

# **ADVICE ON BIASES IN FITNESS TO PRACTISE DECISION-MAKING IN ACCEPTED OUTCOME VERSUS PANEL MODELS**

**FOR THE PROFESSIONAL STANDARDS AUTHORITY**



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# I. Introduction

## Background

- 1.1 The PSA's duty is to protect the public through its work with organisations that register and regulate people working in health and social care.
- 1.2 The PSA currently oversees 10 statutory health and care regulators: The General Medical Council (GMC), The General Pharmaceutical Council (GPhC), Social Work England (SWE), The General Optical Council (GOC), The General Dental Council (GDC), The Nursing and Midwifery Council (NMC), The Pharmaceutical Society of Northern Ireland (PSNI), The General Osteopathic Council (GOsC), The Health & Care Professions Council (HCPC) and The General Chiropractic Council (GCC).
- 1.3 In February 2021 I was approached by the PSA who wished to understand the potential impact on decision making of any move by regulators to use a 'Case Examiner' accepted outcomes ("AO") model, akin to that based on the model currently used by Social Work England (SWE) in addition to the more traditional 'Panel' model.

### Accepted outcomes

The AO model is a paper-based process in which decisions about the conduct and competence of health and care professionals are made by one or two members of staff, who, having considered the findings of an investigation, can decide on a sanction and offer it to the registrant. If the registrant refuses, the case is referred to a panel for adjudication. The Panel model involves a hearing in which evidence is heard by a panel of usually three or more panellists consisting of a mix of lay and members from the regulated profession, with either a legally qualified chair or legal adviser assisting them. The panellists deliberate in private, but the proceedings are usually held in public.

- 1.4 Four aspects were highlighted as having the potential to impact on decision making between these two models:
  - The consensual nature of AOs;
  - The fact that decisions would be made on the papers;
  - The fact that decisions would be reached individually rather than through panel deliberations;
  - The fact that decisions would be made in private.
- 1.5 The PSA, in 2019, published a literature review which highlighted potential differences in how decision makers reach conclusions in private versus public arenas. This is a document I was directed to and have had due regard to in compiling this advice.
- 1.6 The PSA decided to commission an expert on bias in decision-making to consider the two different potential models specifically focussing on what cognitive or social biases would be involved in both, and what effect they

would have on the potential quality of decision-making in those two contexts. I do not hold myself out as an 'expert' but rather leave that opinion to others, such as the PSA, to form<sup>1</sup>. However, I am grateful to have been given the opportunity to contribute my views on this important subject and to potentially have an influence on the future of fitness to practise processes in relation to the regulators the PSA oversees.

### **Purpose of the advice**

- 1.7 Four specific questions were highlighted as needing a response, these being as follows:
- “Looking at the two contrasting models and key differences between them, what is your assessment of how biases might affect the quality of decision-making in the AO model, as compared to the panel model?”
  - What is your assessment of the impact of these biases, in terms of fairness, discrimination, public protection, and any other aspects that might be pertinent to the effectiveness of professional regulation?
  - What do you consider might be effective strategies for addressing these biases, particularly in the AO context?
  - Does your assessment suggest any broad characteristics of cases that might be better resolved through either the AO route or the panel route?”
- 1.8 What this advice does not do, and has not been asked to do, is to express any opinion on which, if either, of the AO or Panel models is 'better' (however you might wish to define this ambiguous term). Indeed, when carrying out decisions involving an assessment of future risk there will rarely be an objectively 'right' or 'perfect' answer in every situation. Whilst there is the cliché that “two heads are better than one” theoretical and experimental literature has found that there are a number of intricate psychological drivers which mean differences between group and individual decision making. Accordingly, nothing within this advice should be interpreted as expressing a preference for, or recommending, one model as opposed to the other. Furthermore, whilst certain regulators e.g. the regulator of social workers in England - SWE – has a specific case examiner model, I was asked to consider different theoretical types of case examiner AO models i.e. where there might just be one case examiner (whether a lay person or a registrant case examiner) or where there might be two or more case examiners working either sequentially (i.e. where one case examiner considers the matter and a second then reviews that decision) or simultaneously. When considering Panel models I again was asked to consider different types of panel i.e. where there might be 3, 5, or more, panel members (comprising a proportion of both lay and registrant members) with the assistance of either a legal adviser or legally qualified chair. This advice therefore seeks to provide general points for discussion for the PSA and regulators in relation to their consideration of these alternative models and how they might be structured.

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<sup>1</sup> As for me to express such a view could indicate that I am myself falling prey to the **Dunning-Kruger effect** as should become clear later.

## Summary of conclusions

- 1.9 Regulators should recognise that there are advantages and disadvantages to both the Case Examiner/Accepted Outcomes model and the Panel model in respect of the potential impact each may have on the cognitive biases which decision makers may be affected by when making decisions which, in turn, may affect the quality of their decisions which then has the potential to impact on the protection offered to the public.
- 1.10 As a result, regulators should consider a number of mitigating strategies including monitoring, evaluating, and reviewing:
- a) the types of decisions which they consider are most appropriate for each method;
  - b) the ability of decision makers to be aware of when their own biases may be influencing their decisions by developing processes, not simply training, to assist in this regard (just as cars are designed with wing mirrors to allow drivers to more easily see their blind spots) and
  - c) the implementation of measures at individual, interpersonal, and organisational levels, to insulate, mitigate, and potentially remove these biases which otherwise have the potential to inappropriately and disproportionately impact upon decisions taken in a fitness to practise context.
- 1.11 One element that the PSA and the regulators it oversees should particularly focus upon and discuss is all decision makers adopting a 'scientist' mindset i.e. constantly considering alternative hypotheses and continually being open to revising their views and opinions. Such an approach might also impact upon the process for recruiting both Case Examiners and Panel members to explore not only whether individuals are aware of previous instances where bias has influenced their decisions but also whether they are able to rethink initial decisions they make.
- 1.12 That in determining what type of cases may be appropriate for each model a starting point may be to focus on:
- i. how quickly the decision needs to be made;
  - ii. how much information is missing or how much ambiguity exists in the evidence;
  - iii. how much interaction is needed with the registrant;
  - iv. how much documentation will need to be analysed to reach the decision; and,
  - v. the extent to which specific cultural characteristics will be relevant to the decisions to be made.

## Documents considered

- 1.13 In **Appendix 2** there is a list of all the documents considered in preparing this advice. I was asked not to provide detailed footnotes nor was I instructed to write an academic treatise which would withstand rigorous peer scrutiny.

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Accordingly, everything which I have written should be read with that understanding.

- 1.14 One particular point to highlight is that much of the research that does exist, relating to decision-making regarding risks, focuses on the perspective of economic self-interest i.e. financial risks to the decision making individual, or to individuals within a decision making group, rather than considering judgments regarding public protection risks which is the focus for health and care regulators. Also, many experiments focus on low stakes decisions as opposed to the often high stakes decisions regulators are involved in making, where the protection of the public and the public interest are on one side of the equation and a registrant's career and future progression is on the other.
- 1.15 A second point to highlight is that many experimental studies focus on decisions involving a static choice, as opposed to a dynamic choice with a lot of ambiguity present, i.e. decision makers are given a set amount of clear information which does not alter. This is different to the situation regulators must deal with where additional information will often be obtained during the course of the decision making process in an effort to reduce ambiguity. It is hopefully self-evident that there is a profound distinction between decisions having to be made where there is an economically objective 'right' answer and those which involve the exercise of judgment in situations of ambiguity where there are a range of potentially appropriate conclusions.

#### **Technical terms and explanations**

- 1.16 I have indicated any technical terms in **bold** type. I have defined a number of these terms when first used and have given definitions of all the terms used in the glossary in **Appendix 3**.

#### **Disclaimer**

- 1.17 This advice is written for the specific purposes stated in the paragraphs above. It is neither legal advice, nor academic research, and should not be relied upon for any other purposes than those set out above.

## II. How biases might affect the quality of decision-making in the AO model, as compared to the panel model

### Understanding cognitive biases in fitness to practise decision-making

#### *What are 'cognitive biases'?*

- 2.1 Cognitive biases are mental shortcuts which reduce the cognitive load on an individual but bias the way attention is then allocated in processing data the individual receives. This has a number of effects including: making us be too quick to make a decision (ignoring evidence that is contrary to our opinion), being overly zealous in justifying our personal opinions, and selectively searching for evidence that supports our past judgments, rather than objectively evaluating all the information available to us.
- 2.2 Cognitive biases are particularly likely to influence reasoning when people are making decisions under uncertainty. They are therefore important in the regulatory context where unbiased reasoning and fair judgment are sought.
- 2.3 **'Implicit' or unconscious stereotype bias** is a type of cognitive bias where individuals are unduly influenced by categories such as gender, ethnicity, or similar, but the person making the decision is unaware of that undue influence. They arise as a result of the human tendency to look for patterns and associations. They can be contrasted with explicit biases or prejudices i.e. **stereotype biases** that someone is aware of and may even endorse.
- 2.4 Cognitive biases are not 'bad' they are a key part of intelligent thought processes as we generally have to make decisions with: limited time, limited information, and the expenditure of limited intellectual energy. **Confirmation bias**, arguably the most common and, some might argue, the most dangerous bias in decision making, does at least provide a method for dealing with complex information i.e. looking for information that supports the decision maker's initial hypothesis. Therefore, this bias gives the decision maker a starting point and can be an efficient strategy for seeking additional information. The problem is that, generally, decision makers make insufficient efforts to obtain disconfirming evidence.
- 2.5 However, what people rarely do is:
  - a) make themselves aware of how these factors are influencing their decisions and
  - b) question or consider the basis for their pre-existing beliefs, assumptions, opinions, and prejudices, and the extent to which they are influencing their decisions.
- 2.6 As a result the quality of decisions can be reduced. 'Quality' of decisions in this context I have taken to be determined by whether decisions meet the statutory duty of the PSA and the Regulators it oversees i.e. protecting the

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public and being 'in the public interest' i.e. upholding the standards of the profession, maintaining public confidence in the profession and the regulator. 'Bias', in a legal context, indicates a failure to be impartial which itself is perceived as undermining any decision that has been made which has been influenced by that bias. To truly be able to determine the quality of decisions made by regulators there would therefore need to be significant monitoring and evaluation both of the decision making process and the outcome of that decision in the longer term e.g. if a registrant's fitness to practise is found not to be impaired, or they are not given any disposal which requires them to alter their practice, does that registrant return back before the regulator as a result of another concern?

- 2.7 The decision maker's mindset also plays a part in decision making and political scientist Phil Tetlock identifies three common mindsets: preacher, prosecutor, and politician.
- 2.8 In 'preacher' mode we are set on promoting our ideas irrespective of listening to others. For the preacher, changing their mind may then be interpreted as a sign of weakness. In 'prosecution' mode we actively challenge the views of others to get what we want. For the decision maker in 'prosecutor' mode, changing their mind can therefore be perceived as being defeated. In 'politician' mode we seek the approval of others. For the politician, changing their mind is perfectly acceptable should the situation, such as the social context, demand it.
- 2.9 There is a fourth mindset which organisational psychologist Adam Grant recommends, the 'scientist' mindset, an approach I have long advocated in my training of decision makers (without having given it a label) of individuals constantly testing hypotheses they may come up with and continually being open to revising their views and opinions. This strategy will be further developed in Section IV below.

***Different stages where cognitive biases could influence fitness to practise decisions***

- 2.10 The following are areas where I propose biases can, and from my anecdotal experience do, impact during the fitness to practise decision making process (this being the position whether it is a Case Examiner/AO or Panel model albeit the prevalence and impact will be different given the four key differences between the models as set out at paragraph 1.1.4 above):
- i. In the initial information presented to the decision maker;
  - ii. in the pre-hearing attitude of the decision maker – i.e. their prior knowledge/assumptions/beliefs/experiences including their preliminary discussions with others and their knowledge and/or experience of earlier decisions having been criticised or overturned by the PSA or the Courts;
  - iii. in the analysis of documents the decision maker is given to read;
  - iv. in how the decision maker interacts with others including how they frame questions which they ask, and how they interpret the responses they are given, including how that response is provided to them;

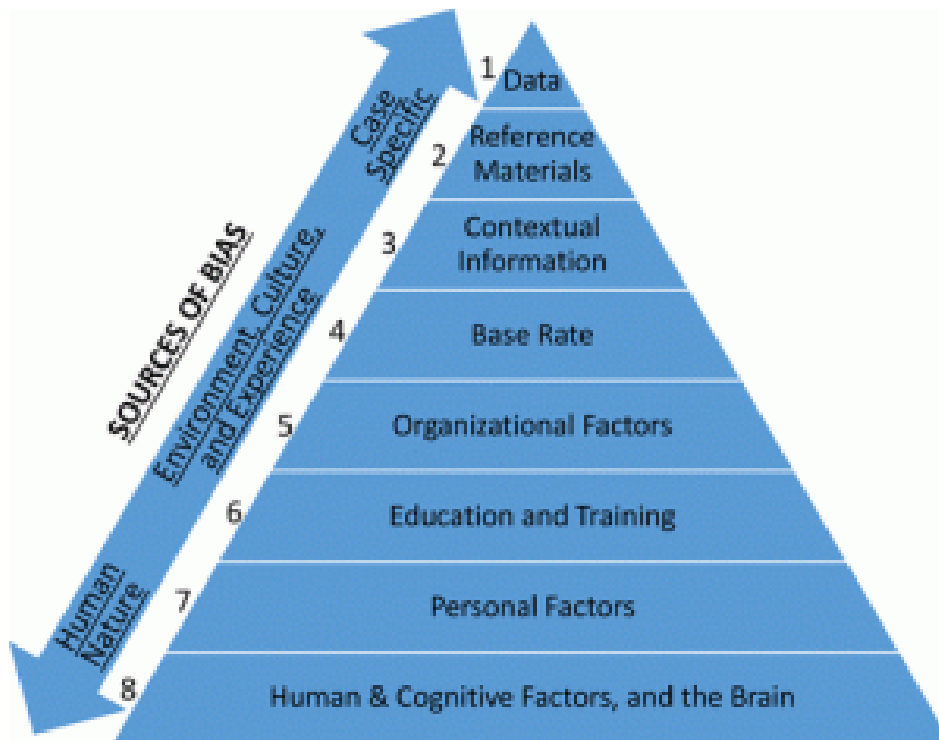


- v. in their assessment of the credibility and/or the reliability of evidence they are provided with;
- vi. in their determination of the relevant facts for a decision and whether they require more facts to decide the matter;
- vii. in their application of the facts to the issue they are to decide, especially in relation to the assessment of risk, and
- viii. in their determination of the appropriate outcome.

### *Sources of an individual's biases*

2.11 So far as what might be potential sources of a person's biases Dr Itiel Dror, a Senior Cognitive Neuroscience Researcher, has identified eight sources as shown in the diagram below:

**Fig. 1 – The Eight Sources of Bias**



### **Individual Decision Maker (e.g. a Case Examiner) in AO model**

2.12 In **Appendix 4** is a list of all the potential cognitive biases which may impact upon the individual decision maker, at the different stages in the process, as outlined at 2.7 above. I emphasise that it is not the position that *all* of these biases will be activated for *every* decision at *every* stage in *every* case (indeed some of the biases are diametrically opposed e.g. the **positivity effect** and **negativity bias**, whilst others overlap e.g. **cognitive dissonance** and the **exception bias**, or are commonly intertwined e.g. **cognitive dissonance** and the **Semmelweis reflex**). Whether a specific bias is likely to influence a particular decision depends upon the individual decision maker's background, beliefs, and pre-existing assumptions.

