. This fact is not always applied in academic research, where the assumption is too often made that every detail reported by an eye-witness is accurate.

9. **Inability to distinguish observations from inferences**

   Some individuals do not see a distinction between what they know is true from their own first-hand observation and what they are convinced is true because they have deduced it or been told it by someone they trust. In research it is important to try to recognise which is which in a source.

10. **Deliberate intention to deceive**

    "Fake news" is nothing new. Propaganda, military psy-ops, forged documents, re-writing of history and other deliberate attempts to deceive have been with us for millennia. The researcher must always bear this possibility in mind. It may be done from good motives.

Google and other search engines are very powerful gatekeepers, controlling which material is brought to the researcher's attention and the order in which it is presented. Not only does this depend on algorithms that a human programmer set up, perhaps long ago, but also it depends greatly and increasingly on the notorious phenomenon of search engine optimisation. Furthermore, there is the question of censorship/control of electronic media, and the issue of whether top executives at Facebook or Twitter, for example, could or should cause to be removed any material that users post. All this filtering is ultimately downgrading the information by removing parts of it non-randomly.

This brings us to the impact of the way that a human editor of a publication selects material to include and material to discard. A human archivist makes similar choices. Both editor and archivist have another level of control in terms of the arrangement of the material that they decide to publish/keep. Of course, such functions are vitally necessary, but at every stage, information is lost that might have been useful, and the possibility of bias is introduced, whether unconscious or conscious. We cannot do without such filtering out of chaff (such as repetition or irrelevancies) – without such filtering, the researcher would be immediately overwhelmed and swept away in the flood of information. Nevertheless, the researcher must remember that the information has been degraded by every gatekeeper who has handled it.

Some gatekeepers are expected to provide some quality control, for example, the editors of journals/newspapers/magazines or the editors of publishing houses. Certain titles or imprints are assumed to carry with them a guarantee of truthfulness. But this can never be totally depended on by the researcher.

A particular example is scientific journals whose papers are peer-reviewed. Unfortunately this system does not always function as well as it should, allowing some flawed research to get published, and even some fraudulent papers. A 2006 article by Lawrence Altman in the *New York Times*,[1] exposed the increasingly weak fact-checking by scientific journal editors and peer-reviews and some of the reasons for it, most of which boil down to finance (remembering that time is money) or professional jealousy.

Assessing the source

Some researchers use a rough and ready system to assess the quality of information, by grading the source from A (highly reliable) to D (unreliable) with E for unknown or untested reliability. A second grading is added to reflect the likelihood that the information is correct, running from 1 (factual) to 5 (unlikely); this reflects the area of expertise of the source – basically, how much does this person know about this subject? This system also takes care to distinguish fact from comment or inference in any piece of information. While grading from A1 to E5 is probably a step too far, a good researcher will keep running over in their mind the two dimensions given here – the trustworthiness of the source in general and their expertise on the particular piece of information they have reported.

However, I believe it is important not to discard even what we might term "D5 or E5" sources simply because they score low on this scale. They still *might* be true, and if they *are* true they could be adding to the sum of human knowledge, revolutionising academic understanding in a particular area, or casting a whole new light on another set of already-known of facts. This is what can happen when an ancient manuscript is discovered.

I therefore disagree with researchers whose standard procedure is to separate the wheat from the chaff by discarding all sources of doubtful reliability and using what remains to judge the credibility of further incoming information. This method may be appropriate in the hurly-burly of life, but it is foolishness for a researcher who has plenty of time and no

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[1] Lawrence K. Altman, "For Science's Gatekeepers, a Credibility Gap," *New York Times*, 2 May 2006.

lives at stake. For an academic researcher, no piece of information should be totally discarded until it is known to be false. It must be kept and considered alongside all the other information, as a possible truth albeit the possibility is small.

A researcher must also bear in mind that a single source for a piece of information may be the only remaining source that has fortuitously escaped destruction during a deliberate effort to "re-write history", often to airbrush from the record the crimes of a particular group.

Databases and spotting fakes

Any collection of information that has been systematically gathered and categorised is a database. It does not have to be held on a computer; it can be on paper or even in a person's memory. The researcher needs to be able to spot what is false and what is true amongst the items of information. In some fields of study the possibility of deliberately deceptive information is high, so it is worth giving careful thought to how someone might try to deceive or simulate, preferably studying actual known deceptions to train themselves to be able to recognise other deceptions.

It is said that those who work in banks are best at spotting forged bank notes or coins, simply because they are so familiar with the genuine ones. Similarly a researcher needs a database of reliable information to teach themselves what is real, and thus make it easier to detect the fake.

Analysis

Analysis methodology

Naturally, there are many ways to analyse a set of information. At the two extremes are data-driven analysis and conceptually driven analysis.

