

# Literature Review

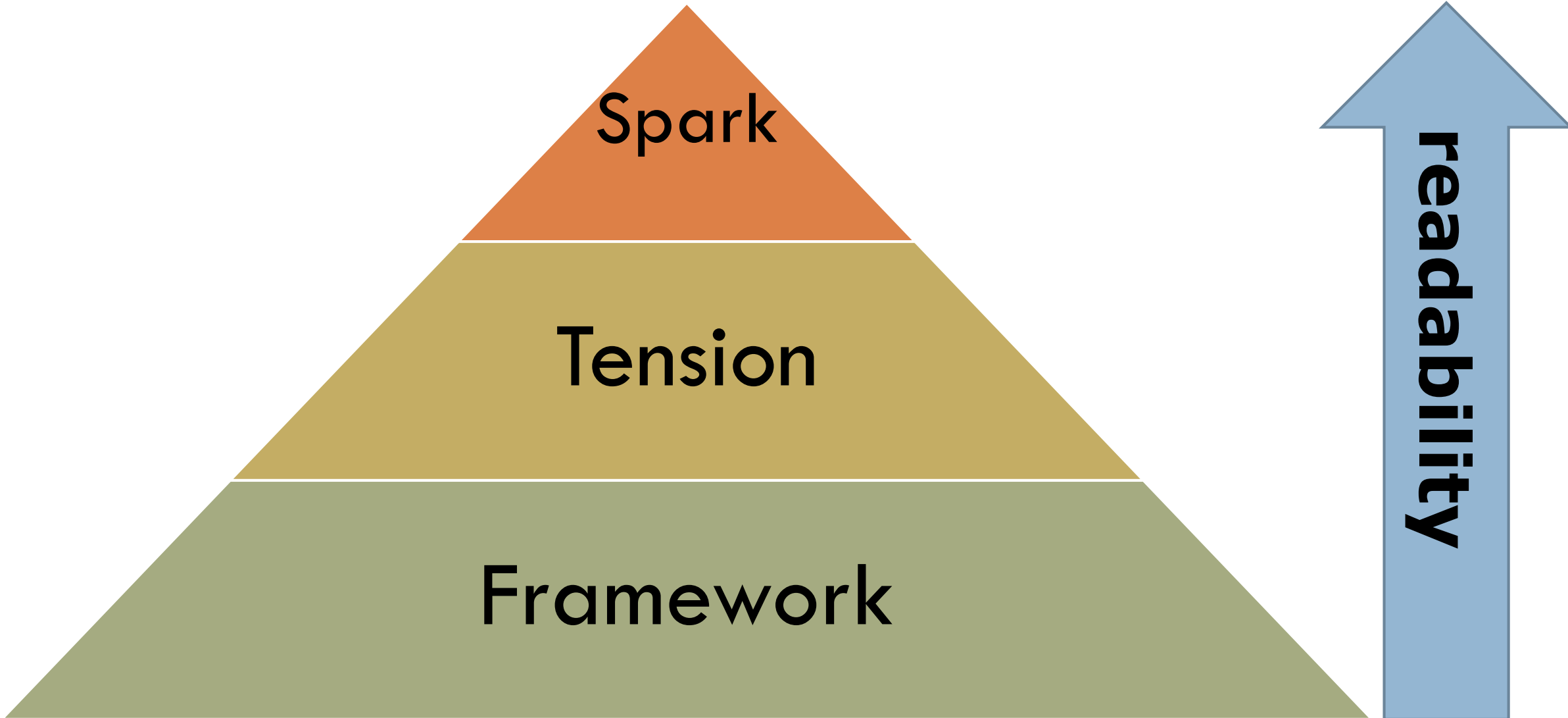
# Literature Review

2

- Functions
  - to study and report all the relevant opinions on a topic of wide disagreements
  - to represent each view with 90 percent of objectivity & 10 percent of subjectivity
  - to make yourself an authoritative story-teller (i.e., someone who “imposes order on the material”)

# Value of Literature Review

3



# Rationale of Literature Review

4

- Motives for citing
  - supporting
  - suspecting
  - supplementing

# Rationale of Literature Review

5

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Bratman et al. 2015. "Nature experience reduces rumination and subgenual prefrontal cortex activation." *PNAS*.

6

"These correlational findings are buttressed by experimental findings showing, for example, that nature experience (usually in urban greenspace) can improve memory and attention (12) and increase positive mood (13). Experimenters also have used psychophysiological methods to characterize the ways in which images and sounds of the natural environment lead to decreased stress and negative emotion after participants have been subjected to stressful stimuli (14, 15). Taken together, these and numerous other studies provide compelling evidence that nature experience may confer real psychological benefits."