- 2.13 As I have indicated various of these biases can impact at different points during the eight stages set out in paragraph 2.7 above. I will not go through each cognitive bias, as to do so would make this advice even longer than it already is, but I hope that some examples at each stage will sufficiently illustrate what I am highlighting. For example:
- i. in the **framing** of the initial information presented to the decision maker such that this acts as an '**anchor**' on their subsequent decision making e.g. "You are asked to handle this *extremely serious* accusation";
  - ii. in the pre-hearing attitude of the decision maker e.g. if it is a lay case examiner dealing with a registrant there could be the risk of **the social comparison bias** coming in to play and the decision maker feeling dislike towards someone they may see as either 'superior' or 'inferior' to themselves, and the decision being influenced accordingly;
  - iii. in the analysis of documents the decision maker is given to read e.g. **absent-mindedness** whereby they may miss or fail to pay sufficient regard to key information contained within the documents;
  - iv. in how the decision maker interacts with others including how they frame questions they ask, and how they interpret the responses they are given including how that response is provided e.g. only asking questions to support their initial opinion, thereby falling prey to **confirmation bias**;
  - v. in their assessment of the credibility and/or reliability of evidence they are provided with e.g. if during interactions the registrant has been courteous, complimentary, and charming towards the decision maker, there is the risk of **the halo effect** meaning that how the registrant has behaved will positively influence the decision maker's assessment of what they have been told;
  - vi. in their determination of the relevant facts for a decision and whether they require more facts to decide the matter e.g. the **ambiguity bias** may lead a decision maker to choose an outcome on the basis that they know the probability of the consequences of that outcome, as opposed to an option where they lack information as to the likelihood of the outcome having an appropriate effect. In a regulatory context this might be choosing a period of suspension over a period of time with conditions of practice;
  - vii. in their application of the facts to the issue they are to decide, especially in relation to the assessment of risk e.g. the **neglect of probability** by not considering the likelihood of events or, even worse, by making the **conjunction fallacy** error whereby they assume that the probability of two events occurring together (in "conjunction") is more likely than the probability of one event occurring alone because they fall foul of **stereotyping** and
  - viii. in their determination of the appropriate outcome e.g. someone who has a high **pessimism bias** may overestimate the likelihood of a negative future event and the level of severity if that event occurred deciding that a more severe disposal is required.

- 2.14 In my opinion, the most common cognitive biases which are therefore likely to have the greatest impact on an *individual decision maker*, such as a Case Examiner, are as follows.

### **TEXT BOX 1: most common cognitive biases likely to affect individual decision-makers**

**Absent-mindedness** – which is a bias that happens when people make mistakes due to inattention which, as human beings, we all fall prey to.

**Ambiguity bias** – which is a bias where decision making is impacted by a lack of information. As any one individual's prior knowledge is necessarily limited, and the amount of information available in relation to a particular fitness to practise decision will be limited, this bias is likely to be prevalent in such decision making.

**Anchoring (or focalism)** – which is a bias where the individual depends too heavily on an initial piece of information when making decisions. For example, if a Case Examiner was told that the case they were given to consider was a particularly serious one.

**Attentional bias** – which is where the individual decision maker's train of thought prevents them from considering alternative possibilities and they have no-one to disrupt their thought processes.

**Availability heuristic** – which is a mental shortcut whereby we think to ourselves "Here we go again" or similar when confronted with an issue which fits a pattern from our prior experience. It is less likely with decision makers who are new to the subject they are deciding but with only one person there will only be one set of patterns being considered.

**Blind-spot bias** – which again relates to simply being human in that we can spot the impact of biases on others but we struggle to recognise our own biases. As an individual decision maker there would potentially be no-one to point out the impact of the Case Examiner's own biases. Therefore, this is one of the most important biases impacting individual decision makers as this overarching bias means that the decision maker is likely to be oblivious to the impact of the other biases listed in this section upon them. This therefore increases the risk of making risky decisions which would impact public protection and of making discriminatory, unfair decisions as a result of **implicit/unintentional stereotypes biases**.

**Choice-supportive bias** – which, without anyone to provide constructive challenge, is the tendency to remember and interpret evidence to support the decision which the decision maker has made. This will not impact on the decision itself but rather on subsequent decisions in a process or on how the decision maker may respond if their decision is subsequently criticised by e.g. the PSA/the Court.

**Cognitive dissonance** – which is the mental stress or discomfort individuals feel when they are confronted with new information/evidence which conflicts with their existing beliefs. Again, this will be more common in more experienced

decision makers and is not an issue in itself but rather it is in how the decision maker responds. Often decision makers will then 'reject' the new evidence which contradicts their established beliefs (**the Semmelweis reflex**). 'Reject' in this context meaning that either the evidence isn't actually absorbed, that it is misinterpreted, that it isn't believed, or that it isn't given sufficient weight. This rejection is usually not at a conscious level. This in turn can accordingly impact on a thorough assessment of the risks to the public and could lead to both unfair and discriminatory decisions. For example, in a case I was involved in the registered panel member read a letter from the current employer of the subject of the hearing and formed the view, from what was written, that there were still concerns as to the subject's record keeping, such that their fitness to practise was still impaired. When I suggested an alternative interpretation they refused to accept it and only by contacting the referee to confirm what they had meant in what they wrote was the issue resolved and my colleague accepted that their initial interpretation had been mistaken.

**Confirmation bias** – as mentioned earlier at paragraph 2.4.

**Congruence bias** – tied to confirmation bias this is where the decision maker over-relies upon their initial decision without testing out alternatives. As is hopefully becoming clear this ties in with other biases such as the **availability heuristic, confirmation bias, cognitive dissonance, the blind spot bias, the first instinct fallacy** and others meaning that the decision maker's first gut reaction, which will be most impacted by their innate biases and prejudices, will therefore hold sway. This can lead to both potential discrimination and an inappropriate assessment of the risks in a particular case.

**Conservation/Conservatism** – which is a lesser form of the **Semmelweis reflex** in that new evidence isn't rejected completely but rather less weight is given to it i.e. they prefer prior evidence to new evidence. For example, in the first letter received from the registered person they strenuously deny any inappropriate behaviour but latterly, in correspondence, they change their position and express remorse but the decision maker considers that, given their initial response, this expression of remorse isn't entirely credible and shouldn't be taken to be 'genuine remorse'.

**Cue-dependent forgetting** – which is where the decision maker may simply fail to recall certain information from the material they have. This will depend upon the size of the bundle of documents the decision maker has and how many cases they may be dealing with and again is simply a consequence of having limited cognitive capacity which is true for all humans.

**Egocentric effect** – which is the tendency of the decision maker to rely too heavily on their own perspective irrespective of other evidence. Again this could have been a factor in the earlier example I gave relating to **cognitive dissonance**.

**Empathy gap** – which is where we may have a tendency to underestimate the influence of our emotional state on our decision making. In making decisions alone the Case Examiner may suffer an emotional response to the description of

a case, for example, they do not simply empathise with the registered person's situation but in fact have sympathy for them. As a result this may impact on the decision maker's thought processes which again could have an impact on public protection if they have been inappropriately swayed by their emotions to choose a less restrictive disposal.

**First instinct fallacy** – which is the belief that the first decision that the decision maker comes to is always the right one. This is separate to but tied to **congruence bias**.

**Focusing effect** – which is where the decision maker focuses too much of their attention on a detail rather than in considering the bigger picture. This is familiar to many people and is summed up by the common expression of "You can't see the forest for the trees". This again raises potential unfair, discriminatory, and public protection concerns, for example, if the decision maker disproportionately focuses on the fact that the registered person has written a letter to them using green ink and, as a consequence, questions much of what has been written.

**Framing effect** – which is where a decision is influenced by how the options are expressed. This will be particularly relevant in the Case Examiner model because of the interactions between the Case Examiner and registered person as to the various options for consensual disposal.

**Fundamental attribution error** – which is where blame is attributed to other individuals and external issues are not taken into sufficient consideration but the reverse is true for the decision maker. Again, this has consequences for potential unfair or discriminatory treatment. For example, the registered person writes an e-mail which the decision maker perceives to be rude and terse which they then attribute to the registered person being a rude and difficult individual. However, when they write an e-mail which the registered person complains is full of errors the decision maker instead might justify what they wrote by saying that they did it in a rush, that they didn't have time to thoroughly check it because of their other work commitments, and that the computer's spell check function didn't pick up errors which it should have done. This sort of bias, when it has moral connotations to it, is referred to as **moral luck** and where someone takes credit for any positive events but blames negative outcomes on external factors is known as the **self-serving bias**.

**Generation Effect** – like **absent-mindedness** is simply the tendency to remember information better when it has come from the decision-maker's own mind rather than simply being read.

**Hindsight bias** – which is the tendency to perceive past events as having been more predictable than they were. Given the nature of fitness to practise proceedings, whereby the regulator is looking at what has taken place in the past before proceeding to consider the risks now, and going forward, there is a strong likelihood of this bias influencing decisions which, in turn, will impact on the assessment of future risks. For example, a supervisor at the registered person's place of work indicates that it was "obvious" that the registered person's action

would have the consequence it did when, in actuality, no-one had ever made any such suggestion beforehand.

**Illusion of validity** – which again is more likely to occur with individual decision makers since this involves the decision maker overestimating their ability to interpret and accurately predict future outcomes. Therefore, this too has a potentially profound impact on assessing the risk to the public in a fitness to practise context.

**Illusory correlation** – which involves perceiving a relationship between variables, where no such relationship exists, will be more common with decision makers who have experience of dealing with decisions. This again is a form of pattern recognition where the recognition of a pattern is flawed. For example, a Case Examiner deals with two separate matters of misconduct involving registered persons both of whom work for the same organisation and, as a result, the Case Examiner forms the view that the organisation itself has issues providing safe care to the public which may then influence their decision making with the individual registrants.

**Implicit/unintentional stereotypes bias** – which is again a significant cognitive bias which may impact upon fairness, discrimination, and public protection. For example, there is a long standing unintentional stereotype in medical settings which has been labelled as the “Mrs Bibi (or Begum) Syndrome” in which older South Asian women are perceived as likely to exaggerate their symptoms. Again, both the registered person and the decision maker will be influenced by such biases and depending on whether their implicit stereotype biases are in sync or not may influence the decision maker’s decisions.

**Information bias** – which is, like **absent-mindedness**, simply another issue for human beings due to the limited cognitive abilities a single person has in relation to the recall, recording and handling of information.

**In-group/out-group bias** – which may be relevant as to whether the Case Examiner comes from the same profession as that being regulated. This bias favours members of one’s ‘in-group’ over those outside of the group. Again, this bias directly relates to fairness and potential discrimination on the basis of membership of a particular group and could therefore also impact on assessing risks to the public. There is also the risk of **Out-group homogeneity bias** whereby the decision maker considers those outside of their ‘group’ as being more similar to one another than to those who are within the decision maker’s own group.

**Loss aversion** – which is the tendency to prefer to avoid losses as opposed to acquiring equivalent gains. This bias, if triggered, may in fact make Case Examiners more cautious in terms of risks to the public given that they may be focussing on the potential negative consequences (losses) of their decisions.

**Mere exposure effect** – which refers to how being repeatedly exposed to something may make people become more familiar with the issue. This could apply to individual decision makers in different ways e.g. they may initially

respond negatively towards a registered person but by having numerous interactions with the registered person they may feel warmer towards them or, as they become more experienced, should they see the same behaviours repeatedly they may start to see behaviours as typical of members of the profession and not be as concerned as they might originally have been. This, again, therefore could impact on their assessing risks to the public.

**Naive realism** – which is the belief that one's perceptions are realistic, unbiased interpretations of the world. Again, this bias is a contributing factor to other biases already mentioned including the **false consensus effect**, **bias blind spot** and **fundamental attribution error** amongst others and so the same points made earlier apply here.

**Need for Cognitive Closure** – which is the desire human beings have to obtain a definitive answer to a question with no potential confusion or ambiguity. The level of need that any one person may have varies between individuals but is inevitable in regulatory fitness to practise decisions given the forward looking nature of the decision making which is inherently ambiguous. Decision makers may want to come to a blunt, definitive answer i.e. removal from the register since that provides no potential confusion or ambiguity rather than some lesser disposal which means that a potential risk remains as to the registered person's practise.

**Neglect of Probability** – which is the tendency to disregard probability when making decisions under uncertainty. All of the fitness to practise decisions at the different stages as set out above are made under uncertainty therefore this bias is likely to be regularly engaged. Even where decision makers should be considering matters applying a balance of probabilities actual consideration of actual probabilities is often not discussed but rather reference to plausibility is made which is different being merely the quality of whether something *seems* reasonable or probable. This bias is particularly concerning for public protection as risks which may have a low probability of occurring may be neglected entirely or, conversely, if they have a potentially immense impact they may be hugely overrated. To give a common every day example, many people have a fear of flying because of the potential catastrophic consequence if something goes wrong ignoring the statistically proven low probability that this will occur whilst they are quite happy to cross a busy road where the likelihood of them being injured is much higher.

**Normalcy bias** – which is a bias which leads decision makers to disbelieve or minimise threat warnings and is tied to **the ostrich effect** where such information is avoided (these biases being similar in nature to **the Semmelweis reflex** and **conservation**). As these biases are specifically focussed on the assessment of threats they have particular importance in assessing risks to the public. As a result individual decision makers may not engage in 'worst case scenario' thinking.

**Omission bias** – which is a more positive interpretation attached to harm which may have been caused, or threatened, by an omission, as opposed to a

deliberate act. Accordingly, this too will be relevant in assessing the risk a registered person may pose to the public if what brings them before the regulator is an act of omission, as opposed to one of commission.

**Outcome bias** – whilst related to **hindsight bias** this is where the outcome of a past decision is given greater weight than any other factor. Again, this can lead to unfair and discriminatory decisions as well as potentially impacting on assessing risks to the public, for example, if the outcome of the registered person's conduct was the death of a child.

**Overconfidence effect** – which is where someone's subjective confidence in their decisions is greater than an objective assessment of their decisions. As this is a particular risk, especially the more experienced a decision maker gets, I discuss this further at paragraph 3.13 below.

**Pessimism bias** – which is a bias which causes people to overestimate the likelihood of negative things and underestimate the likelihood of positive things. Therefore, again, this could make decision makers be more risk averse due to a greater belief in the risk of an event occurring.

**Planning fallacy** – which is a common human cognitive failing in that we underestimate the time needed to complete a task. This can have an impact on decision making because when under time pressure it is more likely that decision makers will rely more heavily on their first instincts and be more influenced by other cognitive biases.

**Processing difficulty effect** – which is a bias relating to more complex information, which takes longer to read and understand, being more easily understood. Therefore, for example, if a registered person produces a detailed medical report, setting out various diagnoses, the information in this document may be more easily recalled by the decision maker when making their decision.

