SE10 reading/lecture notes

BrainPrimed

* Illusion of causality – cognitive bias that makes us prone to assigning a causal relationship to two events simply because they happened one after the other
* Causal illusions don’t just cement erroneous ideas in the mind; they can also prevent new info from correcting them
* Other cognitive biases
  + Motivated reasoning - all of us want to believe that the things we do make a difference
  + Base rate neglect – failing to pay attention to what happens in the absence of the intervention
  + Confirmation bias – the tendency to look for evidence that supports what you already know and to ignore the rest
* Page 4 – ‘ Matute et al. experimented in ways to improve the way people think (bias)
  + Have students teach to think critically about causality
  + What if people are against vaccine because of religious reasons
    - Are these people not thinking critically?

Should you see an energy healer

* Energy healing – describes any therapy that aims to correct or prevent an imbalance in someone’s energy field – aka their frequency, vibration or aura – via intuition and sense, touch, talk, objects like crystals or needles
* What is this energy field?
  + Metaphor of God?
* ‘our body emit energy that’s affected by what happens to and around it’ where is the evidence for this?
* ‘altering’ energy does work but mainly because of placebo effect

Inside the Mind of an Anti vaxxer

* We can assume that most people, without concerning actual data, that the average anti vaxxer is a white adult (google average anti vaxxer). But consolidating this assumption with real data and according to the article, Black people, in fact, are less likely to get vaxxed. It is interesting that the popular social media/media outlets portray the average anti vaxxer as a white adult.
  + When this fact is presented, the article attempts to victimize the Black community by saying they have less access to medical care and decades of maltreatment has eroded their trust in medical establishments.
  + And by this I do not mean that the Black community does not have less access to medical care or has not been maltreated, I am merely stating that the author victimizes and blames the essence of Black anti vaxxers to this reason
* <https://www.mnmed.org/getattachment/news-and-publications/mn-medicine-magazine/Past-Issues/Past-Issues-2018/Jan-Feb-2018/Commentary-Aziz-180102.pdf.aspx?lang=en-US>
* As Horne points out, the rise of “religious exemptions” to vaccine mandates show how parents try to get around vaccine rules. Before long, some denomination might claim that the coronavirus vaccine is offensive to their god.
  + Singular god also points to the below
  + Why not god(s)
  + Denomination main definition by oxford languages
    - a recognized autonomous branch of the Christian Church. Also used in Judaism

How to Read Paper

* 3 pass approach
  + The first pass: general idea about paper
    - 5-10 min
    - Read title, abstract, intro
    - Read the section and sub section headings, but ignore everything else
    - Read conclusions
    - Glance over references (mentally mark the ones you’ve read)
    - You should be able to answer 5 cs
      * Category
      * Context
      * Correctness
      * Contributions
      * Clarity
  + The second pass: lets you grasp the general idea about the paper
    - Look carefully at the figures, diagrams and other illustrations in the paper
    - Mark relevant unread references for further reading
    - Should take an hour
  + Third pass: helps you understand the paper in depth
    - Virtually reimplement the paper: make the same assumptions as the authors, re-create the work.
    - Can take 4-5 hours for beginners or an hour for experienced readers
  + What papers should I read?
    - Use an academic search engine (ie Google Scholar) to find 3-5 recent papers in the area. Do one pass to get a sense of the work.
    - Find shared citations and repeated author names in the bibliography
    - Go to the website for top conferences and look through recent proceedings

Chapter 7 RD

* First signpost: purpose statement – central intent for study
* Second signpost: research questions or hypothesis – narrows the purpose statement to predictions about what will be learned or questions to be answered in the study
* Qualitative study
  + State research questions
  + Not objectives (specific goals of the research) or hypotheses (predictions that involves variables and statistical tests).
  + Research questions assume 2 forms
    - Central question
    - Associated sub questions
* Central question is a very broad question
* Subquestions usually follow after central questions but try not to ask more than 5 to 7
* Relate the central question to the specific qualitative strategy of inquiry
* Begin research question with what or how
* Focus on single phenomenon or concept
* Use explanatory verbs that are non directional (don’t use affect, influence, impact, determine, cause, and relate)
* Expect the research questions to evolve and change during the study in a manner consistent with the assumptions of an emerging design
* Specify the participants and the research site for the study if the info has not been given yet
* Typical script for a qualitative central question
  + \_\_\_\_\_\_\_\_\_ (How or what?) is the \_\_\_\_\_\_\_\_\_ (“story for” for narrative research; “meaning of” the phenomenon for phenomenology; “theory that explains the process of” for grounded theory; “culture-sharing pattern” for ethnography; “issue” in the “case” for case study) of \_\_\_\_\_\_\_\_\_ (central phenomenon) for \_\_\_\_\_\_\_\_\_ (participants) at \_\_\_\_\_\_\_\_\_ (research site).
* **Quantitative study**
  + Quantitative research questions inquire about the relationships among variables that the investigator seeks to know.
  + Quantitative hypotheses are predictions the researcher makes about the expected outcomes of relationships among variables.
  + Script for question describing outcomes of score for a variable
    - What is the frequency and variation of scores on \_\_\_\_\_\_\_\_\_\_\_\_(name the variable) for \_\_\_\_\_\_\_\_\_\_\_\_\_\_(participants) in the study?
  + Script for question focused on examining the relationship among variables
    - Does \_\_\_\_\_\_\_\_\_ (name the theory) explain the relationship between \_\_\_\_\_\_\_\_\_ (independent variable) and \_\_\_\_\_\_\_\_\_ (dependent variable), controlling for the effects of \_\_\_\_\_\_\_\_\_ (mediating variable)?
  + Script for null hypothesis
    - There is no significant difference between \_\_\_\_\_\_\_\_\_ (the control and experimental groups on the independent variable) on \_\_\_\_\_\_\_\_\_ (dependent variable).
* A strong mixed method should have at least 3 research questions: the qualitative question, the quantitative question or hypothesis, and a mixed methods question.

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* Researchers need to spend more time putting things into context or explaining the jargon, science, math behind the phenomenon
  + Or the people can get more educated
* The overuse of lexicon likelihood terms (likely, very likely, etc) gives the impression that they know much less than they actually do.
* Ask: what is the best outcome?
* 2 main approaches to evaluate the merits of action vs inaction or reaction
  + Benefit cost analysis or BCA
    - Aims to calculate the benefits and harms of a particular line of action.
    - It measures that if an actions benefits outweigh its harm, it’s a good plan.
    - Emphasizes that all choices, even the choice of doing nothing, have some benefits and some harms
  + Precautionary principle
    - Its goal is to be wise before it is too late, which often involves acting even before there is proof of danger, especially if the feared harm might be irreversible.
    - 3 premises
      * The innovative powers of science and technology are increasing so fast we can no longer see where they will take us
      * Human interference with the environment is now so widespread that there is a growing risk out collective actions can cause serious global effects
      * These effects may create unstoppable consequences before we even realize what is happening.