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Taken collectively,  
Considered altogether,

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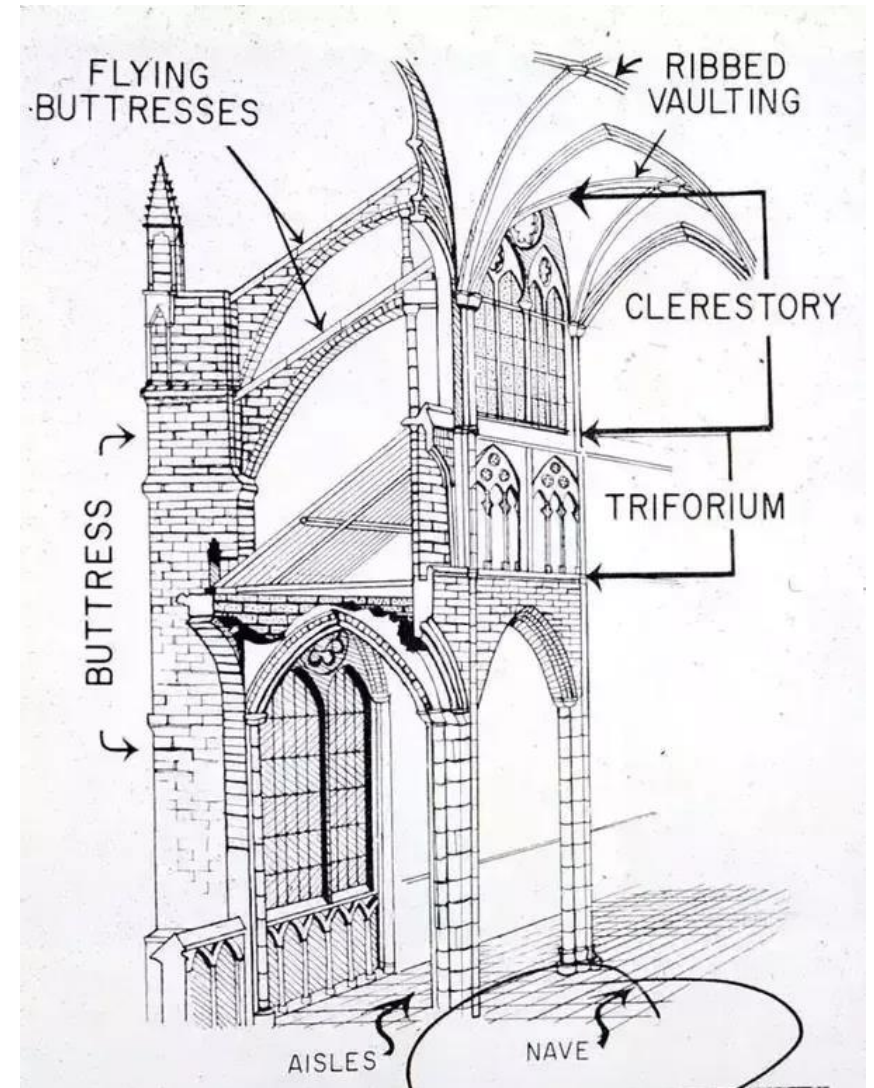
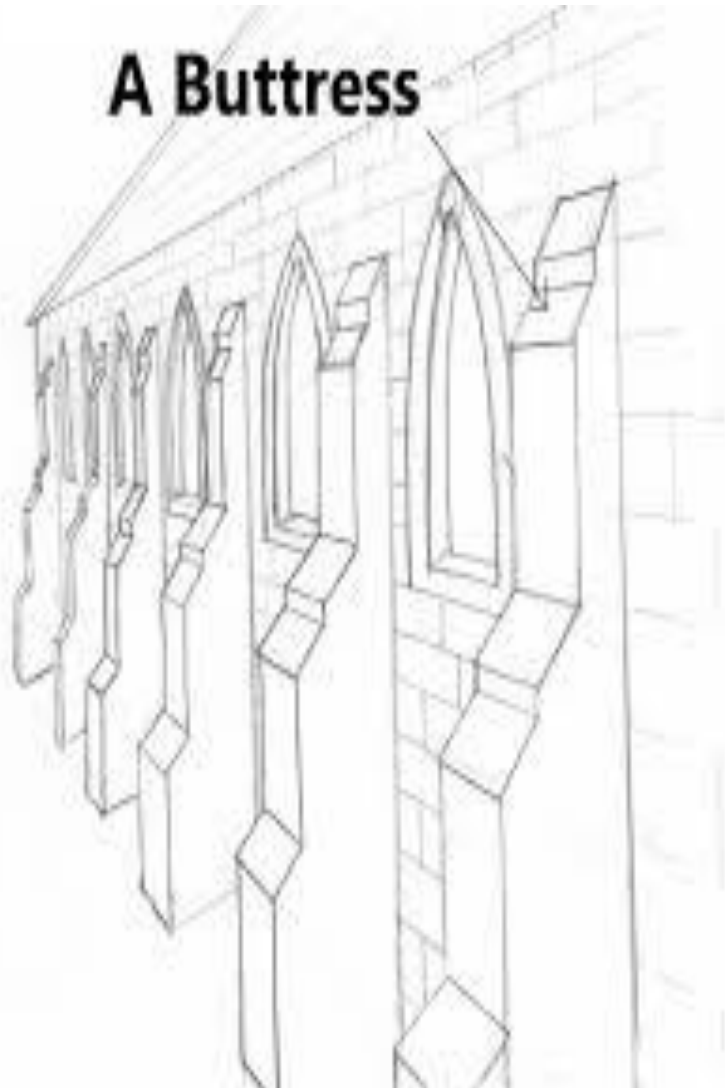