**Pseudo-certainty effect** – which is related to the **certainty effect** or **zero-risk bias** and is the desire to eliminate risk completely. With the pseudo-certainty effect this desire to eliminate risk completely persists even where the certainty of an outcome is only possible rather than being a genuine risk. Again, therefore, this can have an impact on the assessment of risks by the decision maker. As this again is likely to be prevalent in fitness to practise processes I shall give a more detailed example which also demonstrates the importance of rethinking and the power of the **framing effect** on the issues the decision maker has to make. This example comes from an experiment undertaken by Tversky and Kahneman in which two groups were given different scenarios. In Scenario one an epidemic breaks out that's likely to kill 600 people if left untreated. Treatment strategy A will save 200 people. Treatment strategy B has 1/3 chance of saving 600 people and 2/3 chance of saving nobody. From 152 people questioned, 72% recommended strategy A and 28% recommended strategy B. Most respondents preferred the *definite* positive outcome of saving 200 people, over the conditional but larger positive outcome of saving 600 people. In Scenario two 155 people were given the same data in a different way. They were told: under treatment strategy A, 400 people will die. Under



treatment strategy B, there is a 1/3 probability that nobody will die, and a 2/3 probability that 600 people will die. With this framing, 78% of the 155 respondents chose strategy B. They were willing to accept the risk of a larger negative outcome (600 people dying) to have a chance of averting an otherwise *definite* negative outcome (400 people dying). In fact these scenarios are exactly the same save for being framed in a different way and this framing impacted on their decision.

**Recency bias** – which is another memory bias meaning that decision makers who are dealing with a case over a sustained period of time may be more likely to be influenced by more recent information than information they considered earlier in the process.

**Risk compensation** – which is a bias relating to our perception of risk and, as might be expected, that people adjust their behaviours in response to perceived levels of risk being more careful when they sense greater risk. However, this could actually lead to an unintended consequence in that where there is a protective measure in place individuals may decide to act in a riskier manner because of the sense of increased protection thereby nullifying the benefits gained. For example, skiers wearing helmets go faster down a slope on average than non-helmeted skiers. In a fitness to practise context there is therefore the possibility that this might lead to certain protective factors existing in relation to a registered person being seen as sufficient to allow them to continue to practise when in fact the safer course of action, in the particular case, might be suspension or removal.

**Saliency bias** – which is a bias relating to focusing on the most easily recognisable features of behaviour and so is akin to the **availability heuristic** that has already been mentioned.

**Self-consistency bias** – which is a bias relating to how decision makers perceive their own decision making as always being consistent. As they become more experienced, they may therefore suffer with this, considering that their later decisions and decision making processes are how they have always approached matters. There is then the risk of the **overconfidence effect** in their decision making developing.

**Self-relevance/self-reference effect** – which is a bias relating to how people will encode information differently when they are implicated in it. This bias therefore may be triggered where a decision maker's own decision is subject of challenge/criticism by the PSA or a Court.

**Social comparison bias** – which is a bias that occurs where a decision maker may dislike or feel competitive with someone who they perceive as 'better' than them as mentioned at paragraph 2.12 ii above.

**Status quo bias** – which is a bias whereby decision makers prefer to do nothing or stick with an earlier decision rather than amend it. This again may be more prevalent the more experience a decision maker gets in making decisions and has the potential to impact on the fairness of decisions and protection of the

public as decision makers may stick doggedly to their initial decision in the face of opposition.

**Stereotyping** – this is the tendency, consciously, to ascribe perceived characteristics of a group to every member of that group, ignoring or discounting a person's individual characteristics. As with **implicit/unintentional stereotype biases** there is significant risk of unfair and discriminatory decisions and ones that could impact on the protection of the public as a result.

**Subjective validation (personal validation effect)** – which is another bias relating to how information is processed with something which has personal significance to someone being greater meaning. It is similar to the **generation effect** mentioned earlier.

**Suggestibility** – which is simply the tendency of an individual to be inclined to accept and act on the suggestions of others. The level of suggestibility varies between individuals but it has the potential that a sophisticated, manipulative individual could convince an overly suggestible decision maker to reach a decision which does not provide sufficient protection to the public.

### Multiple Case Examiners

- 2.15 If there is more than one Case Examiner involved in the process of making a decision, either working simultaneously or sequentially, there is the likelihood that each decision maker would be affected differently by different biases, especially if the backgrounds of the Case Examiners were diverse. If working simultaneously a comparison of the provisional decisions of the two different perspectives would enable discussion to be had as to why different conclusions were drawn. If working sequentially how information was passed from one to the other and the working relationship between the two Case Examiners would potentially introduce further biases into the process e.g. if the second Case Examiner were to know who undertook the first consideration of the case and had the **anchor** of perceiving that first Case Examiner as being a sensible and effective decision maker the second Case Examiner might easily fall foul of **confirmation bias** and be reviewing the case seeking evidence to confirm the first Case Examiner's conclusions. There is then a risk of **bias cascade** or **bias snowball**.

### *Consensual decisions*

- 2.16 By being *consensual* in nature the following specific biases I conclude are likely to be impacted by an AO model:

## **TEXT BOX 2: cognitive biases likely to affect consensual decisions**

**Choice-supportive bias** – as the process is consensual the decision maker may want to perceive and interpret any evidence they obtain to support their decisions especially if there is no conflict or constructive challenge built into the process.

**Confirmation bias** – again this is more likely due to the lack of potential conflict or constructive challenge in a consensual process.

**Curse of knowledge** – which is a bias that may occur when the decision maker is communicating with the registered person, or others, and the decision maker unknowingly assumes that the other person has the background to understand what they are seeking to convey. This may actually therefore be an impediment to reaching consensual disposal since the two parties may end up miscommunicating or talking at cross purposes.

**Defensive attribution hypothesis** – which is a bias which also may impact on achieving a consensual outcome as the registered person or decision maker may attribute the cause of an event to an 'other', rather than to the registered person. For example, the registered person may consider that they were not responsible for a particular outcome but rather it was due to someone else whilst the decision maker considers that the registered person was wholly or largely responsible and as a result they are unable to reach a consensus.

**False consensus effect** – which is where the decision maker may perceive their personal qualities and beliefs as widespread throughout the population and therefore will ascribe them to how the registered person will behave or what the 'public' would think of their decision. This is dangerous as it can lead to the **overconfidence effect** and therefore could lead to a misconception as to the level of risk the registered person actually poses.

**Halo effect** – which is a bias whereby a positive impression of the registered person may influence the decision maker to want to give them a more positive outcome. This bias (and its opposite known as the '**horns effect**') could therefore lead to an unfair, discriminatory decision and one which may impact on the level of protection afforded to the public as illustrated in paragraph 2.12 v above.

**Illusory correlation** – this is likely to be more common in consensual decision making where the decision maker and registered person are trying to reach an agreement and the decision maker may see correlations between variables in an effort to reach the agreement they consider is appropriate. (as described in Text Box 1)

**Illusory truth effect** – is a phenomenon related to individuals believing repeated statements as being more truthful and given that a consensual process is likely to involve a number of communications between the decision maker and the registered person there is a risk that this may occur. For example, the registered person's repeated insistence that they will not act in the same manner

again may eventually be accepted as true by the decision maker meaning that their assessment of the risks the registered person poses is affected.

**Implicit/unintentional stereotypes bias** – this may lead to individuals from certain groups being more likely to be able to achieve a consensual disposal than others due to the decision maker's **implicit stereotype bias**. For example, the registered person writes eloquently so is perceived to be more intelligent and therefore is deemed to pose less of a risk to the public. (*as described in Text Box 1*)

**In-group/out-group bias** – depending on whether the registered person is perceived by the decision maker as being in-group or out-group this may impact on the likelihood of the two being able to reach agreement with someone who is considered to be 'in-group' standing a greater chance of reaching consensus with the decision maker. (*as described in Text Box 1*)

**Mere exposure effect** – for the same reasons as the **illusory truth effect** described above.

**Moral luck** – as mentioned when explaining **fundamental attribution error**, in the previous text box, this is more likely to be found with a consensual process which involves discussion, and possible negotiation, between the decision maker and registered person with the decision maker potentially being influenced by their moral views about the registered person's actions or omissions.

**Ostrich effect** – due to the consensual nature of the process there is a risk that in order to reach consensus the decision maker may avoid taking into consideration evidence or information which may be an impediment to reaching agreement. This therefore has the potential to impact on protection of the public. (*as described in Text Box 1*)

**Risk compensation** – above this bias may be more common in a consensual setting where the decision maker is seeking to obtain an outcome which both protects the public but also is one the registered person will agree with. (as described in Text Box 1)

**Selective perception** – this is again more likely in a consensual setting as the decision maker may cognitively (as opposed to consciously) wish to perceive only certain types of information in order to reach an agreement. They may not take into consideration opposing perspectives and, as a result, their assessment of the risks may be flawed.

**Self-consistency bias** – this may influence later decisions, especially if the decision maker considers that their earlier consensual decisions were appropriate. Given the consensual nature of the process they are therefore unlikely to ever be challenged by a registered person with the suggestion that the decision maker is making a decision that is inconsistent with their earlier decisions. (*as described in Text Box 1*)

**Social comparison bias** – given that the decision maker and registered person may require more frequent and closer communication in order to reach

consensus, if there is any **social comparison bias** in existence, the impact of this bias may become greater. *(as described in Text Box 1)*

**Social desirability bias** – is a bias which relates to people behaving in a manner that enhances the likelihood of getting approval from others. In a consensual setting, where the decision maker may be seeking the acceptance of their proposal by the registered person, there is therefore the possibility that the decision maker may behave in a way that improves their chances of getting agreement. This, again, could accordingly have a knock-on impact on the potential risk to the public.

**Stereotyping** – the same points as applied to **implicit/unintentional stereotype bias** made above equally apply here.

**Suggestibility** – this again is more likely to be a factor where the two parties are striving to reach an agreement. *(as described in Text Box 1)*

**Trait ascription bias** – which is a bias relating to viewing others as more predictable and is more likely to be prevalent in a consensual process whereby the decision maker is trying to form a view as to how someone will behave in the future in order to then reach agreement with them as to an acceptable outcome.

### *Paper based decisions*

- 2.17 With decisions being made solely *on the papers* as opposed to at an oral hearing the following biases would, in my view, be likely to have more of an impact on the decision since all of these very much relate to the reading, recall, and interpretation, of written information presented to the decision maker whether they be e-mails from the registered person or documents from the complainant. How information is put forward and how it is processed, as well as the overall amount of information which is provided, can all impact on the eventual decision made. Where there is ambiguity the human mind will often 'fill in the gaps' based upon the individual's prior experience, knowledge, and beliefs (which is also where our biases and prejudices reside):

#### **TEXT BOX 3: cognitive biases likely to affect paper-based decisions**

**Absent-mindedness** – there is always a risk, in dealing with paperwork that important points may be missed. *(as described in Text Box 1)*

**Anchoring** – there is the risk that an initial piece of written information which is read has a disproportionate impact on a later decision. *(as described in Text Box 1)*

**Confirmation bias** – by just making a decision on the papers there is the risk of the decision maker simply searching within the documentation for evidence to support their initial hypothesis as to the appropriate outcome. *(as described in paragraph 2.4 and Text Box 1)*

**Conservation/conservatism** – there is the risk that new written evidence, which the decision maker may read only once, isn't given the same weight as earlier evidence which the decision maker may have read several times before making their decision. (*as described in Text Box 1*)

**Cue-dependent forgetting** – the greater the size of the papers the greater the risk that the decision maker may fail to recall certain key points from them. (*as described in Text Box 1*)

**Focusing effect** – there is the risk that a specific detail or details which the decision maker may have physically highlighted in the documents may then be given too great a focus thereby losing sight of the longer term outlook. (*as described in Text Box 1*)

**Framing effect** – exactly how matters are expressed in written documents, without the benefit of hearing the tone of voice or seeing the body language which accompany them, the greater the risk of manipulation, misunderstanding, or miscommunication. This then has the potential to impact on the decision maker's assessment of risks. (*as described in Text Box 1*)

**Generation effect** – for the same reason as given in Text Box 1.

**Implicit/unintentional stereotypes bias** – this is more likely because without seeing, or potentially speaking with the individual, all sorts of unintentional stereotypes may be applied an example of which I give in paragraph 3.3. (*as described in Text Box 1*)

**Information bias** – for the same reasons as with **absent-mindedness** the more written material the harder it is for someone to recall and accurately interpret such information.

**Need for cognitive closure** – this is likely to be a factor for decisions made solely on the papers as there is still a desire amongst many people to physically see the person they are making a decision about in order to properly assess them hence why job interviews are still commonplace. Without having sight of the individual decision makers may feel that there are too many unknowns about the registered person. (*as described in Text Box 1*)

**Processing-difficulty effect** – for the same reason as expressed in Text Box 1.

**Stereotyping** – for the same reasons as for implicit/unintentional stereotype bias above.

### ***Decisions made in private***

- 2.18 The potential impact from decisions being made *in private*, as opposed to in public, has already been considered and summarised, to an extent, within the PSA Literature Review the following points of which are relevant in this advice: that the absence of an 'audience' might lead to lower performance with a greater focus on the individual decision maker's own needs and

interests, such as their career prospects, rather than on public protection and the public interest. Also, that there might be a feeling of less accountability by the decision maker in a private setting which could, in turn, lead to different outcomes and, as a result, a willingness to take riskier options without an immediate need to justify it to the public. Therefore, cognitive biases which are likely to be particularly influenced by the private nature of such a model would be:

#### **TEXT BOX 4: cognitive biases likely to affect decisions made in private**

**Attentional bias** – since the decision maker will not have others present to help prompt them to consider alternative viewpoints. *(as described in Text Box 1)*

**Context effect** – which is where environmental factors can influence a decision but in a private context there will be less likelihood of this having an influence e.g. in a public panel hearing members of the public or press looking shocked whilst listening to the evidence could impact on the decision makers' view of the public's perception of the subject matter of the hearing.

**Curse of knowledge** – this is more likely in a private setting as the decision maker will not be reminded, by the presence of the public, about making what they are writing clear and intelligible to anyone who may read it. *(as described in Text Box 2)*

**Overconfidence effect** – this is more of a risk in a private context as there will be no observers who might, through their response, make the decision maker doubt their decision making as might occur in a public arena. *(as described in Text Box 1 and 3.18)*

**Selective perception** – given the lack of an audience the decision maker may not be prompted to consider other perspectives (see the point made in relation to **attentional bias** in Text Box 5). *(as described in Text Box 2)*

**Social desirability bias** – with the only immediate audience, while the decision is being taken, being the registered person, this bias would make it more likely that the decision will be more amenable to the registered person than to the public in general. *(as described in Text Box 2)*

**The spotlight effect** – which is a bias whereby we overestimate how much other people notice us, is much less likely to be present in a private context because, again, of the absence of an audience whilst the decisions are being made.

#### **Group Decision Maker in a Panel model of 3 or more members**

- 2.19 For the Panel model, again, a number of cognitive biases may apply, some of which are the same as with individual decision makers (since any Panel is made up of individual decision makers) and a full list of the potential biases in this model appears in **Appendix 5**. However, where some biases are less likely to be present in a group setting, or may exist in the Panel model when they are unlikely to exist in individual decision-making, I have provided

further explanation below. The presence of a legally qualified chair might also have an impact on some of these biases as I have also set out. Furthermore, the size of the Panel may affect the risk or impact of some cognitive biases. Similarly, the non-consensual nature of the Panel process, with decisions being made having potentially heard oral evidence, not just on the papers, and in a public arena, are all likely to have different effects to those outlined above in regard to the AO model and which I have therefore highlighted, and expanded upon, where appropriate:

#### **TEXT BOX 5: most common cognitive biases likely to affect group decision-makers**

**Absent-mindedness** – whilst still likely to occur with individual panel members it is unlikely to have as much of an impact since whilst one panel member may miss something in the written documents someone else would not – the more panel members the less impact this bias would likely have. Similarly, whilst one panel member might be distracted by something happening in a public hearing that may not be true for all panel members.

