6 Major Flaws in Neuropsychological and Psychodiagnostic Reports

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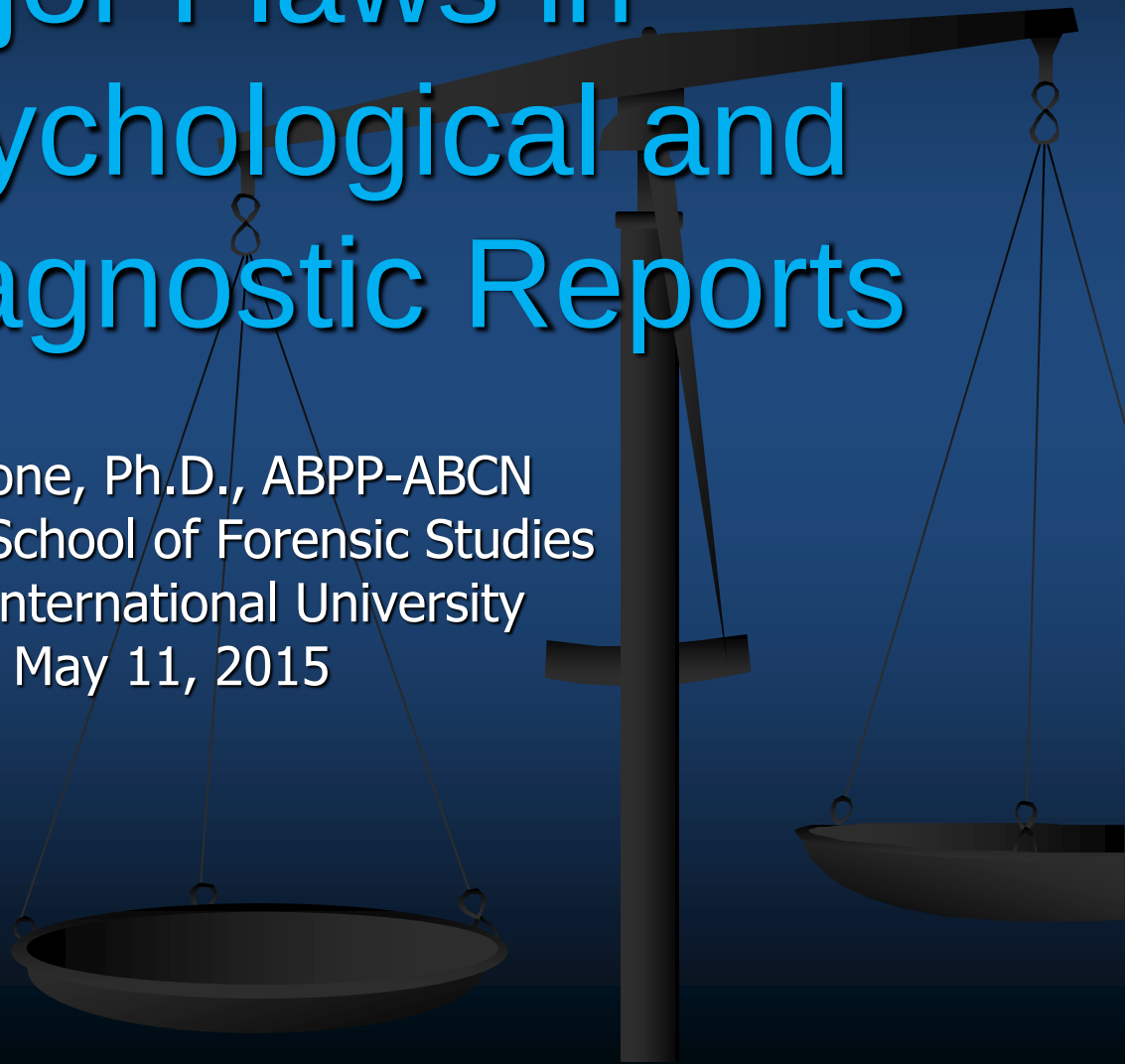
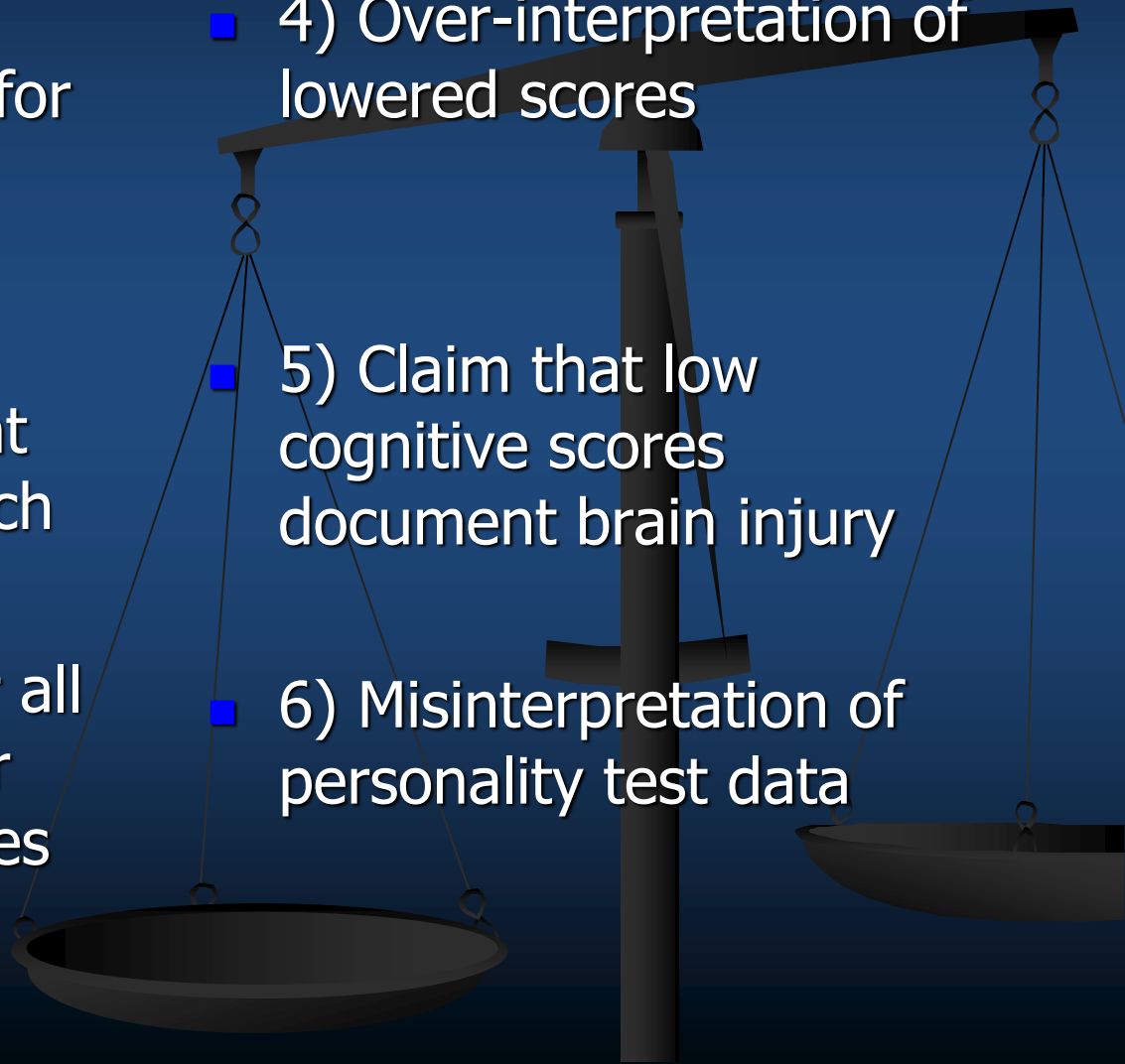