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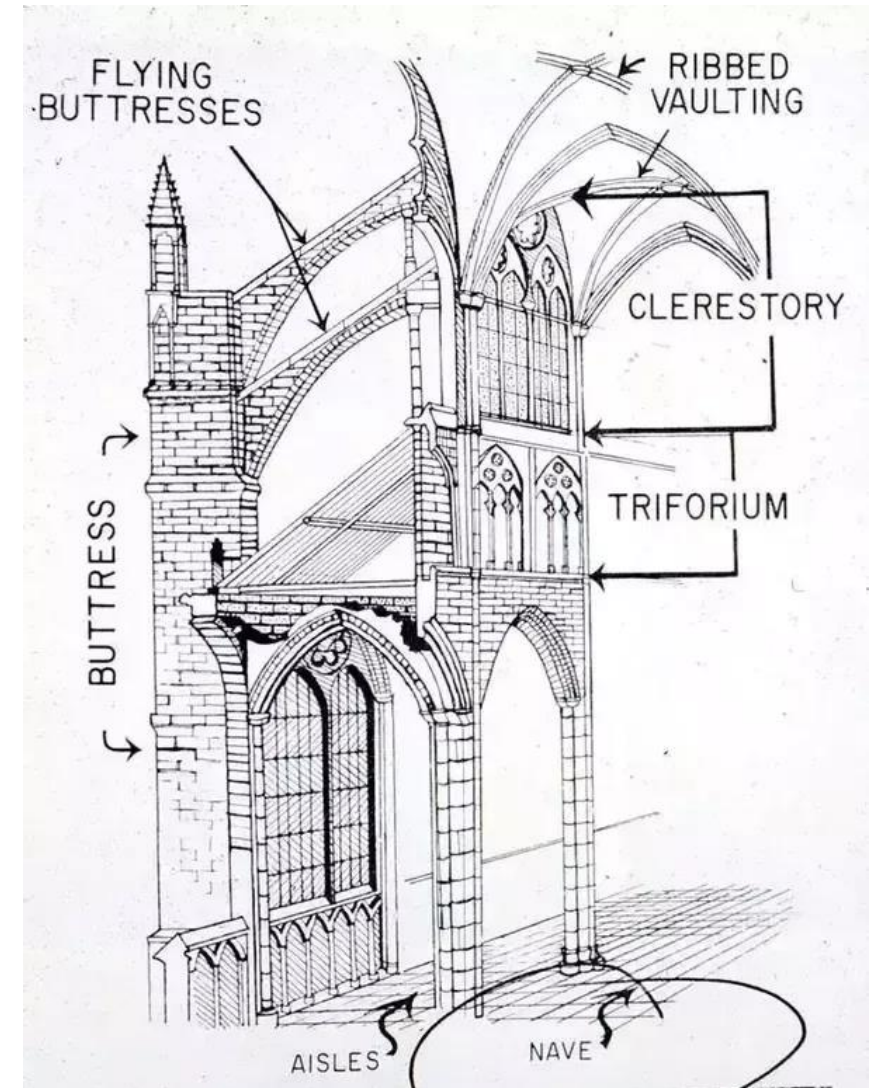
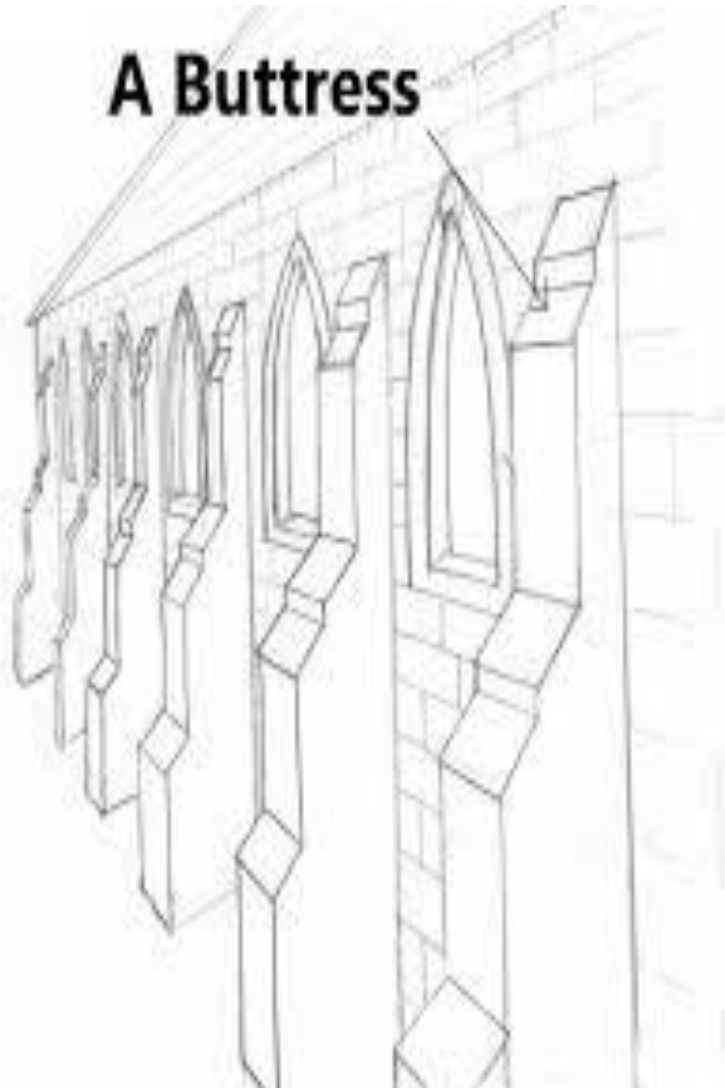
buttress (n.) a solid structure built against a wall as a support