**Actor-observer bias** – likely to be more involved as a result of interacting with more people as well as being in a public arena.

**Attentional bias** – whilst again this will be present with individual panel members the other members of a panel are likely to have their own different attentional biases meaning that alternative possibilities are much more likely to be discussed and considered than if one person alone was making the decision. Again, the potential frequency of this bias might be increased in a public environment.

**Authority bias** - is likely to be more prevalent and have a greater effect due to the presence of a specific authority figure in the Chair (especially if they are legally qualified) which may be heightened even more in a public setting.

**Backfire effect** – is likely to occur in panel decision making when one panel member's view is corrected by someone else involved in the hearing/process and the panel member then believes even more in the very misconception the correction sought to rectify. Again, this may be even more intensified if this were to occur in a public arena.

**Bandwagon (or 'herd') effect** (also known as 'groupthink') – is likely to occur in group decision-making, and unlikely to occur in individual decision making, with panel members being more at risk of following views expressed by others, especially if those expressing the views are more dominant. Groupthink appears more often in groups where there is a clear group identity or cohesion where members feel that there is a positive image of the group that must be protected. Therefore the non-consensual nature of the proceedings and being in public may both exacerbate this. The larger the group the more likely groupthink is to occur and it is often characterised by one or more of the following symptoms:



1. A belief in invulnerability shared by most or all of the group members that creates excessive optimism and encourages them to take extreme risks (see **groupshift** below).
2. Collective rationalisations where members downplay negative information or warnings that might cause them to reconsider their assumptions.
3. An unquestioned belief in the group's inherent morality that may incline members to ignore ethical or moral consequences of their own actions.
4. Negative stereotyped views of those who are outside the group (see **in-group/out-group bias**).
5. Direct pressure being placed on any member who expresses strong arguments against any of the group's stereotypes or commitments.
6. Self-censorship when members of the group minimise their own doubts and don't offer counterarguments.
7. A belief in the inherent strength of unanimity with a lack of dissent being taken to indicate agreement.
8. The emergence of one or more members seeking to protect the group from information that runs counter to the group's assumptions and any earlier courses of action it has decided upon.

**Bias snowball** – is more likely to occur in group decision-making given that there will likely be a variety of sources (the different panel members) whose biases may integrate and influence each other. The more panel members the more the potential for this to occur.

**Blind-spot bias** – is likely to be greatly reduced in a panel setting where other panel members are able to highlight the blind spots as to their biases that their colleagues have. Again, the more panel members the less likelihood of blind spots being missed.

**Conservation/Conservatism** – again may be more common in a group setting where there is the likelihood of being presented with more and more new evidence or information from colleagues.

**Cue-dependent forgetting** – whilst this is likely to be present for the individuals in a group, this is less likely to have as significant an impact in a group setting as other panel members will assist in helping their colleagues retrieve relevant information.

**Curse of knowledge** – this is more likely to occur in a group setting due to the fact that individuals will be communicating with a number of other individuals. However, if in public, with members of the public present, this may diminish the potential impact of this bias as panel members may recognise the need to simplify and explain their points. This bias often being a key contributory factor for decision makers giving insufficient reasons in their decisions.

**Defensive attribution hypothesis** – again, this is more likely to be present in a panel decision making process given that the group decision making setting is more 'social'. It will likely also be more common in a non-consensual setting and where the hearing is in public as opposed to in private.

**Dunning-Kruger effect** – is likely to play a part with some panel members who demonstrate outward confidence in themselves and their decisions being taken as competent and to be trusted when this may not be the case. This matters as people suffering with this tendency then lack self-awareness which is crucial to identifying and tackling other cognitive biases.

**Effort Justification** – again, is likely to be more present in the panel model given that some panel members may put greater effort into their viewpoint being the one which triumphs in any discussion. Alternatively, '**social loafing**' may occur, which is the tendency for some individuals to expend less effort when working collectively than when they are working individually.

**False consensus effect** – is likely to be more prevalent in a panel setting where members believe that the collective opinion of their own group will match that of the larger population e.g. the public. Again, this is also likely to be more common if the hearing is open to the public.

**Groupshift** – will only be present in the panel model where the positions of individual members of the group may be exaggerated towards a more extreme position e.g. some people changing their decisions or opinions to become more willing to be risky when acting as part of a group as compared to if they were acting individually. This may also be impacted by both the non-consensual and public nature of proceedings.

**Halo effect** – is likely to have an even greater impact by being able to see and interact with the subject of the hearing and witnesses.

**Illusion of explanatory depth** – again is likely to be more prevalent in a panel setting where members may frequently be pressed to explain the reasoning for their views.

**Illusion of transparency** – again will be more common in a panel setting due to the increase in interaction between different individuals.

**Illusory truth effect** – is likely to be more prevalent in a panel setting where panel members are likely to repeat statements and the opinions they hold. Oral evidence with witnesses repeating certain points will also likely increase the effect of this bias.

**Information bias** - Shared Information Bias: One well-established finding in the scientific literature is that group discussions tend to focus on information that is shared by all group members, often at the expense of information that is essential but only held by a minority of the members.

**Lake Wobegone effect** – just as with the **Dunning Kruger effect** this is likely to be more prevalent due to the potential interaction and 'competition' that may exist between panel members.

**Naive cynicism** – again is much more likely to be a factor in a panel setting where some members will wish to challenge opinions which differ from their own. Again the non-consensual nature of proceedings may amplify this effect.

**Naive realism** – again this is likely to be more prevalent in a panel setting and in a public arena.

**Not invented here** - is potentially more likely to be present in a panel setting especially if the panel has developed its own identity and, if there is a legal advisor, whether that advisor is seen as part of the that group or separate from it. If the latter then suggestions made by the legal advisor may be minimised or side-lined.

**Ostrich effect** – again is likely to be more in evidence in a panel setting given that members are more likely to receive information and opinions from their colleagues which may be unpleasant to their thinking.

**Reactance bias** – again is much more likely to occur in a panel setting where individual members may react due to their perceptions of the actions of another member of the panel. Being in a non-consensual and public environment is also likely to increase the magnitude of this bias.

**Reactive devaluation** – again, this is more likely to be present in a panel setting if members develop antagonistic stances which may be more likely in a non-consensual situation. The presence of an 'audience' in a public hearing could either constrain or exacerbate this.

**Reverse psychology** – again is more likely to be used in a panel setting where people may wish to encourage others to change their positions.

**Seizing and freezing** – again, this will be more prevalent in a panel setting where there is likely to be much greater challenge of an individual's initially expressed perspective. Dealing with a non-consensual issue and in a public environment again could exacerbate this phenomenon.

**Selective perception** – again, for the same reasons as '**seizing and freezing**', this is likely to be more evident in a panel setting when dealing with a non-consensual issue and in a public arena.

**Simmelweis reflex** – again, will probably be more common due to the non-consensual nature of the issue and the likelihood of panel members being exposed to new and alternative views being expressed by their colleagues.

**Social comparison bias** – again is likely to be more prevalent given that there will be more people present in the setting to whom a panel member may compare themselves.

**Social desirability bias** – is a bias which is unlikely to be present in individual decision making but will exist in a panel/group setting. This is often due to individuals not distinguishing *task* conflict from *relationship* conflict and wishing to remain on 'good terms' with their fellow panel members. This will also be more likely to impact given the non-consensual nature of proceedings and the presence of members of the public.

**Spotlight effect** – due to the greater interactions with others in a panel context this again is more likely to be present than with an individual decision maker being further emphasised if in a public setting.

**Suggestibility** – due to the greater number of other people involved in a panel decision making process this again will therefore be more likely to have an influence in that context as well as with the issue being non-consensual.

**Trait ascription bias** – again is likely to be more common in a panel setting given the larger number of people involved.

2.20 I will again illustrate how some of these biases, which only occur in a group context, or have a different impact in a panel setting, can impact at different points during the eight stages of making a decision as set out in paragraph 2.7 above. For example:

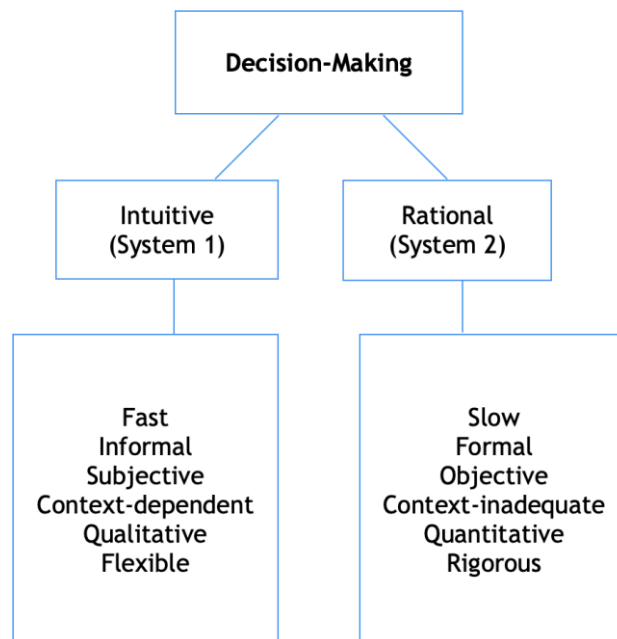
- i. In the initial information presented to the decision maker e.g. if the panel views the regulator as 'other' there is the risk of '**not invented here**' meaning that anything put forward by the regulator is viewed with suspicion and mistrust;
- ii. in the pre-hearing attitude of the decision maker – i.e. their prior knowledge/assumptions/beliefs/experiences, their preliminary discussions with others e.g. there is the risk of **seizing and freezing** with a panel member expressing their initial view and then saying words to the effect that "I am not going to change my mind";
- iii. in the analysis of documents the decision maker is given to read e.g. there is less likelihood of key information being missed due to **attentional biases** as a result of the different perspectives of the panel members reading the material;
- iv. in how the decision maker interacts with others including how they frame questions they ask, and how they interpret the responses they are given including how that response is provided e.g. the **social desirability** bias may mean that there is a lack of robust challenge to others which if coupled with **authority bias** may lead to the Chair's voice being the predominant and determinative opinion;
- v. in their assessment of the credibility and/or reliability of evidence they are provided with e.g. given the non-consensual nature there is likely to be a greater need to determine the weight to be given to certain evidence and if a panel member keeps repeating their opinion that a witness was credible and reliable the **illusory truth effect** may mean that, through this repetition, other panel members may end up adopting a similar view;
- vi. in their determination of the relevant facts for a decision and whether they require more facts to decide the matter e.g. given the non-consensual nature there are likely to be more areas of dispute for the panel to resolve and if a panel member was outvoted at an early stage there could be **reactance bias** or **reactive devaluation** at the next stage of the fitness to practise process with that individual taking up an oppositional stance to their colleagues;
- vii. in their application of the facts to the issue they are to decide, especially in relation to the assessment of risk e.g. **groupshift** and particular

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- risky shift** may occur with panels being more willing to take a riskier approach in a panel setting than if they were solely responsible for the decision;
- viii. in their determination of the appropriate outcome e.g. the **false consensus** effect with panel members convincing themselves that their conclusion would undoubtedly be shared by the general public which may be even more pronounced if earlier decisions announced in public were perceived to have been welcomed by those observing the proceedings.

### III. Assessment of the impact of these biases, in terms of fairness, discrimination, public protection, and any other aspects that might be pertinent to the effectiveness of professional regulation

- 3.1 The biases as outlined in Section II above, for both Case Examiner (individual) decision makers and Panel (group) decision makers, have the potential to impact on fairness, discrimination, public protection, and other aspects such as elements of right touch regulation, including: identifying the problem before the solution, quantifying the risks, focussing on the outcome, checking for unintended consequences and reviewing and responding to change.
- 3.2 However, before explaining the potential impact on each of these elements, it is helpful to set out the two types of decision-making, as identified by Daniel Kahneman and Amos Tversky (and subsequently many others):

**Fig 2: The Two Systems of Decision-Making**



- 3.3 The crucial point here being that cognitive biases, which act as mental shortcuts ('heuristics'), are utilised in System 1 decision making to help us to make fast, subjective decisions. That does not mean that System 2 decisions are 'better' as often our System 1 instinctive choices may be an appropriate, effective, and efficient decision in the circumstances. However, as stated earlier, as cognitive biases alter the way attention is allocated to processing data decision makers who rely predominantly on System 1 can be too quick to make a decision, and then are likely to ignore evidence which contradicts their initial, instinctive, opinion. For example, a Case Examiner might receive a

letter written in green ink from a registrant. If the Case Examiner has a particular **stereotype bias**, one I have previously heard a number of people express, that individuals who use green ink in correspondence are eccentric or 'difficult' this bias will likely then instinctively influence their view of the content of the letter as well as their view of the registrant and the ultimate outcome of the case. Similar biases equally can apply in the context of a Panel hearing with, for example, a panel member being influenced by **saliency bias** and focussing instinctively, and predominantly, on the fact that a registrant hasn't physically attended the fitness to practise hearing and concluding, as a result, that the registrant does not care about their registration or what happens at the hearing.

- 3.4 Individuals are likely to make a vast number of decisions a day. The results of studies that have been conducted in developed countries vary widely with some sources suggesting that the figure may be as high as 35,000 choices each and every day. Human beings accordingly lack the cognitive capacity (and time) to make all of these decisions using System 2 thinking. Therefore, all decisions initially are made in microseconds using System 1. What those who make decisions relating to whether a registrant is fit to practise should then do, in my opinion, is to take a mental step back and consciously activate System 2 to try and rectify potential inappropriate 'contamination' of their thinking by any one of the cognitive biases highlighted earlier. In Section IV I therefore outline a number of practical strategies which could be implemented in an effort to reduce the impact of the various biases I have set out.

### **Fairness**

- 3.5 A number of the biases, as referred to above, have the potential to impact on the 'fairness' of a decision made by either the Case Examiner or Panel models ('fairness' in this context I have interpreted as referring to procedural justice such as compliance with principles of natural justice and the concept that justice must not only be done but be seen to be done). For example, one principle is that decision makers should be unbiased towards both parties, however, **stereotyping**, whether unintentional or not, commonly can occur in hearings. Anyone who has ever used or heard expressions such as: "It's another one of those", "Here we go again..." or similar, will be familiar with the ease with which stereotyping takes place. Indeed, the higher an individual's IQ (intelligence quotient) the more likely they are to be impacted by stereotypes as their IQ indicates that they are faster at identifying potential patterns which is essentially what **stereotyping** is.
- 3.6 Another principle of natural justice is that there should not be an undue delay in hearing the matter yet some case examiners or panel members who have a profound **need for cognitive closure** may wish to delay making decisions, continually requesting more and more information in order to satisfy themselves that they are making the objectively 'right' decision despite such an outcome being an illusion.
- 3.7 Another principle of natural justice is that decisions should have clear reasons attached to them but a repeated concern expressed not just by the PSA but

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by the High Court relates to the inadequacy of reasons given in decisions. This may be as a result of the combination of a number of cognitive biases including: **confirmation bias, the illusion of explanatory depth, the illusion of transparency** and **naïve realism**.

