REDUCING THE ROLE OF DECISION-MAKING BIASES IN MUSLIM RESPONSA

MUSA FURBER

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REDUCING THE ROLE OF DECISION-MAKING BIASES IN MUSLIM RESPONSA

Subject: The role of decision-making biases in the fatwa process.

Significance: This piece examines the role of errors in the fatwa process that result from employing heuristics, and proposes solutions for reducing such errors and improving the accuracy of fatwas.

Executive Summary: Muslims often consult a legal expert (a mufti) concerning legal issues and to mediate intra-personal situations. A consultation with a mufti follows a process which includes conception, adaption, evaluation, and, finally, the response. While reviewing fatwas for errors, the author observed that many of the errors encountered could be explained as errors resulting from rules of thumb employed to facilitate information processing and decision making – that is: decision biases resulting from employing heuristics.

This brief introduces the fatwa process, as well as decision-making heuristics and biases. It then presents an analysis of how biases come into play during the fatwa-delivery process. It concludes that there is a need to better understand decision-making heuristics and biases, and the negative impact of relying upon heuristics in Islamic disciplines. It also recommends that muftis be informed of decision-making biases, and that mufti training programs include decision-making biases in their curriculum so as to improve the quality of the services they provide. It is hoped that examining these errors in this way might help reduce future errors and improve the impact that fatwas have on petitioners' lives.

Muslims are required to know the ethico-legal ruling of an act before engaging in it. Although Muslims often know rulings for the most common, basic situations they encounter in their individual daily lives, they often consult legal experts concerning uncommon deeds, mistakes, and more complex intra-personal situations. The legal experts they consult are known as muftis. A consultation with a mufti begins with the petitioner explaining his situation. The mufti then extracts the relevant features of the case in order to decide on the petitioner's situation.

Although muftis can operate independently, many countries with large Muslim populations have formal institutions and individuals responsible for assisting the religious community. These responsibilities include advising state courts, dividing inheritance and executing bequests, researching new issues, vetting questionable material, announcing lunar months, making available education and training programs, and providing the general public and private individuals with responses to their questions.

Typically, the primary service offered by individual muftis and by more formal fatwa institutions is to respond to questions brought by private individuals. The type of ruling offered is a fatwa (sometimes rendered as the Latin *responsum*), which is a non-binding ruling that a mufti issues to a petitioner (*mustaftī*). A mufti is an expert in Islamic jurisprudence (*fiqh*) who has been trained in its application to specific cases. A mufti's basic legal education includes the subjects of classic Islamic scholarship (including – but not limited to – Arabic grammar, logic, morphology, rhetoric, Quran, exegesis, hadith studies, law, and legal studies), with an emphasis on law, its sources, and its methodologies. Additional details are found in a special genre of literature concerning muftis, *mustaftī*s, and the issuing of fatwas.[1] Some fatwa institutions offer vocational training to aspiring muftis once they have completed a formal Shari'ah program. While learning to apply abstract laws to specific cases is part of the basic skills students of *fiqh* learn from their teachers, the onset of rapid changes in the modern world has prompted the need for additional training in its practice, such as the mufti training programs available at Egypt's Dar al-Ifta, in Cairo, and at Daral Uloom, in Deoband, India. Mufti training programs now typically include advanced tutorials on common issues, case analysis, applying abstract laws to particular instances, and apprenticing under an acting mufti.

As mentioned above, a mufti's opinion (a fatwa) is non-binding. In many circumstances, a petitioner is not obligated to follow the fatwa and is free to consult another mufti. (This option is not available, for example, when one is not able to consult another mufti, or when the issue concerns a matter necessarily known to be part of the religion or decided by scholarly consensus.) Muftis do not handle cases involving disputes or punishments; these are handled by a judge (*qāḍī*) in the courts. Muftis lack authority to coerce recalcitrant or abusive spouses, or dissolve marriage contracts. Petitioners frequently use muftis for mediation – which often places muftis in the position of refereeing spousal disputes. Additionally, their opinions often influence judges whose opinions are binding and who do have author-