Report Flaws

- 1) Failure to appropriately assess for performance validity
- 2) Failure to draw conclusions consistent with empirical research
- 3) Failure to consider all possible etiologies for cognitive abnormalities
- 4) Over-interpretation of lowered scores
- 5) Claim that low cognitive scores document brain injury
- 6) Misinterpretation of personality test data

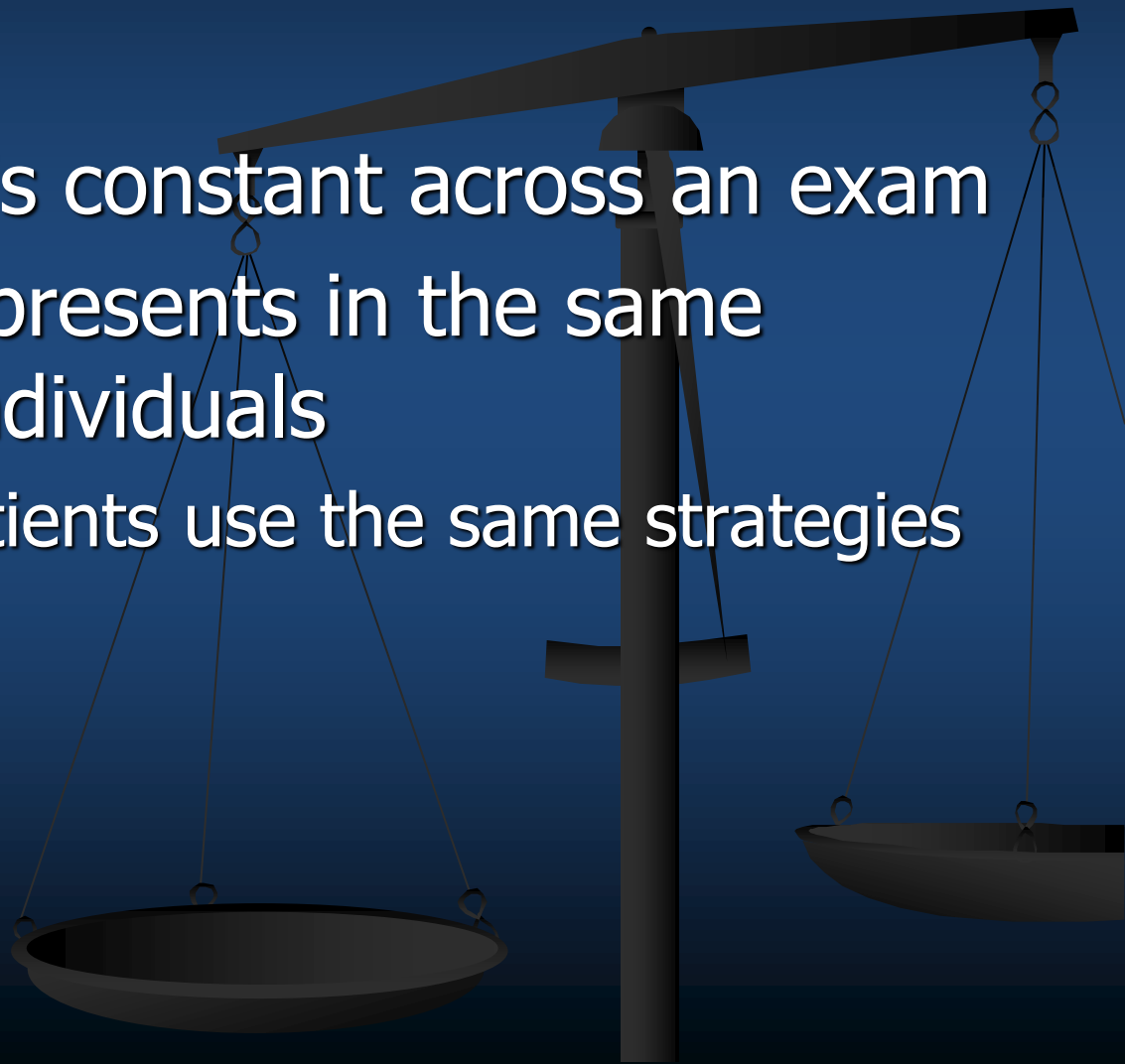


I. Failure to Appropriately Assess for Performance Invalidity/Response Bias

- A. Failure to detect response bias: Administer zero, not enough, or ineffective measures
  - Current practice standards indicate that formal measures of response bias are to be interspersed *throughout* neuropsychological exam
    - NAN (Bush et al., 2005)
  - Including use of *embedded* as well as *free-standing* measures
    - AACN (Heilbronner et al., 2009)