### Discrimination

- 3.8 As highlighted already both Case Examiner and Panel decisions could involve discrimination as a result of a number of biases especially **implicit/unintentional stereotypes biases** and **stereotyping**, but also other cognitive biases such as **in-group/out-group bias** and **social comparison bias**. All of these could lead different decision makers to treat individuals inconsistently due to perceived similarities or differences between the registrants and the decision makers or between the complainants and the decision makers.

### Public Protection

- 3.9 Again, a number of the cognitive biases specifically relate to the assessment of risks by decision makers and therefore could impact on the protection of the public if they inappropriately influence the decision maker to lessen their assessment of the risks and the proportionate action required to meet that risk.
- 3.10 For example, the **zero-risk bias** could see a decision maker focus on options which aim to achieve the complete elimination of a risk when alternative options might produce a greater overall reduction in risk. For example, they may decide to suspend a registered person for 12 months, meaning that the public are completely protected for that 12 months period i.e. there is zero risk. The registered person then returns to practise, without any restrictions, and, potentially may pose the same risk in relation to their practise as they did before the period of suspension say a 15% risk to the public.
- 3.11 However, if they had been subject to a number of conditions on their practise which also lasted 12 months, this might actually reduce the overall risk to the public in the longer term, as a result of the registered person implementing and embedding changes in their habits and approach to their professional duties i.e. their risk reduces from 15% to 5%.
- 3.12 In the panel model, as I have already mentioned, a specific concern is the potential for **groupshift**, particularly **risky shift**, as a result of the group being responsible for making the decision as opposed to an individual. The fact that registered persons theoretically can appeal decisions made by regulators could act to prompt certain biases in decision makers (for example **social desirability bias** in that the decision maker wants to make decisions which will meet with the approval of any appeal body) but any potential impact of this bias would likely be offset by the fact that the PSA equally has the right to challenge a decision it considers is insufficient to protect the public and vice versa.



- 3.13 However, if a Case Examiner or Panel's own decision were to be criticised or overturned then this balance is likely to be affected with the decision maker either developing a greater appetite for risk or becoming more risk averse. Which way they would be affected would depend on a number of biases including:
- **recency bias** (i.e. how recently their decision was criticised),
  - **reactance bias** (if they disagree with the decision, they may make decisions contrary to what they have been told),
  - **reactive devaluation** (they may as a result devalue other decisions made by the same body that criticised them) and/or **risk compensation** (they may alter their perception of risk going forward becoming more careful for fear of being criticised or less careful if their judgment was upheld).
- 3.14 Given the consensual nature of Case Examiner decisions though the likelihood of registered person's challenging decisions made in this model is likely to reduce. This means that there could potentially be a shift to any criticism or challenge of the decision only coming from one direction i.e. from the PSA. However, in reality, whilst registered persons do have the right to challenge decisions made by regulators, given the time and costs involved the more likely challenge and criticism in the Panel model would also be from the PSA.

#### **Other aspects pertinent to effective professional regulation**

- 3.15 Right touch regulation is a decision-making framework developed by the Professional Standards Authority. It is meant to be used in the development of regulatory policy, but may also have some application in individual regulatory decisions.
- 3.16 It is said to involve:
- Identifying the problem before the solution
  - Quantifying the risks
  - Getting as close to the problem as possible
  - Focussing on the outcome
  - Using regulation only when necessary
  - Keeping it simple
  - Checking for unintended consequences
  - Reviewing and responding to change.
- 3.17 Each of these factors could be impacted by cognitive biases e.g.:
- Identifying the problem before the solution – the **availability heuristic** and **confirmation bias** can lead people to very quickly conclude that they know what the 'solution' or outcome to an issue should be before they have necessarily fully understood the extent of the issue they are dealing with.
  - Quantifying the risks – **neglect of probability** is common with decision makers rarely seeking information or discussing the relative probabilities of events.

- Getting as close to the problem as possible – will be influenced by how information is **framed**.
  - Focussing on the outcome – could be lost if decision makers suffer with **reactance bias** or **reactive devaluation**.
  - Using regulation only when necessary – may be impacted by the **saliency bias** with decision makers potentially considering that some action is required otherwise the matter wouldn't have got to the regulator or made it to them for a decision to be taken.
  - Keeping it simple – could easily be influenced by the **hard-easy effect**.
  - Checking for unintended consequences – may be made more difficult by **blind spot bias**.
  - Reviewing and responding to change – is made hard due to a number of biases including **conservatism**, **cognitive dissonance** and **the Semmelweis reflex**.
- 3.18 In addition, all of these factors may also be impacted should the decision maker fall prey to **overconfidence** which is a risk for both case examiners and panels due to the four factors which can cause overconfidence to develop, namely:
- 1) The 'Hard-easy' effect – whereby we become increasingly confident when we have to make difficult decisions i.e. when we have to make a decision where there is ambiguity (which is especially true when making accurate future predictions which is what fitness to practise processes seek to do);
  - 2) Familiarity – the more we decide a particular issue the more confident in our decisions we become;
  - 3) The Quantity of information – the more and more information we are provided with the more and more certain we become in the 'rightness' of our decisions (without this confidence improving the quality of the decisions made);
  - 4) Actively engaging – the more we are actively engaged in the process of making a decision the more accurately we assess our prediction of the future and the 'rightness' of our decision to be.
- 3.19 The frequency with which Case Examiners or Panel members undertake fitness to practise decisions would therefore impact on the risk of developing overconfidence. However, again, having an awareness of these four factors can reduce the likelihood of overconfidence developing or having an impact.

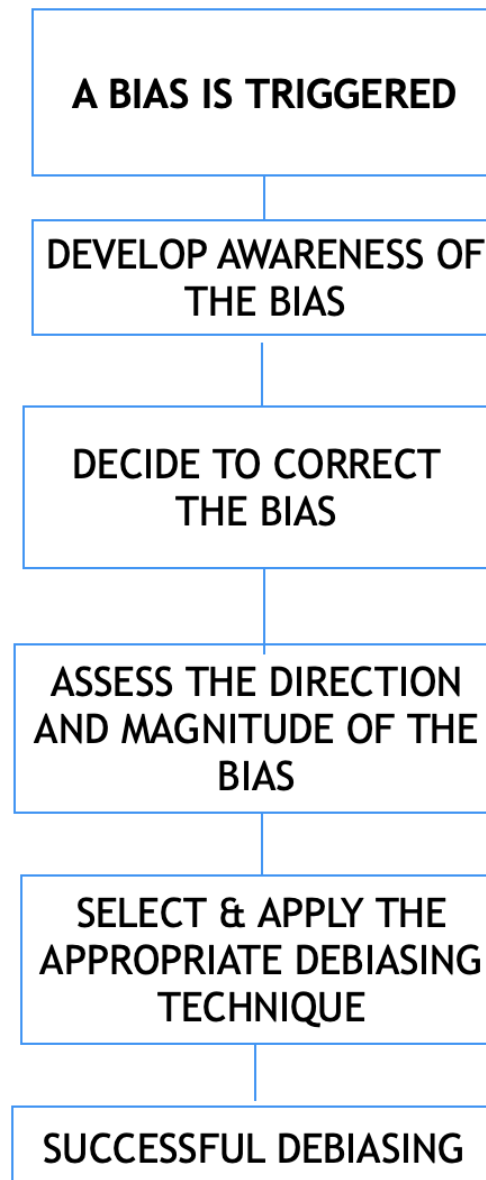
## **IV. Effective strategies for addressing these biases, particularly in the context of accepted outcomes**

- 4.1 It is my profound hope that anyone who has read this advice to this point may now be willing to accept that bias-free decisions do not exist and cannot exist with humans making decisions (algorithms have some benefits which humans do not but even they can be subject to the cognitive biases of their programmers). Similarly, I would hope that there is an acceptance by all involved in professional regulation that there are no 'perfect' decisions but rather that the fitness to practise process should be about making 'good enough' choices. Therefore, all decision makers need to have the humility to recognise that they will be affected by cognitive biases and shouldn't ignore this issue. Regulators equally should not demonise decision makers who will inevitably make occasional mistakes due to the impact of these cognitive biases.
- 4.2 Accepting that biases will impact on an individual's decision making, what must also be recognised is that such biases cannot be entirely removed from the decision making process at a personal psychological level (especially not by simply using willpower and telling yourself to be 'objective' since such suppression is not only ineffective but can actually reinforce biases). Therefore procedures, organisational processes, and inter-personal actions, must also be adopted in an effort to tackle cognitive biases.
- 4.3 Tom Stafford at Sheffield University has highlighted three anti-bias strategies which can be divided by their effect i.e. those that:
  - i. Mitigate against the impact of the bias (but leave the bias intact);
  - ii. Insulate from the effects of bias i.e. removing the possibility of the impact occurring;
  - iii. Remove the bias completely which is much harder and usually will only occur over the longer term.
- 4.4 These anti-bias strategies can be considered at different stages, depending on who the primary target for the intervention is, although some strategies will apply across the different levels:
  - i. Personal strategies - which aim to change an individual's thoughts or behaviour;
  - ii. Interpersonal strategies - which target interactions between two or more people;
  - iii. Institutional strategies - which target the norms and processes of the whole institution.

### **Personal strategies**

- 4.5 Before identifying particular strategies that individuals could adopt it will, I hope, be of assistance for the process of mitigating biases to be shown visually in the following flowchart:

**Fig 3: The Over-arching approach to mitigating the impact of cognitive biases**



4.6 As can be noted from this flowchart awareness is therefore key to tackling cognitive biases. Indeed, I would suggest, awareness is a key requirement whether the strategy being sought to be implemented is at a personal, interpersonal, or organisational level. However, awareness can be challenging as some people and organisations continue to question the existence of, or impact of, cognitive biases despite the numerous studies that have been undertaken demonstrating their existence and effects. Some people whilst accepting the existence of cognitive biases do not consider themselves vulnerable to such biases (which itself I would propose is likely due to the **exception bias/illusory superiority**). One option which has been shown to assist in developing awareness is Mindfulness/Meditation practice which

- aims to achieve a state of alert focus by deliberately paying attention to thoughts and sensations without applying judgment. Another option to develop awareness would be encouraging or requiring decision makers to use reflective journals in relation to their thought processes when making a particular decision.
- 4.7 Training can have an effect, at a personal level, but this must be repeated and can't just be a 'one-off' session. Some readers of this advice may be aware of a ministerial statement from the United Kingdom's Government in 2020 which set out a decision to phase out unconscious bias training in the Civil Service due to research which found that such training did not lead to long term changes in behaviour, nor improved workplace equality. Indeed this conclusion had already been confirmed by earlier studies looking at single sessions of unconscious bias awareness training.
  - 4.8 However, the analogy used by Tom Stafford is that addressing cognitive biases should be thought of as being akin to undertaking a healthy diet. A single healthy meal won't make someone healthy. Instead, what is needed, is committing to regular healthy eating. Similarly, not just one strategy, such as training, will be the single 'magic bullet' which cures the decision-making processes in an organisation of the potentially negative virus of cognitive biases. Instead, multiple inoculations are required at the three different levels. Accordingly, only with a commitment to intentionally dealing with bias in the long term, and via a multitude of measures, will the potentially inappropriate impact of cognitive biases be combatted.
  - 4.9 Once aware of what their instinctive reaction to a decision is individuals should then explore what that gut reaction is based upon which will shift them from System 1 to System 2 thinking.
  - 4.10 Individuals should avoid various forms of pressure when making decisions. This means decision makers should ensure they have sufficient time to make the decision and have had enough sleep and food before doing so in order that they are neither tired nor hungry. There is also the potential social/emotional pressure that may result should a decision maker realise that a colleague has become a 'friend' and, as a result, they may wish to avoid relationship conflict with them which in turn could influence the decision maker's view of an issue.
  - 4.11 Decision makers should also strive to prevent themselves from being distracted. Distraction can come from a variety of sources but again decision makers should be encouraged not to multi-task (which few human beings can do effectively) but to have periods of sustained focus on a single issue interspersed with regular breaks.
  - 4.12 A focus on the individual and their personal traits such as their engagement with the fitness to practise process and their length of time in the profession is appropriate rather than referring to them by characteristics the decision maker has concluded based solely due to their membership of a particular grouping i.e. based upon their race, sexual orientation, or similar.

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- 4.13 Deliberately countering stereotypical imaging by getting more information is another approach. One suggestion for how to do this being to think of people that prove that the potential stereotype the decision maker has is inaccurate e.g. anyone who earlier identified with the 'green ink user' bias I mentioned, as being indicative of eccentric or difficult people, could very quickly discover that a famous proponent of using green ink was the first head of the Secret Intelligence Service (MI6), Sir Mansfield-Cummings. This can then help to counter the stereotype.
  - 4.14 Engaging in conscious perspective-taking i.e. putting yourself into the shoes of the person you may be biased against is another useful strategy. Even better is to widen your perspective by talking and listening to other people, the more different from you the better, and learning directly from them including by reading books by people whose backgrounds are different from the decision maker's own.
  - 4.15 'Cloaking' or counterfactual thinking is another useful approach which involves imagining the person is part of a different group, or that their circumstances are different e.g. change the subject's gender, ethnicity, age etc. and see if that change has any impact on the decision. Then the decision maker should question themselves as to whether making that change should have such an impact.
  - 4.16 A particularly useful technique to assist with raising a decision maker's awareness is to develop and use memory aids such as practice guidelines, mnemonics, and checklists. These are cognitive forcing strategies which act as mental prompts e.g. many Regulators already have documents described as 'Indicative Sanctions Guidance', or similar, which are designed to encourage panels to adopt a specific process ensuring that certain factors are taken into consideration. Checklists could be provided in relation to other areas focussing on combating predictable cognitive biases in specific situations e.g. in assessing the credibility or reliability of someone who has given oral evidence panel members could use something like the below example checklist which emphasises some areas and recommends not attributing weight to others:

### Example: *Draft Checklist for Assessing a Person's Credibility/Reliability*

#### Consider the extent to which you found the person:

- |    |                     |   |                         |
|----|---------------------|---|-------------------------|
| 1) | Accurate/Consistent | v | Inaccurate/Inconsistent |
| 2) | Impartial           | v | Biased                  |
| 3) | Truthful            | v | Dishonest               |

#### Do not rely upon the following factors in your assessment:

- Making a judgment based solely upon one aspect of a person's demeanour
- Whether they looked you in the eyes when they spoke to you
- Your opinion of the clothes the person was wearing
- How attractive or sympathetic you found the person
- Whether they remained still or 'fidgeted'
- Whether they spoke nervously or, alternatively, spoke with confidence
- Cultural differences between you and the person whom you are assessing
- Stereotypes based upon someone having a particular characteristic or being part of a specific group.

Rather than consider how *plausible* what the person said was (which depends on your own personal experience) consider how *probable* it is. Apply BAYESIAN reasoning recognising that the usual is more likely to occur than the unusual.

#### What to look out for (and potentially probe by means of further questions):

- Internal inconsistency (i.e. they give two or more versions or there is a contrast between the content of what they are saying and how they are saying it) without a satisfactory explanation for the inconsistency
- External inconsistency (i.e. what they say is contradicted by other evidence)
- Using distancing language (e.g. avoiding the use of 'I')
- Waiting longer before giving answers to some questions but not others
- Regularly repeating the same words/phrases
- Tending to make short, generalised statements
- Their willingness to make concessions and accept their recollection may be in error.