9



buttress (v.) to support or strengthen (as if) with a buttress  
to provide a good reason for supporting an idea

10



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11

- The call for change is buttressed by constant riots all over this region.
- The sharp increase in crime seems to buttress the argument for more police officers on the street.
- Buttressed by its past profits, the company stayed in business through a difficult period.

# Rationale of Literature Review

12

- Motives for citing
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Rekkas & Constable. 2005. "Evidence That Autobiographic Memory Retrieval Does Not Become Independent of the Hippocampus: An fMRI Study Contrasting Very Recent with Remote Events." *Journal of Cognitive Neuroscience*.

“The precise role of the structure in autobiographic retrieval, however, continues to be an issue of intense debate. Spears et al. (2001) reviewed the literature on hippocampal amnesia and concluded that whereas a clear deficit in new learning is associated with lesions to the structure, the findings on retrograde amnesia are inconclusive. Patient deficits following damage to the region range from an extensive, flat loss of autobiographic information (Hirano & Noguchi, 1998; Sanders & Warrington, 1971), to graded amnesia that is characterized by superior recall for remote events (Victor & Agamanolis, 1990; Duyckaerts et al., 1985), to an apparent sparring of all autobiographic information (Zola-Morgan, Squire, & Amaral, 1986).”



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Stevanovski et al. 2022. “Comprehensive genetic diagnosis of tandem repeat expansion disorders with programmable targeted nanopore sequencing.”  
*Science Advances*.

para. 3

19

“Established molecular techniques are relatively slow, labor-intensive, and imprecise and require a separate assay with specific primers/probes for every different STR (11). This is problematic when multiple different STR expansions can manifest in a similar phenotype (3, 4) and is a major barrier to the implementation of tests for newly identified STR genes. Next-generation sequencing (NGS) has some utility for the analysis of STR expansions (12, 13). However, the large size, low sequence complexity, and high GC content of many pathogenic STR expansions make them refractory to analysis by short-read NGS platforms (11).”