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1.   Classic texts within this genre include: Muḥammad Amīn Ibn ʿĀbidīn Afandī, 'Sharḥ ʿuqūd rasm al-muftī' in *Majmūʿat rasāʾil Ibn ʿĀbidīn* (n.p.: ʿĀlam al-Kutub, 1903), 1:1–152; Aḥmad bin Idrīs al-Qarāfī, *Al-Iḥkām fī tamyīz al-fatāwa ʿan al-aḥkām wa-taṣarrufāt al-qāḍī wa-al-imām*, 2nd edn., ed. ʿAbd al-Fattāḥ Abū Ghuddah (Aleppo: Maktab al-Maṭbūʿāt al-Islāmīyah, 1995); Aḥmad bin Ḥamdān al-Ḥarrānī, *Ṣifat al-fatwā wa-al-muftī wa-al-mustaftī* (Beirut: al-Maktab al-Islāmī, 1960); ʿUthmān Ibn Ṣalāḥ al-Shahrazūrī, *Adab al-muftī wa-al-mustaftī* (Beirut: ʿĀlam al-Kutub, 1986); Ibn Qayyim al-Jawzīyah, *Iʿlām al-muwaqqiʿīn ʿan Rabb al-ʿālamīn* (Damascus: Maktabat Dār al-Bayān, 2000); Yaḥyā bin Sharaf al-Nawawī, *Ādāb al-muftī wa-al-mustaftī* in Muḥammad Najīb al-Muṭīʿī (ed.), *Kitāb al-majmūʿ: Sharḥ al-Muhadhdhab* (Beirut: Dār Iḥyāʾ al-Turāth al-ʿArabī, 2001), 1:117–124. Recent examples include: Muḥammad Sulaymān al-Ashqar, *al-Futyā wa-manāhij al-iftāʾ*, 3rd edn. (Amman: Dār al-Nafāʾis, 1993); ʿĀmir Saʿīd al-Zaybārī, *Mabāḥith fī aḥkām al-fatwā* (Beirut: Dār Ibn Ḥazm, 1995); Aḥmad ʿAlī Ṭāhā Rayyān, *Dawābiṭ al-ijtihād wa-al-fatwā*, 2nd edn. (Mansoura: Dār al-Wafā li-al-Ṭibāʿah wa-al-Nashr wa-al-Tawzīʿ, 1997); ʿAbdullāh al-Darʿān, *al-Fatwā fī al-Islām* (Riyadh: Dār al-Tawbah, 2008).

ity to coerce. So while muftis lack authority to coerce and fatwas are non-binding opinions concerning a legal issue, they nonetheless possess significant moral and persuasive force.

A consultation with a mufti begins with the petitioner explaining his situation. Petitioners can present cases in writing or in person. Although fatwa institutions and individuals are increasingly accepting questions through a wider variety of media, coming in person remains the preferred communication medium since this provides the richest set of cues and allows bilateral communication.

A mufti's fatwa is the result of extracting significant features of the petitioner's case, identifying a corresponding legal issue in the legal corpus, and subsequently evaluating its validity and its likely consequences. In describing the process of issuing a fatwa, Sheikh Ali Gomaa, the current Grand Mufti of Egypt, and head of Dar al-Ifta al-Misriyyah, has broken down the process into four stages: conception, adaption, evaluation, and response.[2]

During the *conception* stage, the petitioner describes a specific case. The mufti identifies the features of the case which are relevant in determining a legal ruling. The mufti may ask the petitioner for additional details. Next, during the *adaption* stage, the mufti matches the relevant features of the case to the known legal issue that corresponds best to the described case. This is followed by *evaluation,* where the mufti checks whether the pre-conditions, essential elements and associated conditions for the identified issue have been met in the petition's specific case, and its ensuing legal consequences. Finally, during the *response* stage, the mufti re-examines the petitioner's circumstances to ensure that applying the ruling will realise the petitioner's interests without violating the overall objectives of the Shari'ah, and with an eye on avoiding unintended consequences.

The stages are not completely isolated nor the process purely linear, as uncovering errors from previous stages or encountering difficulties in later stages will require the mufti to return to previous stages. It is important to note that each stage provides the premises for decisions made at the next, so mistakes in prior stages necessarily lead to mistakes in subsequent stages.

In the end, a fatwa is the product of several decisions based upon uncertain information, rendering each stage subject to decision-making biases. Technical literature on the subject of decision making defines *decision biases* as irrational errors that decision makers commit in spite of their best attempts to make rational decisions. These mistakes are often the result of decision makers employing heuristics in order to facilitate making decisions and judgments.[3] The term heuristic has become popular since 1945, when the mathematician George Polya described the methods of mathematics in *How to Solve It* using a list of heuristics. Polya defined a *heuristic* as 'reasoning not regarded as final and strict but as provisional and plausible only, whose purpose is to discover the solution of the present problem'.[4] Although Polya popularised the contemporary use of heuristics in mathematics and the natural and