4.7 Another example of such a memory aid for assessing risks, which could be developed by Regulators, if not already used, is demonstrated by the following example table which provides a simple Red/Amber/Green rating for decision makers to consider when making assessments of risk by looking at the likelihood of an event occurring (the vertical axis) as against the potential impact if the event did occur (the horizontal axis):

**Table 1: Probability versus Impact**

		Insignificant	Minor	Moderate	Major	Catastrophic (e.g. death of a member of the public)
Almost certain	e.g. 90%+	High	High	Extreme	Extreme	Extreme
Likely	e.g. between 51 – 90% chance	Moderate	High	High	Extreme	Extreme
Moderate	Between 11 – 50% chance	Low	Moderate	High	Extreme	Extreme
Unlikely	e.g. between 3 – 10% chance	Low	Low	Moderate	High	Extreme
Rare	e.g. under 3% chance	Low	Low	Moderate	High	High

4.17 Decision makers should seek to gain a better understanding of probabilities by training in, for example, Bayesian reasoning, which would help them to counter **neglect of probability, conjunction fallacy** and other such biases.



## Bayesian reasoning

Bayesian reasoning is based on Bayes' theorem which is about the probability that something is true given some piece, or pieces, of evidence. It can be demonstrated by this equation:

$$\text{Probability of event (A) given that event/evidence (B)} = \frac{\text{probability of (B) given (A)} \times \text{probability of (A)}}{\text{probability of (B)}}$$

Bayesian reasoning involves incorporating conditional probabilities and updating these probabilities when new evidence is provided. This is useful because it forces the decision maker to take into consideration alternative explanations or outcomes and how likely they are given the evidence they have.

This means that you can't just get a theory and take it to be true if it fits the evidence. You need to also look at alternative hypotheses or outcomes and see if they fit the evidence better. This leads the decision maker to start thinking about all hypotheses in terms of probabilities rather than certainties. It also leads decision makers to think about their beliefs in terms of evidence.

A corollary of this is that different evidence leads to different probabilities.

For example, from a case I was once involved in where the registered person was before their regulator admitting misconduct in the form of working back-to-back 12 hour shifts for two different employers, on one occasion having worked 72 hours without any significant break. A key issue for the panel was therefore the likelihood (or probability) that this person would decide to behave in the same way again (event A) given that they had admitted the allegations and were saying that they wouldn't repeat such behaviour (evidence B).

In assessing this we could have said that the probability of them admitting the behaviour and asserting that they wouldn't behave in the same way again, given that they would decide to do this again, we could estimate is low (e.g. 20% or 0.2). This being based on the view that the person in admitting it is being truthful and is not seeking to deceive the regulator. The probability of anyone wanting to work back-to-back shifts we could have estimated as perhaps low e.g. 20% or (0.2). The probability of someone admitting their behaviour (whatever that behaviour might be) and asserting that they wouldn't behave in the same way again let us estimate is 50% or 0.5. This would give us a starting point probability of 8% that they might behave in the same way again (therefore this would be deemed a 'unlikely' likelihood as shown in the example table above).

However, during the evidence I asked the subject of the hearing a factual question namely, how they felt, physically, when they had worked the 72-hour period without a break. Their response was that they had felt fine,

“strong as an ox”, and that it hadn’t been a problem. They also said that there was no risk to patients as no one suffered any actual harm as a result of their having worked for this period of time.

We now recalculate the probability that this person would decide to behave in the same way again (event A) given that they were saying that they had physically felt fine whilst working 72 hours and did not see any risk to patients from having done so (evidence B). The probability of someone saying that they felt physically fine and of not having posed a risk to patients given that they’d decided to work back-to-back shifts we might say is high e.g. 75% or 0.75. This being because people would want to potentially delude themselves.

The probability of someone wanting to work back-to-back shifts would not have changed i.e. 20% or 0.2. However, the probability of someone actually saying that they had felt physically fine and hadn’t posed a risk to patients from working back-to-back shifts we might consider to be even lower, let us say 1% or (0.01).

The probability that this individual would decide to work back-to-back shifts again, given their statement that they had physically felt fine whilst working 72 hours and did not see any risk to patients from having done so, would now therefore be 1500%.

Now neither of these estimate probabilities is definite but the point about doing the exercise is to show how new information can impact on the likelihood ratio and that such a ratio needs to be regularly considered and updated.

- 4.18 Another approach to combat **confirmation bias, focusing effect** and other biases which might influence a decision maker’s assessment of what may happen in the future is for decision makers to carry out a ‘pre-mortem’ (also known as prospective hindsight) once they have come to a provisional decision. In such an exercise the decision maker then considers what the worst potential consequences would be if their provisional decision was to be enacted. The decision maker then would analyse every possible reason for why those consequences might have happened and consider whether an alternative to their provisional decision should be made.

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## Interpersonal strategies

- 4.19 In interpersonal situations feedback from others should be actively sought both during and after the decision making process. To ensure a collaborative approach in interpersonal interactions decisions should be approached with humility and curiosity instead of being a preacher or prosecutor without really listening to the other people involved in the process. Questions should be asked to challenge, not confirm, assumptions which would lessen the potential impact of **social desirability bias**. The risk of *task* conflict becoming *relationship* conflict should be minimised by using phrases such as, "Can we debate this point?" rather than "I disagree". Pride leads to an increased risk of **social desirability bias** whilst strong conviction can launch decision makers into **confirmation bias** both of which can then lead to validation and arrogance and an unwillingness to alter our beliefs (at the same time making us more liable to the **Semmelweis reflex**). This also includes being prepared to give feedback on the perceived biased behaviour shown by others. As part of the AO or Panel models a process could be introduced for decision makers to anonymously review decisions of anonymised peers and provide feedback (similar to the peer review approach to academic journal articles) using a checklist with prompts of areas to consider and comment upon.
- 4.20 Consider adapting and adopting tools such as the Nominal Group Technique (NGT) which was developed to help with group decision making by ensuring that all members participate fully in the process. Its approach could be applied to panel decision making. Modifying the technique's four steps to a fitness to practise context could look something like this: First, each member of the panel would engage in a period of independently and silently writing down their opinions as to the key facts that should be taken into consideration in regard to the decision the panel has to come to. Second, each member shares their view of the key, relevant facts, without interruption or comment from the other panel members, with the Chair speaking last. Third, a discussion then takes place around the facts resolving any inconsistencies or disputes with people being asked to give clarification and reasons for why they have reached the views they have. Finally, individuals are asked to express their view on the decision that is to be made at that point in the process, explaining which of the facts that have been discussed have influenced them to reach their final opinion and also highlighting what the strongest counter argument to their decision is. This would help to ensure that all members participate fully and would also help to tackle biases such as **confirmation bias** and **groupthink**.
- 4.21 To further reduce the risk of **groupthink**, the following steps could be implemented:
- 4.22 Individuals should:
- Monitor their own behaviour for signs of groupthink and modify their behaviour if needed;
  - Check themselves for self-censorship.

- Avoid censoring or putting pressure on other group members to conform with their viewpoint.
- 4.23 Chairs of panels should:
- Remain impartial and refrain from stating their opinions at the outset of deliberations.
  - Set a tone of encouraging critical evaluations throughout the panel's deliberations.
  - Remind members of the ground rules for avoiding groupthink if someone should get off track.
  - Encourage a group member to play devil's advocate and challenge the panel's decisions.
- 4.24 Organisations should:
- Monitor panel size, as participants grow more hesitant to participate in larger groups.
  - Discuss the symptoms of groupthink and how to avoid them.
  - Invite and share reactions from those outside the organisation to decisions that are made and share those reactions, on a regular basis, with the decision makers.
  - Encourage a culture of difference where different ideas are valued.
  - Seek diversity of characteristics amongst decision makers.

### Organisational strategies

- 4.25 Regular training opportunities should be provided including the use of simulation exercises to have decision makers practice scenarios they may encounter in an effort to identify and remedy any cognitive errors they might encounter by pointing out potential biases that could be activated and then considering solutions to the impact of those biases.
- 4.26 As mentioned earlier decision makers need to fight against becoming overconfident. As competence and confidence don't progress at the same rate it is easy to mistake experience for expertise. In fact, beginners to a process, or those inexperienced in it, rarely make **Dunning-Kruger** errors because they don't fall foul of overconfidence. Therefore, one option, at an organisational level, would be to ensure that someone doesn't make too many decisions as a Case Examiner or Panel Member for too long a period of time (indeed Regulators generally already have a limit on the amount of time Panel Members are appointed for and could equally appoint individuals to be Case Examiners for a set amount of time). As Adam Grant highlights what must be encouraged is a rethinking cycle as opposed to an overconfidence cycle:

**The 'rethinking' cycle:** Humility => Doubt => Curiosity => Discovery

**The 'overconfidence' cycle:** Pride => Conviction => Confirmation and Desirability Biases => Validation

- 4.27 Tracking the outcomes of decisions and feeding back what happened with registered persons to the decision makers would enable them to reflect on their decisions. For example, one element of feedback which regulators already receive, and which they should ensure is cascaded to decision makers, are those instances where the PSA has expressed concern about whether an outcome sufficiently protected the public in its view.
- 4.28 One approach which can assist in mitigating the impact of biases, and has already been implemented by all regulators, is recording the process of decision making by means of reasons being given in all written decisions which are then published. This enables others to read and potentially spot the impact of any biases in assumptions that the decision maker may have had. As Lord Neuberger, former President of the Supreme Court, pointed out in a lecture in 2016, "there is no better way than testing your own conclusion by being forced to explain them in writing knowing that what you will say will be put into the public domain".<sup>2</sup>
- 4.29 Developing procedures to remove bias activating information e.g. anonymising information provided to decision makers which might lead to stereotyping, for example, a registrant's name, their gender and so on. Therefore, consideration should be given to what contextual information is crucial to a particular decision making process and what contextual information is extraneous and potentially bias triggering.
- 4.30 Taking steps to reduce the likelihood of decision fatigue (a deterioration in the quality of decision making due to tiredness). In group decision making, decision fatigue can arrive over one decision that is drawn out and reviewed over and over again without coming to a conclusion while with an individual decision maker they tend to experience decision fatigue when they are faced with a lot of decisions to make in a limited amount of time.
- 4.31 Organisational culture should foster and encourage rethinking i.e. they should not punish or criticise decision makers for sometimes 'being wrong'. For example, decision makers whose decisions may be subject of concern by the PSA for not sufficiently protecting the public, or decisions which may be successfully appealed to the High Court, should be taken as an opportunity to learn and improve rather than be perceived as an attack on the decision maker's abilities or judgment. Organisations should also be careful to describe approaches as 'best practice' as to do so can mean they then become 'frozen' with people being reluctant to challenge them. Instead the aim should be on continually striving for better and better practices. Therefore, rather than focus on outcome accountability organisations should focus more on process accountability for decision makers, evaluating how carefully decision makers explored different options before reaching their final decision.

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<sup>2</sup> <https://newjurist.com/some-thoughts-on-judicial-reasoning-across-jurisdictions.html>

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### Limitations of these strategies

- 4.32 Bias and the impact of biases cannot be solved at a personal psychological level. Evidence suggests that biases will persist and that they cannot be excised from our thinking. Part of the solution is to use groups and procedures which help to counter-act biases, for example, having an adversarial approach to hearings doesn't get rid of **confirmation bias**, but it does mean that two potential options for **confirmation bias** are each given the opportunity of being considered by the decision maker from the submissions of the two advocates.
- 4.33 Mitigation strategies are the easiest to immediately put in place but can have limited effect. Insulating a decision from bias may have greater effectiveness than a mitigation strategy but neither alters the ongoing existence of the bias. Removing biases, such as **stereotyping**, is the best longer-term goal, but is likely to be slow and challenging. There is evidence that social biases born of ignorance, those which result in discrimination on the grounds of, for example, a person's sexuality, disability, or ethnicity, can be diminished over time by increasing workplace diversity thereby enabling perspective taking to occur. However, there is also the risk of a backlash with the introduction of any bias interventions in that if individuals feel blamed or criticised they may reject the principle behind or practical steps of the intervention.

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## V. Broad characteristics of cases that might be better resolved through either the accepted outcomes route or the panel route

- 5.1 There is no 'hard and fast rule' as to when to make use of group or individual decision-making, as such a choice is context based.
- 5.2 However, when considering context applying the sort of labels often used by regulators when considering cases is not necessarily appropriate e.g. grouping cases in terms of ones relating to 'dishonesty', 'sexual misconduct' and so on since such broad descriptions can encompass a vast range of circumstances.
- 5.3 With these caveats the following are some factors which the PSA and Regulators may wish to consider when determining which model is most appropriate in respect of any specific case given everything that has been set out above:

### Cases potentially more appropriate for the Case Examiner/AO route

- Cases where a decision needs to be made urgently.
- Cases where there is very little missing information and very little ambiguity.
- Cases which are likely to require limited amounts of engagement with the registrant.

### Cases potentially more appropriate for the Panel route

- Paper heavy cases as there would be less likelihood of a number of the biases which would impact on an individual decision maker considering matters on the papers having a significant effect e.g. the **absent-mindedness bias**.
- Cases which may involve different cultural considerations (providing the panel itself is diverse) as individual decision makers may be more prone to **blind spot bias** and to **stereotyping**, whether intentionally or not.
- Cases with significant 'gaps' in the information and/or with substantial ambiguity as to what occurred.

## VI. Appendix 1 – The Author of this advice

I have been qualified as a solicitor since 1996 and currently undertake a number of employed and self-employed roles which may be relevant as to why I was asked by the PSA to provide this advice:

- a) I make decisions alone as a Road User Charging Adjudicator deciding appeals either on the papers, or at personal hearings, in relation to London's Road User Charging schemes;
- b) I also make decisions alone as one of the three Independent Adjudicators for Companies House deciding appeals electronically, on the papers only, in respect of Late Filing Penalties for limited companies which file their accounts late;
- c) I sit as a Recorder in the Crown Court making decisions of law alone and presiding over jury trials dealing with people accused of a variety of criminal offences;
- d) I sit as a Tribunal Judge, together with one or two specialist colleagues, in making decisions in respect of: (i) people detained against their will under The Mental Health Act 1983, (ii) children with special educational needs and (iii) people who are claiming welfare benefits;
- e) I previously sat as a Fitness to Practise Chair for the Conduct and Competence Committee of the Nursing and Midwifery Council (NMC);
- f) I currently sit as a Legally Qualified Chair for Police Misconduct Panels relating to Metropolitan Police, British Transport Police, and Ministry of Defence Police Officers who are accused of serious misconduct;
- g) I have been a trainer of investigators, lawyers, and judicial office holders, since 2002, delivering training in relation to unconscious bias and communication, amongst other topics, and, more recently, for both The Judicial College of England and Wales and The European Judicial Training Network;
- h) I was a member of the Editorial Board of Tribunals Journal for several years and during this time had a number of articles published within the Journal which focussed on the impact of cognitive biases on decision making including: "Too confident by half", "The lies we tell ourselves", and "Cognitive biases: 15 more to think about";
- i) I have written a book called '365 Daily Advocacy Tips' which refers, in parts, to the impact cognitive biases can have on decision makers; and
- j) I have delivered training on the impact of unconscious biases in decision making for a number of professional regulators including: The Medical Practitioners Tribunal (MPTS), The General Pharmaceutical Council (GPhC), The Nursing and Midwifery Council (NMC), The Pharmaceutical Society of Ireland (PSI), Social Care Wales (SCW), The Royal College of Veterinary Surgeons (RCVS), The General Optical Council (GOC), The Royal Institution of Chartered Surveyors (RICS), The Royal Institute of British Architects (RIBA), The Civil Aviation Authority (CAA), The General Osteopathic Council (GOsC) and the PSA itself.