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para. 4

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“Long-read sequencing technologies from Oxford Nanopore Technologies (ONT) and Pacific Biosciences can be used to genotype large and complex STR expansions, even within challenging contexts such as mobile elements (5–8, 14–17). Simultaneous profiling of DNA methylation at repeat sites is another advantage of these technologies (15, 17). However, whole-genome analysis remains prohibitively expensive on either platform. A cas9-based approach for targeted enrichment of STR loci and long-read sequencing was recently developed (15, 18). However, this suffers from the same limitation as existing molecular techniques, in that a unique set of cas9 guide RNAs is needed for every different STR, requiring careful design and experimental optimization.”

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para. 5

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“An alternative approach to targeted long-read sequencing is ONT’s ‘ReadUntil’ functionality, whereby an ONT sequencing device can be programmed to recognize and accept/reject specific DNA sequence fragments during a sequencing experiment (19, 20). Target selection is fully flexible and requires no additional laboratory processes beyond standard library preparation. Here, we demonstrate that ONT ReadUntil can be used to achieve accurate molecular characterization of all known neuropathogenic STRs in a single assay.”

# A Bridging Statement to Problematize the Prior Works

23

“Yoon and Kim (2007) studied the optimization problem of hyper-elastic structures using an element connectivity parameterization method. Haand Cho (2008) proposed a level set based topological shape optimization method for geometrically nonlinear hyperelastic structures. Klarbring and Strömberg (2013) studied the topology optimization of hyperelastic bodies subjected simultaneously to external forces and prescribed non-zero displacements. By adopting the total potential energy concept and the ground structure approach, Ramos and Paulino (2015) proposed a convex topology optimization method for the design of hyperelastic trusses. In particular, Labuerta et al. (2013) addressed the instability problem in the excessive distorted low density elements during the topology optimization process of large-deformation hyperelastic structures.”

**“The above-mentioned works for topology optimization of hyperelastic structures were all performed under the assumption of fixed boundary conditions. . . .”**

# Rationale of Literature Review

24

- Motives for citing
  - supporting
  - suspecting
  - supplementing



“Major depression (MD) constitutes one of the largest contributors to global disability worldwide, affecting around 322 million people and accounting for approximately 50 million years lived with disability (1). This disorder is of complex origin, being determined by the interplay of a multitude of environmental factors (e.g., life events) and genetic variations (2). The genetic contribution to MD has been shown by twin studies, which yielded heritability estimates of approximately 37% (3), and genome-wide association studies (GWASs), which estimated a 9% heritability as captured by common single nucleotide polymorphisms (SNPs) (4).”

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Lorenza Dall'Aglia et al. 2020. "Delineating the Genetic Component of Gene Expression in Major Depression." *Biological Psychiatry*.

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(3) Sullivan PF, Neale MC, Kendler KS (2000): Genetic epidemiology of major depression: [Review and meta-analysis](#). *Am J Psychiatry* 157:1552–1562.

(4) Howard DM, Adams MJ, Clarke TK, Hafferty JD, Gibson J, Shirali M, et al. (2019): [Genome-wide meta-analysis of depression](#) identifies 102 independent variants and highlights the importance of the prefrontal brain regions. *Nat Neurosci* 22:343.