Data-driven analysis requires relatively accurate and complete data, and the researcher's mental model can quite easily be explained to others, who can then follow the same procedure and are likely to arrive at the same conclusion.

At the opposite end of the scale is conceptually driven analysis, where there are many unknowns, variables interact with each other, and even the formulation of the questions to be answered is uncertain. In this case, different researchers may come up with wildly different interpretations of the same (scanty) information, based on their own pre-existing mental model of the general situation.

In both cases there is an idea that little pieces of information coming in can be fitted together like a mosaic or jigsaw puzzle so that eventually a clear picture emerges. This has some truth, in that I believe it is vital to keep in mind many small pieces of information, even if their relevance is not necessarily yet clear. But cognitive psychology shows that analysts generally decide on the big picture first, guided by their own mental model, and then arrange the small pieces to fit into the big picture.

I myself use a version of the mosaic methodology that has been compared with a physician making a medical diagnosis. The doctor observes the symptoms and then uses their specialised knowledge of the human body to develop a hypothesis to explain the observations. They may also conduct tests to collect further information or to test a hypothesis. The key here is that the doctor identifies all the plausible hypotheses and evaluates them, focusing on the information that will help them to discover which hypothesis is the most likely to be the true explanation.

Information overload and the inter-disciplinary and trans-disciplinary approach

Long ago it was possible for an able and well educated individual to know practically all there was to know in the intellectual sphere of their particular civilisation – history, literature, several languages, what we now call science and the liberal arts, and perhaps also to acquire selected skills such as rhetoric, poetry or music-making of some kind. Though some might acquire only a smattering of each discipline, many individuals could be called polymaths, and a few particularly gifted individuals could become a master of all.

But soon the sum of human knowledge was growing so fast that it was no longer possible for anyone to master it all. Contents lists and indexes began to appear in books. Academic disciplines splintered into increasingly narrow specialities to reflect what an individual could reasonably grasp. With the arrival of the digital age, this trend mushroomed.

I believe that one of the greatest handicaps in academic research today is the expectation that each researcher will continue down the narrow road conventionally mapped out for them by their chosen area of research. An inter-disciplinary or trans-disciplinary approach is often the secret to a breakthrough in understanding. Scientists are increasingly discovering this, and I believe the principle applies in other areas of academia. An inter-disciplinary and trans-disciplinary approach is certainly a main emphasis of my own research methodology.

If the narrow approach was a protective reaction to save researchers from information overload, how then does a researcher handle an approach involve multiple disciplines without being overwhelmed?

In 1948 Claude Shannon, who is generally credited with being the creator of Communication (Information) Theory, provided a mathematical definition of "information", based on a 1928 definition by Ralph Hartley. This is not a definition for everyday use, but did introduce the concepts of repetition ("redundancy") and irrelevant background sounds ("noise") which should be stripped away from any piece of information, whose accuracy (or otherwise) can then be considered. With the exponential growth in accessible information, this concept has use in dealing with information overload.

I believe that the way to prevent information overload is to filter out redundancy and noise, and then apply appropriate analysis to what remains.

It is interesting to note that more information does not necessarily lead to more accurate deductions, predictions or other judgements. As long ago as 1979, Heuer reported the work of some experimental psychologists which showed that the accuracy of judgement did not improve in proportion to the amount of information available. The experiments showed

that an experienced analyst, expert in their field, needs a minimum amount of information to make their judgement, but, if this minimum has been provided, adding extra information does not increase the accuracy of the analyst's judgement; it does however increase their confidence in the accuracy of their judgement. Heuer points out that of course there will be circumstances where additional information *does* lead to more accurate analysis and also circumstances where the addition of extra information (particularly if it contradictory) decreases the analyst's confidence But in general the "disturbing but not surprising findings" of the experiments were that analysts grew ever more confident, even over-confident, as the amount of information they were given increased despite the fact that the accuracy of their judgements remained broadly the same. The experiments also showed that the analysts had an imperfect understanding of their own thought processes and were unaware that they did not systematically integrate all the information they had available and were in reality relying on only a few dominant factors.[2]

Thinking like "the other"

My research methodology utilises culture in a way that many do not. Although I have been trained in the Greek linear position, I am also able to see things from a non-Western position and therefore my methodology utilises that aspect. I also seek consciously to put myself in the place of "the other", my source or my subject, to "put myself in their shoes", and to learn to think as they do.