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## CURRICULUM VITAE OF CURRENT PROFESSIONAL ACTIVITIES

- Aug 2018 - Tribunal Judge of the First Tier Tribunal (Social Entitlement Chamber)  
now Chair hearings in relation to Personal Independence Payments and Employment Support Allowance appeals.
- Jan 2016 - Legally Qualified Chair for the Police Misconduct Panel for the  
now Metropolitan Police, British Transport Police and Ministry of Defence Police  
Chair hearings determining whether or not a police officer has engaged in misconduct or gross misconduct.
- May 2014 - Tribunal Judge of the First Tier Tribunal (Special Education Needs and  
now Disability)  
Chair hearings in relation to decisions about the special education needs of children.
- Aug 2013 - Appeals Officer for Community Interest Companies  
now Determine appeals in relation to breaches of legislation.
- Oct 2009 - Crown Court Recorder, South Eastern Circuit  
now Sit as a Judge in the Crown Court for 3 – 6 weeks per annum hearing a variety of criminal cases authorised to preside over serious sexual cases and appeals from the Magistrates Court.
- Jun 2009 - Independent Member, Lord Chancellor's Advisory Committee for North  
now East Essex Magistrates Courts  
Recruit and appoint lay magistrates.
- Apr 2009 - Independent Adjudicator, Companies House  
now Determine appeals in relation to Late Filing Penalties imposed upon companies and with respect to complaints against Companies House staff.
- Aug 2008 - Director, Independent Investigative Interviewing Limited  
now Conduct interviews and training for both private and public organisations in relation to disciplinary, grievance and complaints investigations.
- Jan 2007 - Tribunal Judge of the First Tier Tribunal (Mental Health)  
now Chair hearings relating to the detention of persons under the Mental Health Act 1983 and train other members. Authorised to sit on both the

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Restricted Patients Panel and Children and Adolescent Mental Health Services (CAMHS) Panel.

Oct 2006 – Consultant, Central Law Training

now Teach courses in obtaining Higher Rights and improving cross examination in criminal proceedings.

Dec 2003 – Consultant, Bond Solon Training

now Conduct training for a variety of organisations including PWC, EY and the Parliamentary and Health Service Ombudsman in relation to Advanced Investigative Practice and running effective hearings for criminal, employment, complaints and regulatory investigations both within the UK and overseas.

Nov 2002 - Road User Charging Adjudicator, London Tribunals

now Deciding appeals against alleged contraventions of London's Congestion Charge and Low Emission Zone. Conduct training sessions, appraise colleagues and help draft annual reports.

## PREVIOUS EXPERIENCE

Mar 2012 – Panel Chair, Conduct and Competence Committee, Nursing and  
July 2017 Midwifery Council

Chaired hearings determining registrants' fitness to practice as a nurse or midwife.

Jan 2007- Training Contract Monitor, Solicitors Regulation Authority

Feb 2014 Assessed the efficacy of training contracts by liaising with training principals and trainee solicitors.

Oct 2006 - Mental Health Liaison Worker, Open University

Jul 2008 Assisted students with learning disabilities and documented mental health difficulties with their studies.

Jul 2006 – Visiting Public Law Lecturer, College of Law

Apr 2007 Lectured students on the Graduate Diploma in Law course.

May 2005 – Non-Executive Director (Vice-Chairman and Senior Independent  
Sep 2010 Director), South Essex Partnership University NHS Foundation Trust

Responsibilities included: acting up as Chair for 3 months; being on the Integrated Governance Committee, Investment and Audit Committees and Trust Board and conducting a quarterly review of complaints handling within the Trust.

- Jan 2001 – Tutor on W201 'Law: the Individual and the State', Open University  
 Nov 2008 Tutored Criminal and Constitutional Law to undergraduates.
- 1993 - 2016 Student/Trainee/Partner/Principal then from 2004 External Consultant at McCormacks Law, London
- Successfully ran one office for 4 years and was instrumental in the expansion of the firm into Essex. My experience ranged from representing individuals accused of minor theft through to complex frauds, serious sexual offences, murder and breaches of UN Arms Embargoes as well as International Criminal Tribunal work.

## PROFESSIONAL MEMBERSHIPS AND OTHER WORK

- Professional membership Member of The Solicitors Association of Higher Courts Advocates (Chair between October 2015 – September 2016), Fellow of the RSA, Fellow of the Institute of Directors.
- Member of: The Chartered Institute of Arbitrators, The International Investigative Interviewing Research Group, The European Association of Psychology and Law, The Law Society, The British Academy of Forensic Scientists, The Association of Regulatory & Disciplinary Lawyers, The Society of Authors, The Crime Writers Association and The Worshipful Company of Scriveners
- Other professional and voluntary work
- Trainer on the Judicial College's 'Business of Judging' and 'Judge as Communicator' courses for both Courts and Tribunal Judiciary.  
 Trainer for the European Judicial Training Network.
- Was Vice Chair and Legal and Corporate Governance Officer of the British Aikido Board for several.
- Lead Advocacy Trainer for SAHCA, having trained hundreds of Advocates in relation to all aspects of trial advocacy for over 10 years.
- Vice Chair of the Vulnerable Witness Management Committee of the Advocacy Training Council and Author of a Toolkit relating to 'Questioning Someone with a Mental Disorder' and Lead Facilitator delivering Vulnerable Witness Training for The Law Society.
- Pro Bono Advocacy Training in 2010 for 120 members of the Tanganyika Law Society in Dar Es Salaam, Tanzania.
- Author of 365 Daily Advocacy Tips (Cuthbert 2015, Bloomsbury Professional Publishing), and Effective Interviewing for Disciplinary, Grievance and Complaints Investigations (Cuthbert, 2010)

## EDUCATION

- 1998-2000 LLM in Criminal Litigation, Inns of Court School of Law, London

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- 1996-1998 BA (Open), The Open University
  - 1994-1995 Diploma in Legal Practice (Distinction), Anglia Polytechnic University, Chelmsford
  - 1990-1994 2:1 LLB (Hons) Degree, Brunel University, Uxbridge

## VII. Appendix 2 - Details of published works or other materials relied upon

PSA Literature review - [https://www.professionalstandards.org.uk/docs/default-source/publications/from-public-hearings-to-consensual-disposal---insights-from-the-decision-making-literature.pdf?sfvrsn=6cc87420\\_0](https://www.professionalstandards.org.uk/docs/default-source/publications/from-public-hearings-to-consensual-disposal---insights-from-the-decision-making-literature.pdf?sfvrsn=6cc87420_0)

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## VIII. Appendix 3 - Glossary of technical terms

**Absent-mindedness** – a bias that happens when people make mistakes due to a lack of attention.

**Actor-observer bias** - is a term that refers to a tendency to attribute one's own actions to external causes while attributing other people's behaviours to internal causes which plays a role in how we perceive and interact with other people.

**Argument from fallacy** - is the formal fallacy of analysing an argument and inferring that, since it contains a fallacy, its conclusion must be false.

**Ambiguity bias** - is a bias where decision making is affected by a lack of information, or "ambiguity". The effect refers to people tending to select options for which the probability of a favourable outcome is known, over an option for which the probability of a favourable outcome is unknown.

**Anchoring (or focalism)** - is a bias where an individual depends too heavily on an initial piece of information they have received (the "anchor") when making subsequent judgments during decision making.

**Anecdotal fallacy** - is a logical fallacy that occurs when someone argues on the basis of anecdotal evidence.

**Appeal to probability fallacy** - is the logical fallacy of taking something for granted because it would probably be the case (or *might* possibly be the case).

**Attentional bias** - refers to how a person's perception is affected by selective factors in their attention. Attentional biases may explain an individual's failure to consider alternative possibilities when occupied with an existing train of thought.

**Authority bias** - is the tendency to attribute greater accuracy to the opinion of an authority figure (unrelated to its content) and be more influenced by that opinion.

**Automation bias** - is the propensity for humans to favour suggestions from automated decision-making systems and to ignore contradictory information made without automation, even if it is correct.

**Availability heuristic** – is a mental shortcut that relies on immediate examples that come to a given person's mind when evaluating a specific topic, concept, method or decision.



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**Backfire effect** - occurs when an evidence-based correction is presented to an individual and they report believing even more in the very misconception the correction sought to rectify.

**Bandwagon (or 'herd') effect (also known as groupthink)** - is the tendency of an individual to acquire a particular style, behaviour or attitude because everyone else is doing it.

**Base rate fallacy** - our tendency to give more weight to the event-specific information than we should, and sometimes even ignore base rates entirely.

**Belief bias** - is the tendency to judge the strength of arguments based on the plausibility of their conclusion rather than how strongly they support that conclusion.

**Bias cascade** – irrelevant information at one point in the process cascades to the second point in the process.

**Bias snowball** – bias increases as irrelevant information from a variety of sources is integrated and influences each other.

**Binary bias** – is the tendency to seek clarity by reducing a spectrum of categories to two opposites.

**Bizarreness effect** - is the tendency of bizarre material to be better remembered than more familiar material.

**Blind-spot bias** - is the cognitive bias of recognising the impact of biases on the judgment of others, while failing to see the impact of biases on one's own judgment.

**Choice-supportive bias** - is the tendency, once a decision is made, to retroactively ascribe positive attributes to an option one has selected and/or to demote the forgone options.

**Clustering illusion** - is the tendency to erroneously consider the inevitable "streaks" or "clusters" arising in small samples from random distributions to instead be part of a 'pattern'.

**Cognitive dissonance** - is the name given by psychologists to the mental stress or discomfort experienced by an individual when they are confronted with new information that conflicts with their existing beliefs, ideas or values.

**Confabulation** - is a type of memory error in which gaps in a person's memory are unconsciously filled with fabricated, misinterpreted, or distorted information. When

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someone confabulates, they are confusing things they have imagined with real memories.

**Confirmation bias** - is the tendency to search for, interpret, favour, and recall information in a way that confirms or supports one's prior beliefs or values.

**Congruence bias** - the tendency of people to over-rely on testing their initial hypothesis (the most congruent one) while neglecting to test alternative hypotheses.

**Conjunction fallacy** - is a formal fallacy that occurs when it is assumed that specific conditions are more probable than a single general one when in reality the probability of two events occurring together (in "conjunction") is always less than, or equal to, the probability of either one occurring alone.

**Conservation/Conservatism** (belief revision) - is a bias which refers to the tendency to revise one's belief insufficiently when presented with new evidence i.e. people favour prior evidence over any new evidence or information that emerges.

**Context effect** – is an aspect that describes the influence of environmental factors on one's perception i.e. when information about the context of an event or the way in which information is presented influences the reasoning whilst being logically irrelevant to the decision.

**Contrast effect** - is the enhancement or diminishment, relative to normal, of perception, cognition or related performance as a result of successive (immediately previous) or simultaneous exposure to a stimulus of lesser or greater value in the same dimension.

**Continued influence effect** (also known as the continued influence of misinformation) - refers to the way that falsehoods persist in our thinking.

**Cue-dependent forgetting** - or retrieval failure, is the failure to recall information without memory cues.

**Curse of knowledge** - is a cognitive bias that occurs when an individual, communicating with other individuals, unknowingly assumes that the others have the background to understand what they are communicating.

**Defensive attribution hypothesis** - is a social psychological term where an observer attributes the causes for a mishap to minimise their fear of being considered found responsible in a similar situation. The attributions of blame are negatively correlated to similarities between the observer and the people involved in the mishap, i.e. more responsibility is attributed to the people involved who are dissimilar to the observer. Assigning responsibility therefore allows the observer to believe that the mishap was controllable and thus preventable. A defensive attribution may also be used to protect the person's self-esteem if, despite everything, the mishap does occur, because blame can be assigned to the "other" (person or situation). The use of defensive attributions is considered a cognitive

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bias because an individual will change their beliefs about a situation based upon their motivations or desires rather than the factual characteristics of the situation.

**Distinction effect** - a concept of decision theory, is the tendency to view two options as more distinctive when evaluating them simultaneously than when evaluating them separately.

**Dunning-Kruger effect** – refers to the disconnect between competence and confidence with often the most confident individuals being the least competent.

**Effort Justification** - is an idea stemming from cognitive dissonance. Effort justification is a person's tendency to attribute a greater value to an outcome, which they had to put effort into achieving, than the objective value of that outcome.

**Egocentric effect** - is the tendency to rely too heavily on one's own perspective and/or have a higher opinion of oneself than of reality.

**Empathy gap** - the tendency to underestimate the influence of our emotional state and overestimate the intellectual influence on our decisions.

**Escalation of commitment** - is a human behaviour pattern in which an individual or group facing increasingly negative outcomes from a decision, action, or investment yet nevertheless continues the behaviour instead of altering it.

**Exception bias/illusory superiority** - a cognitive bias that causes us to believe that we represent "the exception" rather than "the rule."

**Extrinsic incentive error** - is an attributional bias according to which people attribute relatively more to "extrinsic incentives" (such as monetary reward) than to "intrinsic incentives" (such as learning a new skill) when weighing the motives of others rather than themselves.

**False consensus effect** - is a pervasive cognitive bias that causes people to "see behavioural choices and judgments as relatively common and appropriate to existing circumstances". In other words, they assume that their personal qualities, characteristics, beliefs, and actions are relatively widespread through the general population. This false consensus is significant because it increases self-esteem and can lead to overconfidence. It can derive from a desire to conform and to be liked by others in a specific environment. This bias is especially prevalent in group settings where one thinks the collective opinion of their own group matches that of the larger population.

**First instinct fallacy** – the belief that your gut instinct/first response is always right.

**Focusing effect** - is a cognitive bias that occurs when a person places too much importance or emphasis on a selected detail rather than considering the "larger picture" - this can lead to errors in predicting a future outcome.

**Framing effect** - is a cognitive bias where people decide on options based on whether the options are presented with positive or negative connotations; e.g. as a

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loss or as a gain. People tend to avoid risk when a positive frame is presented but seek risks when a negative frame is presented.

**Frequency illusion** - also known as the Baader–Meinhof phenomenon, is a cognitive bias in which, after noticing something for the first time, there is a tendency to notice it more often, leading someone to believe that it has a high frequency (a form of selection bias).

**Fundamental attribution error** - is when an individual assigns blame or a cause of something to another person and does not take into account external issues.

**Gambler's fallacy** - is the erroneous belief that if a particular event occurs more frequently than normal, during the past, it is less likely to happen in the future (or vice versa), when it has otherwise been established that the probability of such events does not depend on what has happened in the past.

**Generation effect** - is a phenomenon where information is better remembered if it is generated from one's own mind rather than simply read

**Group attribution error** - refers to people's tendency to believe either: (1) that the characteristics of an individual group member are reflective of the group as a whole, or (2) that a group's decision must reflect the preferences of individual group members, even when external information is available suggesting otherwise.

**Groupshift** - is a phenomenon in which the initial positions of individual members of a group are exaggerated toward a more extreme position (one particular example being '**Risky shift**' which occurs when people change their decisions or opinions to become more extreme and risky when acting as part of a group, compared with acting individually – this being in either direction i.e. overly minimising a risk or overly exaggerating a risk).