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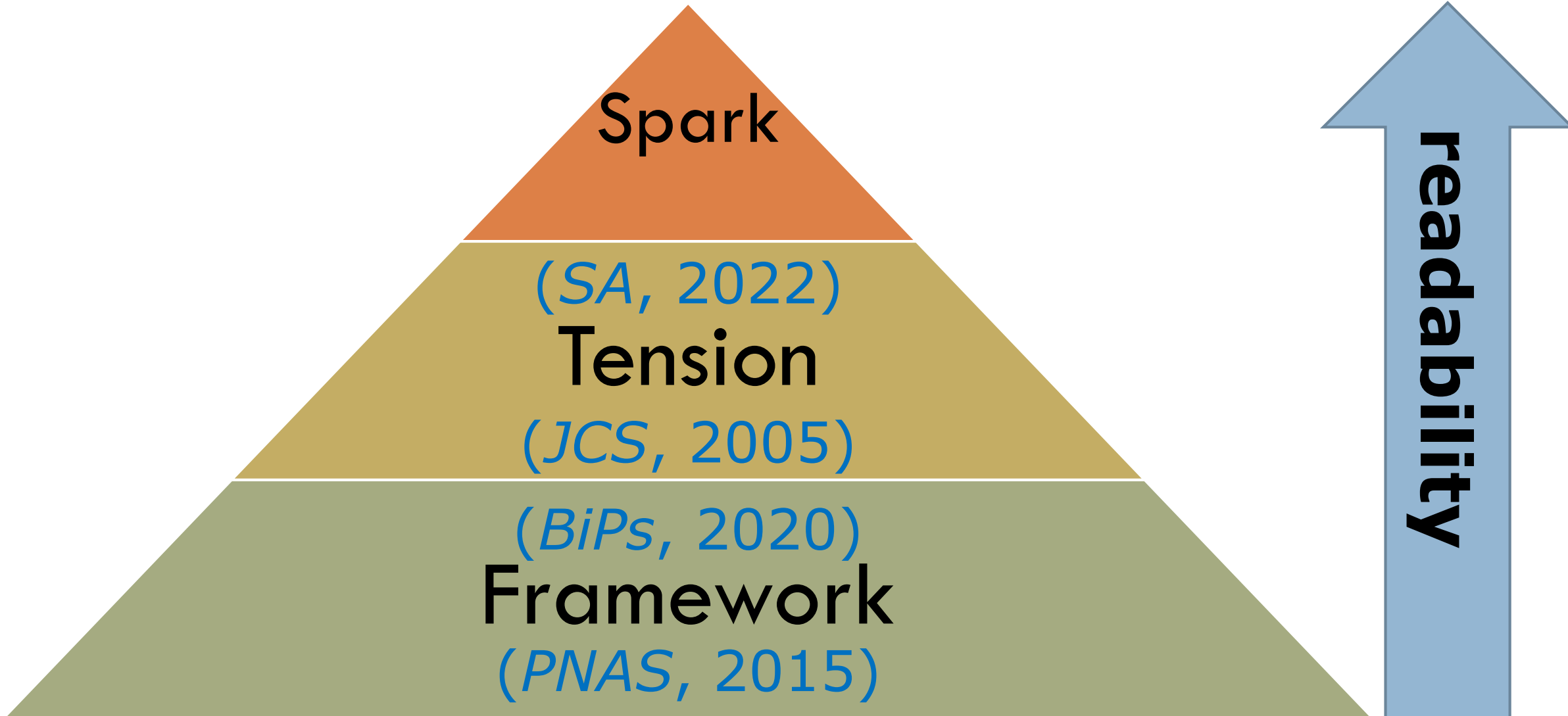
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“The year 2007 has been the year of the publication of a large amount of rapidly and widely replicated GWAS.” (*European Journal of Human Genetics*, 2008)

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# Value of Literature Review

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# Operation of Literature Review

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## □ Tenses of Citation

- sometimes regulated to be “consistent” (certain journal writing manuals)
- sometimes manipulated to indicate your stance toward different perspectives

# Tenses & Centrality

Detailed discussion pp. 344-5







### Language Focus: Citation and Tense

Tense choice in reviewing previous research is subtle and somewhat flexible. (It is also not very much like the “rules” you may have been taught in English classes.) The following, therefore, are only general guidelines for tense usage.

Several studies have shown that at least two-thirds of all citing statements fall into one of these three major patterns.

#### Pattern 1

Past—researcher activity as agent

Huang (2007) *investigated* the causes of airport delays.

The causes of airport delays *were investigated* by Huang (2007).

#### Pattern 2

Present Perfect—researcher activity not as agent

The causes of airport delays *have been* widely *investigated* (Hyon, 2004; Huang, 2007; Martinez et al., 2010).

There *have been* several investigations into the causes of airport delays (Hyon 2004; Huang, 2007; Martinez et al., 2010).

Several researchers *have studied* the causes of airport delays.<sup>1–3</sup>

#### Pattern 3

Present—no reference to researcher activity

The causes of airport delays *are* complex (Hyon, 2004; Huang, 2007; Martinez et al., 2010).

Airport delays *appear to have* a complex set of causes.<sup>1–3</sup>

Note the common uses of these patterns.

Pattern 1—reference to single studies—past

Pattern 2—reference to areas of inquiry—present perfect

Pattern 3—reference to state of current knowledge—present

Also note that in Patterns 1 and 2, attention is given to what previous researchers did, while in Pattern 3 the focus is on what has been found.

Finally, note that different areas of scholarship have somewhat different preferences. Patterns 1 and 2 are most common in the humanities and the

social sciences and least common in the areas of science, engineering, and medical research. However, all three patterns tend to occur in many extensive literature reviews since they add *variety* to the text.