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2. ʿAlī Jumʿah, *Al-Kalim al-ṭayyib: Fatāwā ʿaṣrīyah* (Cairo: Dār al-Salām, 2005), 229.
3. Jonathan Baron, *Thinking and Deciding*, 3rd edn. (New York: Cambridge University Press, 2008), 53.
4. George Polya, *How to Solve It: A New Aspect of Mathematical Method* (Princeton: Princeton University Press, 2004), 113.

social sciences, he noted that other fields – including philosophy – have long employed heuristics:

> **Heuristic**, or heuretic, or 'ars inveniendi' was the name of a certain branch of study, not very clearly circumscribed, belonging to logic, or philosophy, or to psychology, often outlined, seldom presented in detail, and as good as forgotten today. The aim of heuristic is to study the methods and rules of discovery and invention. A few traces of such study may be found in the commentators of Euclid; a passage of Pappus is particularly interesting in this respect. The most famous attempts to build up a system of heuristic are due to Descartes and Leibniz, both great mathematicians and philosophers. Bernard Bolzano presented a notable detailed account of heuristic. The present booklet is an attempt to revive heuristic in a modern and modest form.[5]

Islamic disciplines also make use of heuristics according to the definitions given above. Perhaps the clearest example is found in the principles and controls employed in the methods of jurisprudence and in jurisprudence [Ar. *qawāʿid wa-ḍawābiṭ uṣūlīyah*, and *qawāʿid wa-ḍawābiṭ fiqhīyah*] which provide rules of thumb that facilitate making decisions and judgments about particular cases.

While heuristics are useful for making decisions, their use can lead to bias. It is important to note that biases resulting from employing heuristics are often labeled 'cognitive biases' to distinguish them from other forms of bias, such as cultural, organisational, or biases resulting from one's own interests or motives.[6] It is important to note that cognitive biases are predictable and consistent; they are not deliberate and may remain compelling even though one is fully aware of their nature.[7]

The study of how heuristics lead to biases has been a popular topic for inquiry since 1974, when Tversky and Kahneman's 'Judgment under Uncertainty: Heuristics and Biases' appeared in *Science*.[8] Since then, the area of study has flourished, producing a large list of biases and heuristics.

From Summer 2006 through Summer 2008, the author worked at Egypt's government fatwa institution, Dar al-Ifta al-Misriyyah, as the head translator for the English translation unit and apprenticed as a mufti as part of Dar al-Ifta's vocational training program for muftis. The head translator's responsibilities included reviewing scores of fatwa issued by Dar al-Ifta's chief muftis; and, as an apprentice mufti, the author was responsible for replying to over 2000 unique cases. While reviewing fatwas of others and having his own reviewed, the author observed a number of errors in fatwa. In almost all cases, the answering mufti possessed the requisite skills and knowledge, followed established procedures, and applied the proper heuristics – yet still made and repeated mistakes that were obvious to the issuing

5. Ibid. 112–3.
6. Richards J. Heuer Jr., *The Psychology of Intelligence Analysis* (Center for the Study of Intelligence, 2010), 111.
7. Ibid. 111–2.
8. Amos Tversky and Daniel Kahneman, 'Judgment under Uncertainty: Heuristics and Biases', *Science*, 27 (1974), 1124–31.

mufti when brought to his attention. An examination of the author's notes revealed some common types of mistakes. For example, one pattern observed is that a mufti would forget distinctions between similar issues if one of the issues had occurred in a case earlier that day, or when one of several similar issues was more frequent than others. In the language of heuristic-related biases: the muftis were displaying an availability effect.

The patterns observed during the fatwa process that could be attributed to heuristic-related biases (with a very brief description) include:

- *Anchoring effect:* focusing on a past reference or a single trait or piece of information.

- *Availability effect:* estimating the likelihood of events based upon the ease with which they can be recalled from memory, which is itself biased towards things that are vivid, unusual, or emotionally charged.

- *Confirmation bias:* seeking out or interpreting information in a way that confirms one's preconceptions.

- *Fundamental attribution error:* over-emphasising the role of personality traits when explaining one's own behaviour, and under-emphasising the role of external influences when explaining the behaviour of others.

- *Halo effect:* allowing the observation of a positive trait in one area or aspect of an individual to influence a positive evaluation of other traits.

- *Forked-tail, devil,* or *reverse-halo effect:* allowing the observation of a negative trait in one area or aspect of an individual to influence a negative evaluation of other traits (the converse of the above).

- *Overconfidence effect:* excessive confidence in one's own ability and accuracy when answering questions.

- *Primacy and recency effects:* the tendency that items near the end of a list are the easiest to recall, followed by the items at the beginning of a list.

- *Recency bias:* recalling or weighing recent events more than earlier events.