**Halo effect** - is the tendency for positive impressions of a person, company, brand or product in one area to positively influence one's opinion or feelings in other areas. The opposite effect of negative impressions about a person leading to a negative outcome for them being known as the '**horns effect**'.

**Hard-easy effect** - is a cognitive bias that manifests itself as a tendency to overestimate the probability of one's success at a task perceived as hard, and to underestimate the likelihood of one's success at a task perceived as easy.

**Hindsight bias** - is the common tendency for people to perceive past events as having been more predictable than they actually were.

**Humour effect** - is a psychological phenomenon that causes people to remember information better when they perceive that information as humorous.

**Illusion of asymmetric insight** - is a cognitive bias whereby people perceive their knowledge of others to surpass other people's knowledge of them.

**Illusion of control** – is the tendency for people to over-estimate their ability to control events.

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**Illusion of explanatory depth** – is the belief that we know more about things than we really do and when pressed to explain something we are unable to do so to a significant degree e.g. Q. “Why do you think that?” A. “I’ve got a gut feeling”.

**Illusion of external agency** - is the false belief that good and positive things happen because of external influences rather than personal effort. Likewise, this could be a belief that bad things (like failing a test) happen due to external forces.

**Illusion of transparency** - is a tendency for people to overestimate the degree to which their personal mental state is known by others.

**Illusion of validity** - is a cognitive bias in which a person overestimates his or her ability to interpret and predict accurately the outcome when analysing a set of data, in particular when the data analysed show a very consistent pattern—that is, when the data “tells” a coherent story.

**Illusory correlation** - is the phenomenon of perceiving a relationship between variables (typically people, events, or behaviours) even when no such relationship exists. A false association may be formed because rare or novel occurrences are more salient and therefore tend to capture one's attention. This phenomenon is one way stereotypes form and endure. Stereotypes can lead people to expect certain groups and traits to fit together, and then to overestimate the frequency with which these correlations actually occur.

**Illusory truth effect** - refers to a phenomenon where people rate repeated statements as more truthful than non-repeated ones. The more someone ingests a piece of information, the more likely they are to believe it to be true.

**Impact bias** - is the tendency for people to overestimate the length or the intensity of future emotional states.

**Implicit/unintentional stereotypes bias** - is the attribution of particular qualities by an individual to a member of a group, to which they do not belong to, being unaware of doing so.

**Information bias** - is any systematic difference from the truth that arises in the collection, recall, recording and handling of information in a study, including how missing data is dealt with.

**In-group/out-group bias** - is a pattern of favouring members of one's in-group over out-group members. This can be expressed in the evaluation of others.

**Irrational escalation** - is a term used to refer to a situation in which people can make irrational decisions based upon rational decisions in the past or to justify actions already taken.

**Just-world hypothesis** - is the cognitive bias that a person's actions are inherently inclined to bring morally fair and fitting consequences to that person; thus, it is the assumption that all ‘noble’ actions are eventually rewarded and all ‘evil’ actions will eventually be punished.

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**Lake Wobegone effect** - is the human tendency to overestimate one's achievements and capabilities in relation to others.

**Loss aversion** - refers to an individual's tendency to prefer avoiding losses to acquiring equivalent gains.

**Mere exposure effect** - a psychological phenomenon by which people tend to develop a preference for things merely because they are familiar with them. In social psychology, this effect is sometimes called the familiarity principle.

**Mood-congruent memory bias** - the tendency to more easily remember events that have a congruence with one's current mood.

**Moral luck** - describes circumstances whereby a moral agent is assigned moral blame or praise for an action or its consequences even if it is clear that said agent did not have full control over either the action or its consequences.

**Naive cynicism** - is the belief that individuals expect other people's judgement will consistently be motivated by their own self-interest and that others will always view themselves in the most flattering light available.

**Naive realism** - describes people's tendency to believe that they perceive the social world "as it is"—as objective reality—rather than as a subjective construction and interpretation of reality. This belief that one's perceptions are realistic, unbiased interpretations of the social world has two important implications: (1) that other, rational people will have similar perceptions as you and (2) that other people who have different perceptions from you must be uninformed (i.e. they do not have the same information as you), irrational, or biased.

**Need for cognitive closure** - is a psychological term that describes the human desire to obtain a definitive answer to questions leaving no space for confusion or ambiguity.

**Negativity bias** - also known as the negativity effect, is the notion that, even when of equal intensity, things of a more negative nature (e.g. unpleasant thoughts, emotions, or social interactions; harmful/traumatic events) have a greater effect on one's psychological state and processes than neutral or positive things.

**Neglect of Probability** - a type of cognitive bias, is the tendency to disregard probability when making a decision under uncertainty and is one simple way in which people regularly violate the normative rules for decision making. Risks which have a low probability of occurring are typically either then neglected entirely or, conversely, are hugely overrated.

**Normalcy bias** - is a cognitive bias which leads people to disbelieve or minimise threat warnings. Consequently, individuals underestimate the likelihood of a disaster, when it might affect them, and its potential adverse effects.

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**Not invented here** - is the tendency to avoid using or buying products, research, standards, or knowledge from external origins. It is usually adopted by institutional cultures. Research illustrates a strong bias against ideas from the outside.

**Occam's razor** - the more assumptions you have to make, the more unlikely an explanation.

**Omission bias** - the tendency to favour an act of omission (inaction) over one of commission (action).

**Ostrich effect** - is a bias that causes people to avoid information that they perceive as potentially unpleasant to their thinking.

**Outcome bias** - is the tendency to evaluate a decision on the basis of its outcome rather than on what factors led to the decision.

**Out-group homogeneity bias** - is the perception of **out-group** members as more similar to one another than are **in-group** members, e.g. "they are alike; we are diverse".

**Overconfidence effect** - is a well-established bias in which a person's subjective confidence in his or her judgments is reliably greater than the objective accuracy of those judgments, especially when confidence is relatively high.

The '**Peak end rule**' is another cognitive bias that impacts how people remember past events. Intense positive or negative moments (the "peaks") and the final moments of an experience (the "end") are heavily weighted in our thoughts and recollections of that experience.

**Pessimism bias** - is a cognitive bias that causes people to overestimate the likelihood of negative things and underestimate the likelihood of positive things, especially when it comes to assuming that future events will have a bad outcome.

**Picture superiority effect** - refers to the phenomenon in which pictures and images are more likely to be remembered than words.

**Planning fallacy** - is a phenomenon in which predictions about how much time will be needed to complete a future task display an optimism bias and underestimate the time needed.

**Positivity effect** - is an attentional preference for positive information as well as avoidance of negative information.

**Processing difficulty effect** - people have an easier time remembering information that takes longer to read and understand.

**Pseudo-certainty effect** - is the tendency for people to perceive an outcome as certain while it is actually uncertain in multi-stage decision making.

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**Reactance bias** - is the tendency to do something different from what someone wants you to do in reaction to a perceived attempt to constrain your freedom of choice.

**Reactive devaluation** - is a cognitive bias that occurs when a proposal is devalued if it appears to originate from an antagonist.

**Recency bias** - is a memory bias that favours recent events over historic ones.

**Reverse psychology** - is a strategy for getting what you want by demanding or suggesting what you don't want.

**Rhyme as reason effect** - is a cognitive bias whereupon a saying or aphorism is judged as more accurate or truthful when it is rewritten to rhyme.

**Risk compensation** - is a theory which suggests that people typically adjust their behaviours in response to perceived levels of risk, becoming more careful where they sense greater risk and less careful if they feel more protected.

**Rosy retrospection** - refers to the psychological phenomenon of people sometimes judging the past disproportionately more positively than they judge the present.

**Saliency bias** – a tendency to focus on the most easily recognisable features or a person or of behaviour.

**Seizing and freezing** – the phenomenon of 'sticking to our guns' partly for psychological comfort to avoid suffering from cognitive dissonance.

**Selective perception** - is the process by which individuals perceive what they want to while ignoring opposing viewpoints.

**Self-consistency bias** - is the commonly held idea that we are more consistent in our attitudes, opinions, and beliefs than we actually are, i.e. being unable to see the changes in your thoughts/opinions because you're sure you've always thought the same way.

**Self-relevance/self-reference effect** - a tendency for people to encode information differently depending on the level on whether they are implicated in the information.

**Self-serving bias** - is the common habit of a person taking credit for positive events or outcomes, but blaming outside factors for negative events.

**Semmelweis reflex** - is a metaphor for the reflex-like tendency to reject new evidence or new knowledge because it contradicts established norms, beliefs, or paradigms.

**Social comparison bias** - is the tendency to have feelings of dislike and competitiveness with someone that is seen as physically or mentally better than oneself.



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**Social desirability bias** - is the tendency to act in a manner that enhances your acceptance or approval from others.

**Social loafing** - the tendency for individuals to expend less effort when working collectively than when working individually e.g. there may be a perception that some group members are not putting out their fair share of effort, and so others purposely reduce their own contribution. It may also be due to the entire group sharing responsibility for an outcome, so no one person is held solely accountable for the outcome.

**Spotlight effect** - is a term used by social psychologists to refer to the tendency we have to overestimate how much other people notice about us.

**Status quo bias** - is evident when people prefer things to stay the same by doing nothing (see also inertia) or by sticking with a decision made previously.

**Stereotyping** - occurs when a person ascribes the collective characteristics associated with a particular group to every member of that group, discounting individual characteristics. **Stereotypes** can be negative or positive.

**Subjective validation (personal validation effect)** - is a cognitive bias by which people will consider a statement or another piece of information to be correct if it has any personal meaning or significance to them.

**Suggestibility** - is the quality of being inclined to accept and act on the suggestions of others.

**Sunk cost fallacy** - Individuals commit the sunk cost fallacy when they continue a behaviour or endeavour as a result of previously invested resources (time, money or effort).

**Survivorship bias** – an error that comes from focusing only on surviving examples i.e. past successes rather than on past failures.

**Trait ascription bias** - is the tendency for people to view themselves as relatively variable in terms of personality, behaviour and mood while viewing others as much more predictable in their personal traits across different situations.

**Ultimate attribution error** - is a group-level attribution error that offers an explanation for how one person views different causes of negative and positive behaviour in ingroup and outgroup members.

**Unit bias** - is the tendency for individuals to want to complete a **unit** of a given item or task. People want to finish whatever portion they have no matter the size, it is a perception of completion that is satisfying to people.

**Zero-risk bias** - is a tendency to prefer the complete elimination of a risk in a part of a problem even when alternative options produce a greater overall reduction in risk. It often manifests in cases where decision makers address problems concerning health, safety, and the environment.

## **IX. Appendix 4 – Potential biases that could influence decision-making within the Accepted Outcomes model**

**Absent-mindedness / Actor-observer bias / Argument from fallacy / Ambiguity bias / Anchoring (or focalism) / Anecdotal fallacy / Appeal to probability fallacy / Attentional bias / Automation bias / Availability heuristic / Base rate fallacy / Belief bias / Bias cascade / Binary bias / Bizarreness effect / Blind-spot bias / Choice-supportive bias / Clustering illusion / Cognitive dissonance / Confabulation / Confirmation bias / Congruence bias / Conjunction fallacy / Conservation/Conservatism / Context effect / Contrast effect / Continued influence effect / Cue-dependent forgetting / Curse of knowledge / Defensive attribution hypothesis / Distinction effect / Egocentric Effect / Empathy gap / Escalation of commitment / Exception bias (illusory superiority) / Extrinsic incentive error / First instinct fallacy / Focusing effect / Framing effect / Frequency illusion / Fundamental attribution error / Gambler's fallacy / Generation effect / Halo effect / Hard-easy effect / Hindsight bias / Humour effect / Illusion of control / Illusion of explanatory depth / Illusion of external agency / Illusion of validity / Illusory correlation / Illusory truth effect / Impact bias / Implicit/unintentional stereotypes bias / Information bias / In-group/out-group bias / Irrational escalation / Just-world hypothesis / Loss aversion / Mere exposure effect / Mood-congruent memory bias / Moral luck / Naive cynicism / Naive realism / Need for Cognitive Closure / Negativity bias / Neglect of Probability / Normalcy bias / Not invented here / Occam's razor / Omission bias / Ostrich effect / Outcome bias / Out-group homogeneity bias / Overconfidence effect / Pessimism bias / Picture superiority effect / Planning fallacy / Positivity effect / Processing difficulty effect / Pseudo-certainty effect / Recency bias / Risk compensation / Rosy retrospection / Saliency bias / Seizing and freezing / Self-consistency bias / Self-relevance/self-reference effect / Self-serving bias / Semmelweis reflex / Social comparison bias / Status quo bias / Stereotyping / Subjective validation (personal validation effect) / Suggestibility / Sunk cost fallacy / Survivorship bias / Trait ascription bias / Unit bias / Zero-risk bias**

## **X. Appendix 5 – Potential biases that could influence decision-making within the Panel model**

**Absent-mindedness / Actor-observer bias / Argument from fallacy / Ambiguity bias / Anchoring (or focalism) / Anecdotal fallacy / Appeal to probability fallacy / Attentional bias / Automation bias / Availability heuristic / Backfire effect / Bandwagon (or 'herd' effect) / Base rate fallacy / Belief bias / Bias cascade / Bias Snowball / Binary bias / Bizarreness effect / Blind-spot bias / Choice-supportive bias / Clustering illusion / Cognitive dissonance / Confabulation / Confirmation bias / Congruence bias / Conjunction fallacy / Conservation/Conservatism / Context effect / Contrast effect / Continued influence effect / Cue-dependent forgetting / Curse of knowledge / Defensive attribution hypothesis / Distinction effect / Dunning-Kruger effect / Effort Justification / Egocentric Effect / Empathy gap / Escalation of commitment / Exception bias (illusory superiority) / Extrinsic incentive error / False Consensus effect / First instinct fallacy / Focusing effect / Framing effect / Frequency illusion / Fundamental attribution error / Gambler's fallacy / Generation effect / Group Attribution error / Groupshift / Halo effect / Hard-easy effect / Hindsight bias / Humour effect / Illusion of asymmetric insight / Illusion of control / Illusion of explanatory depth / Illusion of external agency / Illusion of transparency / Illusion of validity / Illusory correlation / Illusory truth effect / Impact bias / Implicit/unintentional stereotypes bias / Information bias / In-group/out-group bias / Irrational escalation / Just-world hypothesis / Lake Wobegone effect / Loss aversion / Mere exposure effect / Mood-congruent memory bias / Moral luck / Naive cynicism / Naive realism / Need for Cognitive Closure / Negativity bias / Neglect of Probability / Normalcy bias / Not invented here / Occam's razor / Omission bias / Ostrich effect / Outcome bias / Out-group homogeneity bias / Overconfidence effect / Pessimism bias / Picture superiority effect / Planning fallacy / Positivity effect / Processing difficulty effect / Pseudo-certainty effect / Reactance bias / Reactive devaluation / Recency bias / Reverse Psychology / Rhyme as reason effect / Risk compensation / Rosy retrospection / Saliency bias / Seizing and freezing / Selective perception / Self-consistency bias / Self-relevance/self-reference effect / Self-serving bias / Semmelweis reflex / Social comparison bias / Social desirability bias / Spotlight effect / Status quo bias / Stereotyping / Subjective validation (personal validation effect) / Suggestibility / Sunk cost fallacy / Survivorship bias / Trait ascription bias / Ultimate attribution error / Unit bias / Zero-risk bias**