We have said that these three patterns cover about two-thirds of the cases. The reason this proportion is not higher is because writers of literature reviews can have certain options in their choice of tenses. This is particularly true of Pattern 1. The main verbs in Pattern 1 can refer to what a previous researcher *did* (*investigated, studied, analyzed, etc.*). By and large, in these cases the past is obligatory. However, the main verbs can also refer to what the previous researcher *wrote* or *thought* (*stated, concluded, claimed, etc.*). With this kind of reporting verb (see Unit Five), tense options are possible.

Rogers (2004) *concluded* that business failure may be related to reduced working capital and retained earnings.

Rogers (2004) *has concluded* that . . . .

Rogers (2004) *concludes* that . . . .

The differences among these tenses are subtle. In general, moves from past to present perfect and then to present indicate that the research reported is increasingly *close* to the writer in some way: close to the writer's own opinion, close to the writer's own research, or close to the current state of knowledge.

The present tense choice is sometimes called the *citational present* and is also used with famous or important sources.

Aristotle argues that . . . .

Confucius says . . . .

The Bible says . . . .

The Constitution states . . . .

Comparable options exist in the subordinate clause.

Rogers (2004) found that business failure *was* correlated most closely with reduced working capital.

Rogers (2004) found that business failure *is* correlated most closely with reduced working capital.

The first sentence shows that the writer believes that the finding should be understood within the context of the single study. In the second, the writer implies that a wider generalization is possible. (However, it should be noted that some editors disapprove of the use of present tense here.)

# Literature Review

34

Becker (1968) was the first to apply the logic of rational-choice decision making to criminals. Following him, a number of others extended this logic to decision making in the context of organized outlaws. Fiorentini and Peltzman (1995) provide the best and most comprehensive collection of essays that consider the economics of criminal organization. In addition, a large literature has discussed the economic impact of organized crime, activities of criminal organizations, optimal strategies for preventing organized crime, and reasons for its emergence (see also, e.g., Anderson 1979; Reuter 1983, 1987; Jennings 1984; Arlacchi 1986; Jankowski 1991; Dick 1995; Konrad and Skaperdas 1998; Garoupa 2000; Skaperdas 2001; Chang, Lu, and Chen 2005).

# Literature Review: Tense Variations

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# Literature Review: Long List

36

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# Literature Review: Scholar-oriented

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# Literature Review

Subjective memory complaint (SMC) is another possible indicator of age-related cognitive decline and dementia [7]. The incidence of SMC increases with age [8]. While the rate of SMC is about 29% in the younger population, it increases to 52% in the elderly population [9]. Further, SMC has been associated with objective cognitive decline and memory problems [10]. However, memory complaints have been related to a number of other conditions including depression [11], anxiety and health problems [12,13], and certain personality traits such as neuroticism [14]. It is apparent from the literature that there is a potentially complex relationship between psychological problems, including depression symptoms, and SMC. Further, Niederehe [15] has proposed a theoretical model suggesting that age, physiological disorders, depression, and anxiety may all contribute towards memory complaints and memory impairment.



# Literature Review: Content-oriented

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# Literature Review: Content-oriented

focus on a particular scholar

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- Integral or Non-integral
  - Jean Piaget (1970) emphasizes the ever “more rapidly” changing state of knowledge nowadays.
  - The rapidly changing state of knowledge in the present age, compared with that in the past, is remarkable (Piaget, 1970).
- ✓ **An integral citation would be preferred when that cited study plays a central role in the literature.**

Shaw, Chang, & Chen, 2013. “Capital adequacy and the bank lending channel: Macroeconomic implications.” *Journal of Macroeconomics*.

“In this paper, we develop an analytically tractable *dynamic general-equilibrium* framework to systematically examine the *macroeconomic* implications of CAR. One of the earliest attempts to examine the macroeconomic implications of CAR was Blum and Hellwig (1995). Under specific parameter configurations, they argue that CAR may potentially amplify demand-side shocks. By following this line of research, Cecchetti and Li (2008) further suggest that CAR can also reinforce the effects of supply-side shocks. Seater (2001) points out that coordinated bank regulation and monetary policy influence both the mean and variance of aggregate output.

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“Although insightful, the results of these studies are based on *ad hoc* IS-LM-style macro models that fail to fully account for endogenous responses of the banking system to regulation. Moreover, their work lacks a micro-foundation, and hence they are unable to perform a welfare analysis. By contrast, Van den Heuvel (2008) constructs a quantitative dynamic model and calibrates the model to US banking data in order to perform a numerical analysis.”