- *Self-serving bias:* the tendency to claim more responsibility for successes than for failures, or to evaluate ambiguous information in a way beneficial to one's own interests.

Details on how these biases occur during the various stages of the fatwa process are as follows:

Conception is the first stage of the fatwa process. During this stage, the petitioner explains his or her problem to the mufti, who asks questions to obtain additional details of the case. Before making a single observation, muftis need to be aware that they are themselves subject

to biases while collecting and processing information. The first information the mufti collects will have greater impact than subsequent information (primacy effect), so muftis need to be careful that they do not allow prior information to overrule subsequent information. They also need to be aware that when the first thing they learn about someone is positive, they will be more likely to assume that the person possesses other positive attributes (halo effect); and conversely, when the first thing is negative, they will be more likely to assume that the person possesses other negative attributes (forked-tail effect). At all times, the mufti must be cognisant of the fact that impressions can persist even after earlier evidence has been fully discredited: 'that once information rings a bell, the bell cannot be unrung'[9] (anchoring effect).

While obtaining information from the petitioner, muftis need to be aware that petitioners will try to present their case in a way that shows themselves in the best positive light (self-serving bias). Petitioners who have come to the mufti in response to a negative event will find it very easy to find additional examples of the event (primacy and recency effects; availability bias), yet find it difficult to find or accept counter examples (confirmation bias, anchoring effect). Furthermore, petitioners will remember occurrences more than they remember the lack of occurrences, so they will remember the presence of negative acts more than the absence of negative acts (availability bias).

Petitioners are likely to view themselves as victims of circumstances, while assuming that the mistakes of others are intentional or due to personality traits (fundamental attribution error). People tend to see their actions as contributing towards their successes but not towards their own failures (overestimating one's importance), while assuming that hurtful actions are intentional acts of hostility (fundamental attribution error). This is exacerbated by the bias to look for causal explanations: the petitioner will seek coherence in whatever prompted his or her visit, just as the mufti will seek coherence in the petitioner's case as it is presented – so the mufti must always be on notice for slips of assuming causal explanations. When searching for causes, there is a tendency for people to expect a cause to resemble its effects (process of causal attribution), so that large, malignant effects are automatically assumed to come from similarly large, malignant causes.

At all times, the mufti must remember that people tend to see what they want to see and to interpret information in terms of what they already think (confirmation bias).[10]

Adaption. During this stage, the mufti matches the relevant features of the petitioner's case to the known legal issue that corresponds best to the described case. The mufti needs to keep in mind that when looking for the corresponding issue, he will be influenced by the petitioner's own identification and judgment of the issue in the previous stage (availability). Petitioners are not legal specialists, so it is not surprising that they misidentify, for example, the types of financial contracts they perform. What is surprising, though, is when the muftis accept the petitioner's identification at face value instead of asking for a description of the event; muftis should not allow themselves to be anchored by the petitioner's assessment.

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9.   Heuer, *The Psychology of Intelligence Analysis*, 125.
10. Ibid. 153.

One frequent anchoring effect occurs when a mufti attempts to identify the issue which best corresponds to the petitioner's case, and consequently misidentifies it as a case that arises frequently or had been handled earlier that day. Frequent and recent cases can skew the mufti's decisions via the availability effect. This is particularly pernicious during Ramadan and Hajj season, when uncommon cases can be confused for a case that occurs more frequently (for example, confusing the case of chronic illnesses with the case of acute illnesses).

Evaluation. During this stage, the mufti checks whether the pre-conditions [Ar. *shurūṭ*], essential elements [Ar. *arkān*], and associated conditions [Ar. *shurūṭ al-arkān*] for the issue identified in the previous stage, have been met. Finding few or none of these in the petitioner's case is a good indication that the mufti made a mistake and needs to go back to the stage of adaption. Unfortunately, muftis sometimes become overly confident in their initial decision (overconfidence bias) and instead of moving back to the adaption stage proceed to the response. Once muftis are aware that they are subject to decision biases, they should be more willing to question their earlier decisions and assumptions, and move back to previous stages in the process.