The phrase "strategic empathy" has been coined by the American historian Zachary Shore to describe the skill of "stepping out of our own heads and into the minds of others", and more specifically how leaders within governments try to think like their enemies. He applies this to twentieth century warfare but it is, of course, the same advice as that of the ancient Chinese strategist Sun Tzu: "Know your enemy." Zachary looks not only at patterns of behaviour but also at breaks in those patterns. Strategic empathy, he says,

> is what allows us to pinpoint what truly drives and constrains the other side. Unlike stereotypes, which lump people into simplistic categories, strategic empathy distinguishes what is unique about individuals and their situation. To achieve strategic empathy, you must first identify the information that matters most…[3]

My research methodology, which long pre-dates Shore's book, applies this principle to all situations: you cannot properly understand a piece of information without understanding the mind of the person who authored it.

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[2] Richards J. Heuer, "Do You Really Need More Information?", *Studies in Intelligence*, Vol. 23, No. 1, Spring 1979, pp.15-25.

[3] Zachary Shore, *A Sense of the Enemy: The High-Stakes History of Reading Your Rival's Mind*, Oxford: Oxford University Press, 2014, quoted excerpt from introduction at http://www.zacharyshore.com/a-sense-of-the-enemy.html [accessed 30 July 2020].

Indirect thinking

It is important in research that is trying to solve a question of some kind, as in many kinds of problem solving, to think creatively and be open to the intuitive promptings of the right-hand side of the brain. Is there a third option instead of the obvious two? There are many names for this kind of thinking, which does not follow the prescribed and well-worn routes of thinking, nor does it look at each issue as a binary either-or choice. It has been called indirect thinking, lateral thinking, "thinking out of the box", "blue sky thinking", "listening with the third ear" and even "the wisdom of Solomon". Many scientists are especially aware of these "adventures of the mind"[4] although not always willing to admit to them. It does, however, apply to research in any discipline.

Indirect thinking is applicable at each one of the six stages that I outlined under the heading "My approach to information", even in assessing the source, for it assists in detecting deliberate falsehood by helping the researcher to think like a deceiver.

Using all the above methods and analyses will enable the student to arrive at the precise areas they should research and the attendant issues. It is very important that the student should conduct their research with an open mind rather than starting with a "conclusion" which they wish to prove and selecting material to validate and support it.

They should be allowed to be guided by the analyses and information gathered, rather than boxed in by their research methodology. My research methodology combines and syntheses elements from the following types of research: historical research, comparative research, descriptive research, correlation research in a relational and predictive manner, evaluation research, elements of ethnogenic (the context being very important) research and cultural research.

This approach to research has guided my writing, for example, in my books *Global Jihad* (2008), *Understanding Islamic Theology* (2013) and my latest work *Understanding Living Islam* (2020).

My approach to teaching

Students must think for themselves

I believe that the single most important issue in teaching is to get the student to think for themselves, clearly, analytically and critically, and not just to resort to quotations. When lecturing, I like to engage with my students in question and answer – primarily meaning I ask them questions and they answer, rather than the other way round. Through dialogue and argument, which I guide by my questions, I aim to stimulate the students to develop their

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[4] P.B. Medawar, "Is the Scientific Paper Fraudulent?" *The Listener*, Vol. 70 (12 September 1963), p. 377.

critical thinking and their own original ideas, at the same time helping them to recognise whatever presuppositions they have unconsciously assumed.

When I first began teaching in the US I failed most of those working for PhD on the single issue that the Americans used a methodology that any position could be validated by three quotations. I rejected this, spoke to the Dean, and said that unless the students could come up with their own arguments, assess the material and argue their case, they should not be awarded a high grade.

Inter-disciplinary and trans-disciplinary approach

My second principle is to educate broadly, drawing on a variety of disciplines. I believe that students should engage with a diverse range of subject matter through their reading and thinking. In this sense, I am more 19th century than 21st century. I encourage my students to bring to their research all that they can of their own cultural background.

Virtue

Thirdly, I believe in the importance of ethics and virtue in education, as did the Victorians and the ancient Greeks, for example. Whichever way the student handles their research material, it should help to shape them into an increasingly virtuous person, not merely an increasingly knowledgeable person.

Methodology

To implement these three principles, I teach students my six-point approach to information (see above). Sadly, in academic studies today, a single work, a single source or a single person can be hugely influential because their thesis is not subject to critical analysis. I believe that this is now the most fundamental issue facing academia at the PhD and postdoc end. When supervising or examining PhD students I have often discovered that their whole thesis is deficient because the student had not treated the information as I have suggested above.

I emphasise accuracy and academic integrity, and train my students to make their work empirical, cognitive and facts-driven. At the same time, I train them to use their minds in the two particular ways I outlined at the end of the section on research above, that is, to think like "the other" and to allow their right-hand brain to roam freely, with the possibility of new insights. The conclusions reached by these ways of thinking must of course be rigorously tested by the student, but I believe that this is the way to develop researchers with the potential to make great and original strides forward in new directions rather than tiny and predictable steps along a pre-programmed route.

Patrick Sookhdeo

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