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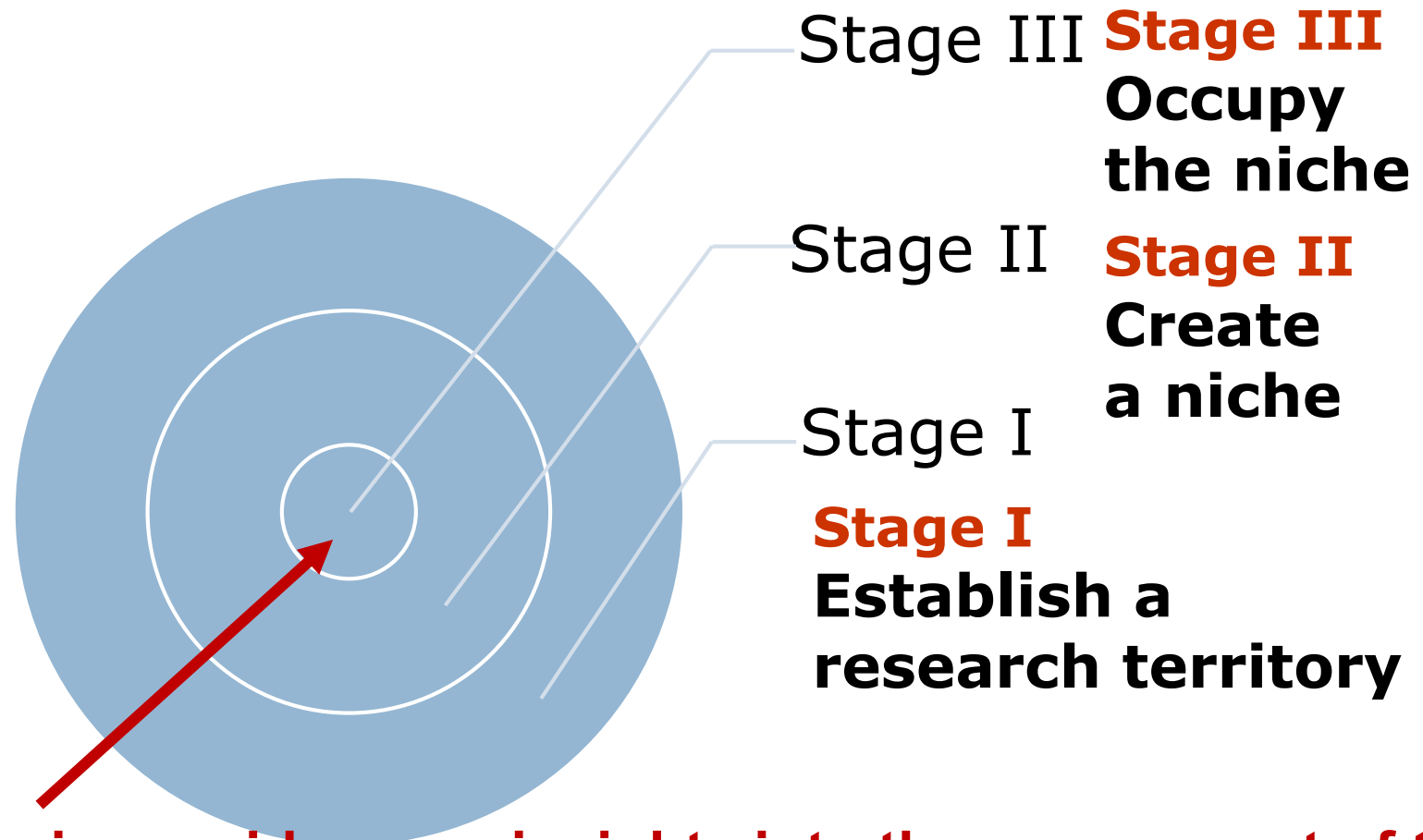


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# Creating a Research Space



**“Our theoretical analysis provides new insights into the assessment of the effects of CAR that have never been considered in a formal theoretical setting before.”**

# A Sample Literature Review to Read in Class

51

- Paragraphing to form the framework

# Assignments (15%)

52

- ❑ **Literature Review** (in the **Introduction** section)
  - Essay writing: **200-400** words.
  - Include at least **5** references to form the framework.
  - Make these literature reviews **“talk”** to one another.
  - Put the References in the end.
  - Deadline: 21:00 on 5 / 21 (Sun.)
- ◆ Read through **pages 327-361** in the textbook to get a complete picture of the Introduction & Literature Review section.

# Q & A