Response is the final stage in the fatwa-delivery process. Here the mufti re-examines the petitioner's circumstances to ensure that applying the ruling will realise the petitioner's interests [Ar. *maṣāliḥ al-mustaftī*] without violating the overall objectives of the Shariʿah [Ar. *maqāṣid al-sharīʿah*]. Many errors that manifest themselves here are likely to result from errors that occurred at earlier stages in the process. However, since this stage focuses on searching for consequences and the likelihood of their occurrence, muftis need to take note of probability-related biases. For example, they should be aware that the ease in which a consequence is imagined is not related to the likelihood of its occurrence, but rather tends to be influenced by other things.[11] Merely imagining an event can produce availability effects, causing the mufti to overestimate the likelihood of its occurrence.[12] In addition, people who have not studied probabilities tend to overestimate the probability of the conjunction of two events, and to underestimate the probability of the disjunction of two events (adjustment and anchoring biases).[13]

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The above analysis shows the many ways that decision biases can come into play in the fatwa process. The most serious biases are primacy, anchoring, recency, and availability. At all stages of the process, the mufti needs to keep in mind that the 'impact of information on the human mind is only imperfectly related to its true value as evidence.'[14]

Several studies have been done concerning overcoming the effects of decision biases. One study has shown that focusing on distinguishing features helps reduce anchoring.[15] Other

11. Ibid. 148.
12. Ibid. 149.
13. Tversky and Kahneman, 'Judgment under Uncertainty'.
14. Heuer, *The Psychology of Intelligence Analysis*, 145.
15. Gretchen B. Chapman and Eric J. Johnson, 'Anchoring, Activation, and the Construction of Values', *Organizational Behavior and Human Decision Processes*, 79/2 (1999), 115–53.

research indicates that recency and primacy effects occur only when subjects make some commitment to the belief suggested by the earliest evidence they receive.[16] The findings suggest a method that can be used to ensure that all available information is used: '[i]f they simply note the evidence and its implications, without forming a desire that its implications be true, they may remain open-minded until all of the evidence is in; they will effectively be using all of the evidence simultaneously, and irrational persistence will not occur.'[17] Other studies show that feeling accountable helps reduce overconfidence,[18] as does humility. While these latter two are emphasised in the classical manuals concerning the etiquette of muftis, future works could benefit from the types of studies mentioned here.

When reviewing biases and their role in *iftā'* and other areas, it is important to note that some studies find that culture influences how individual biases operate. For example, there is evidence that members of individualistic cultures are more susceptible to fundamental attribution error and to the self-serving bias than members of communalistic cultures.[19]

The previous analysis suggests that relying upon heuristics can lead to decision biases. Many Islamic disciplines include heuristics within their methodology. For example, the methods of jurisprudence [Ar. *uṣūl al-fiqh*] and jurisprudence [Ar. *fiqh*] employ the heuristics of principles and controls [Ar. *qawā'id wa-ḍawābiṭ uṣūlīyah*, and *qawā'id wa-ḍawābiṭ fiqhīyah*] which are employed as rules of thumb to facilitate making decisions and judgments about particular cases. There is thus a general need to better understand the negative impact of relying upon heuristics in Islamic disciplines. Existing literature should provide immediate benefits, though the heuristics specific to Islamic disciplines are likely to warrant their own study. More specifically, muftis should be informed of decision-making biases, and mufti training programs should include decision-making biases in their curriculum, since both of these measures will improve the quality of the services they provide.

> **Conclusion:** The preceeding analysis shows how decision-making biases and heuristics come into play during the conception, adaption, evaluation, and response stages of the fatwa process. The analysis suggests that the adjustment bias, anchoring effect, availability effect, confirmation bias, primacy effect, recency effect, and self-serving bias are likely to be the most common. Some studies provide clues as to how the effects of specific biases can be reduced or avoided altogether. Educating muftis in biases and encouraging them to seek alternative explanations both help to treat the influence of biases, as well as reminding them of their religious responsibility. Petitioners visit fatwa institutes and individual muftis to resolve problems, and for informal dispute resolution and marriage counselling services. It is recommended that the impact of relying upon heuristics in Islamic disciplines be studied. It is also recommended that regional and community fatwa institutes inform their current muftis about the influence of biases, and that this be

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16. Baron, *Thinking and Deciding*, 207, reporting on Cameron R. Peterson and Wesley M. DuCharme, 'A Primacy Effect in Subjective Probability Revision', *Journal of Experimental Psychology*, 73/1 (1967), 61–5.
17. Baron, *Thinking and Deciding*, 207.
18. Philip E. Tetlock and Jae D. Kim, 'Accountability and Judgment Processes in a Personality Prediction Task', *Journal of Personality and Social Psychology,* 52/4 (1987), 700–9.
19. For an example of these studies, see Dale T. Miller and Michael Ross, 'Self-Serving Biases in the Attribution of Causality', *Psychological Bulletin*, 82 (1975), 213–5.

included in mufti-training programs, since doing so will ensure that petitioners receive fatwas that are more accurate and better-suited to improving the quality of their lives.

And Allah Most High knows best.

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