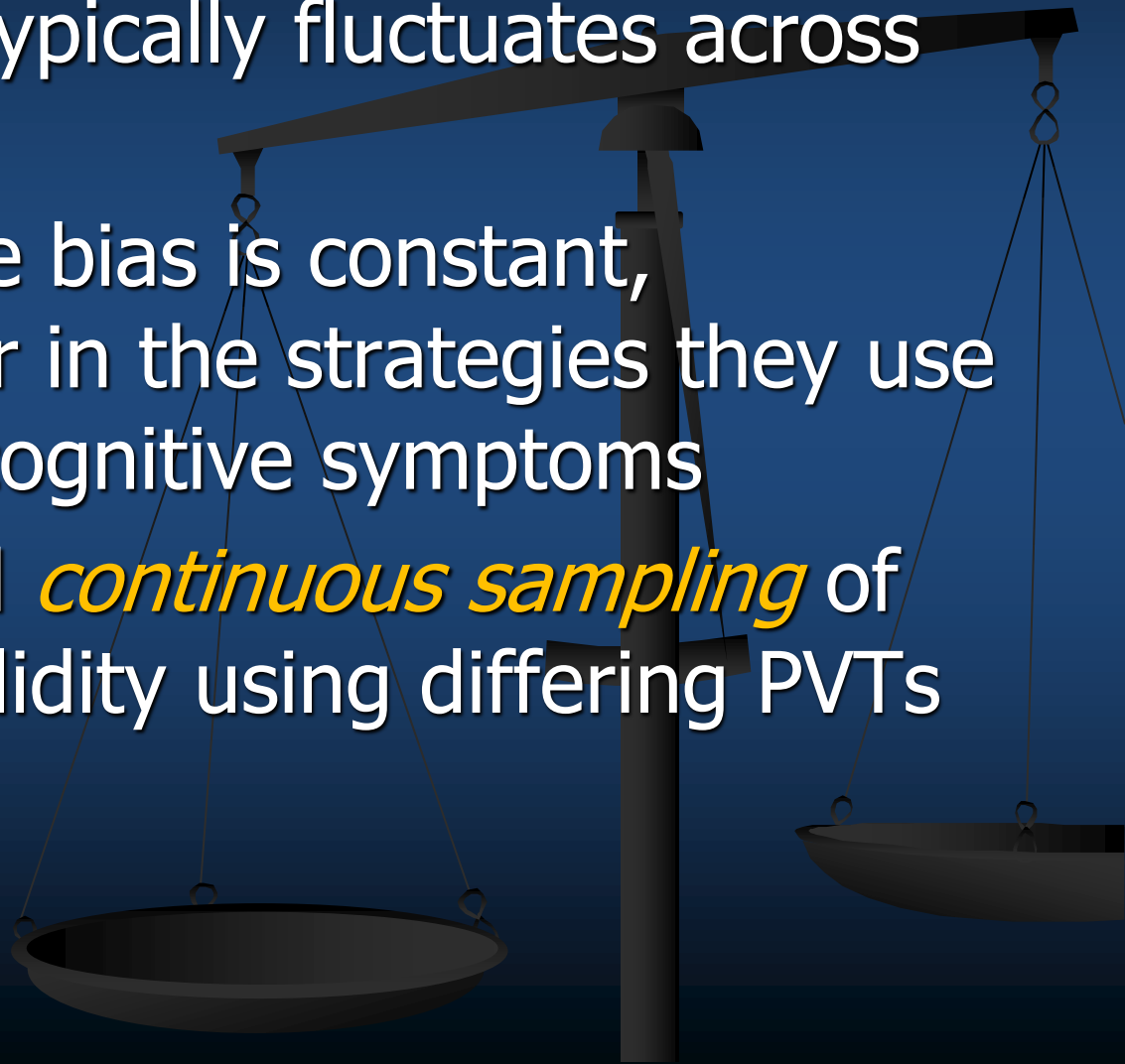
Reliance on a single Performance Validity Measure (PVT) incorrectly assumes that

- Response bias is constant across an exam
- Response bias presents in the same manner in all individuals
  - i.e., that all patients use the same strategies when feigning



Instead:

- Response bias typically fluctuates across an exam
- Even if response bias is constant, individuals differ in the strategies they use when feigning cognitive symptoms
- Therefore, need *continuous sampling* of performance validity using differing PVTs
  - Boone (2009)



Response bias only during *discrete* portions of exam:

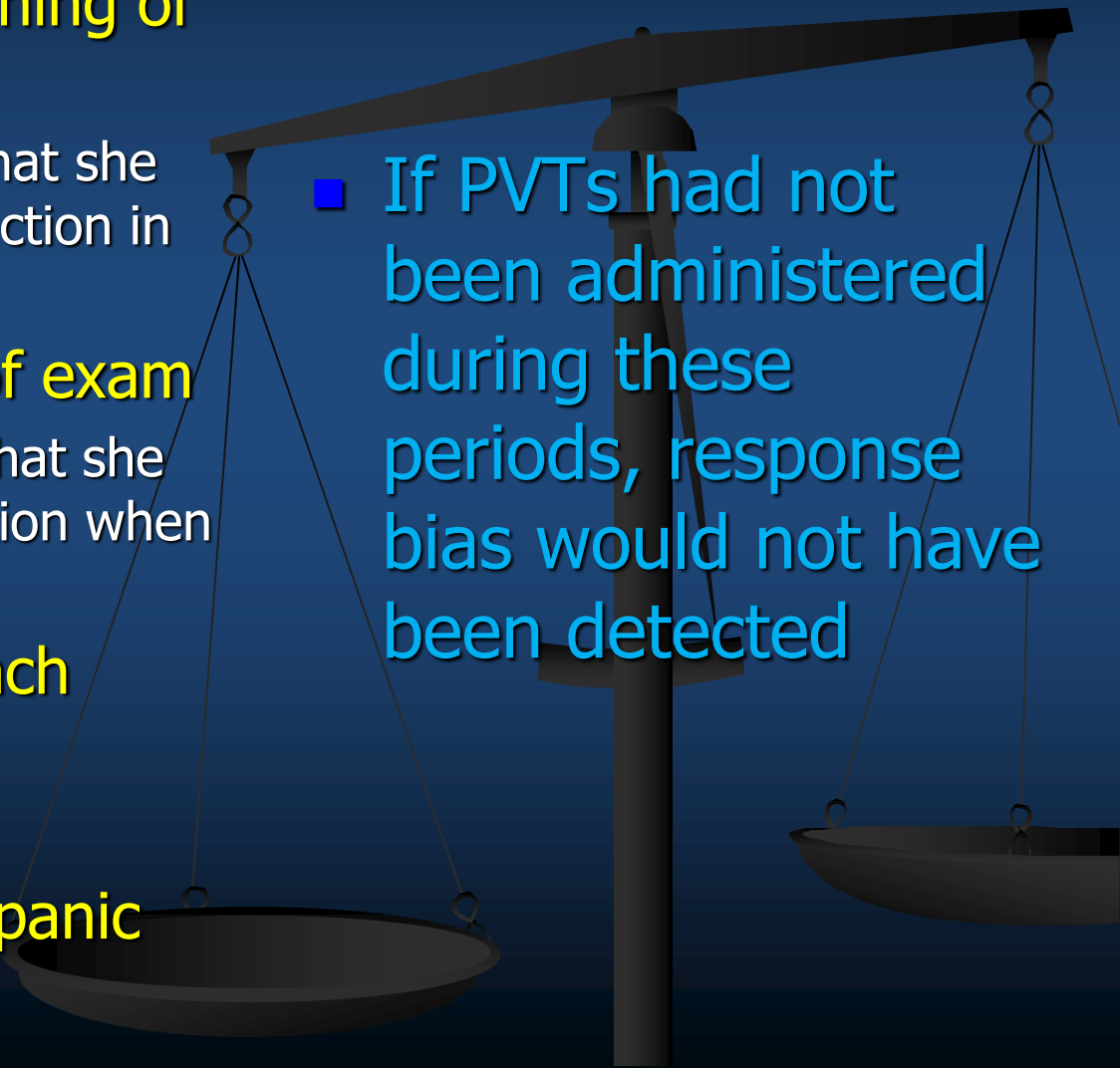
Case #1:	51-year-old disability-seeking female claiming fibromyalgia, depression, and anxiety	Failed 2 PVTs half way through exam after she commented, "you do know that my brain is on overload!"
Case #2:	59-year-old disability-seeking male claiming panic attacks and depression	4 failed PVTs occurred only during 6 "panic attacks" in the exam

Response bias only during *discrete* portions of exam:

Case #3:	45-year-old male litigant claiming chronic cognitive problems from mTBI	During morning session only failed 1 PVT, but after having lunch with his attorney, he failed all remaining effort indicators
Case #4:	31-year-old female litigant claiming chronic cognitive problems from mTBI	At start of exam claimed she was not "good" in the morning, and failed the first 2 PVTs; subsequent scores "zoomed" up to above average (FSIQ=145)

Response bias only during *discrete* portions of exam:

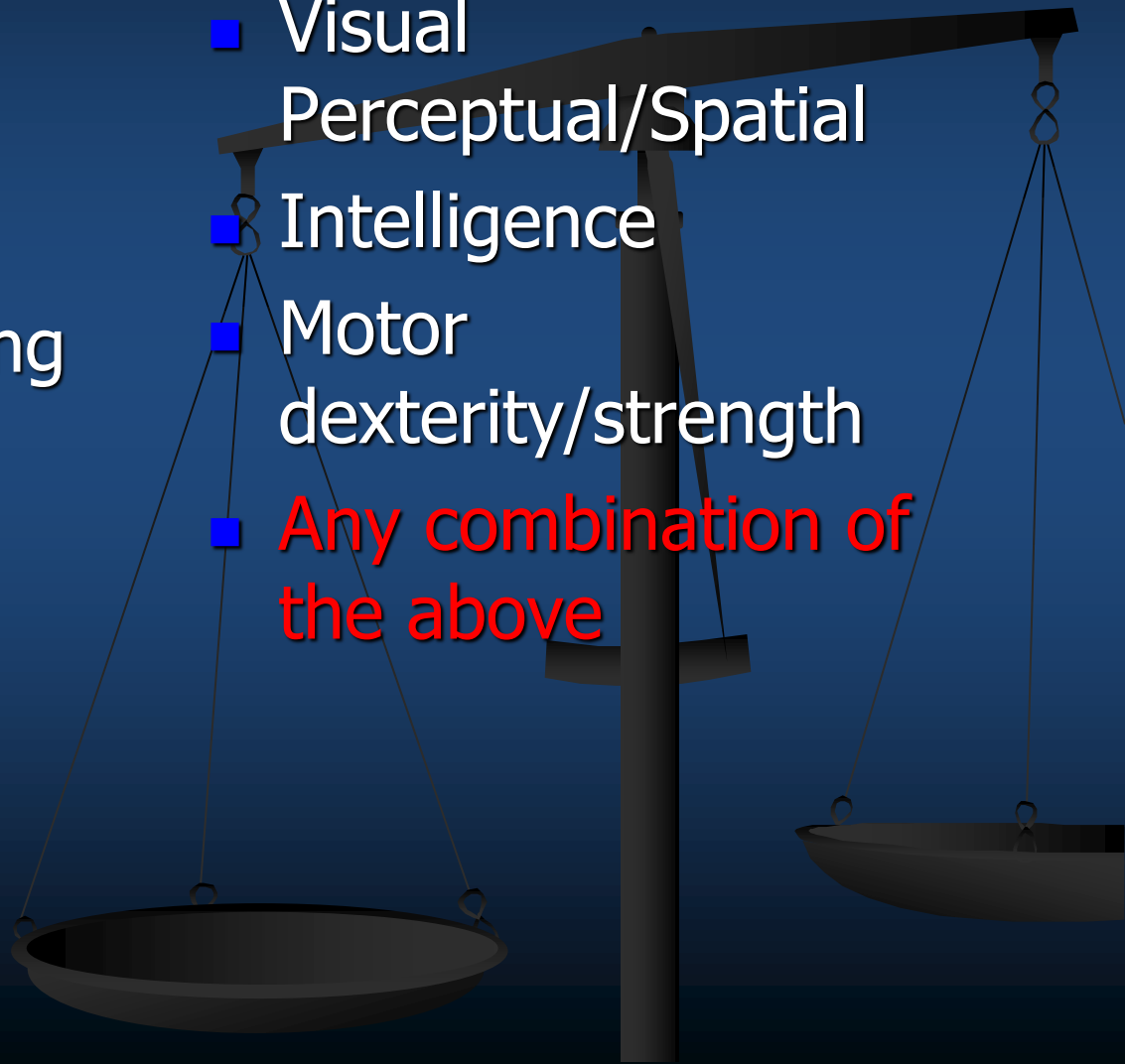
- Only at beginning of exam
  - illustrating that she does not function in morning
- Only at end of exam
  - Illustrating that she cannot function when tired
- Only after lunch meeting with attorney
- Only during "panic attacks"



- If PVTs had not been administered during these periods, response bias would not have been detected

Cognitive domains in which symptoms can be faked:

- Memory
- Attention
- Mental Speed
- Language (including reading)
- Math
- Visual Perceptual/Spatial
- Intelligence
- Motor dexterity/strength
- Any combination of the above



Response bias only on *particular* tasks

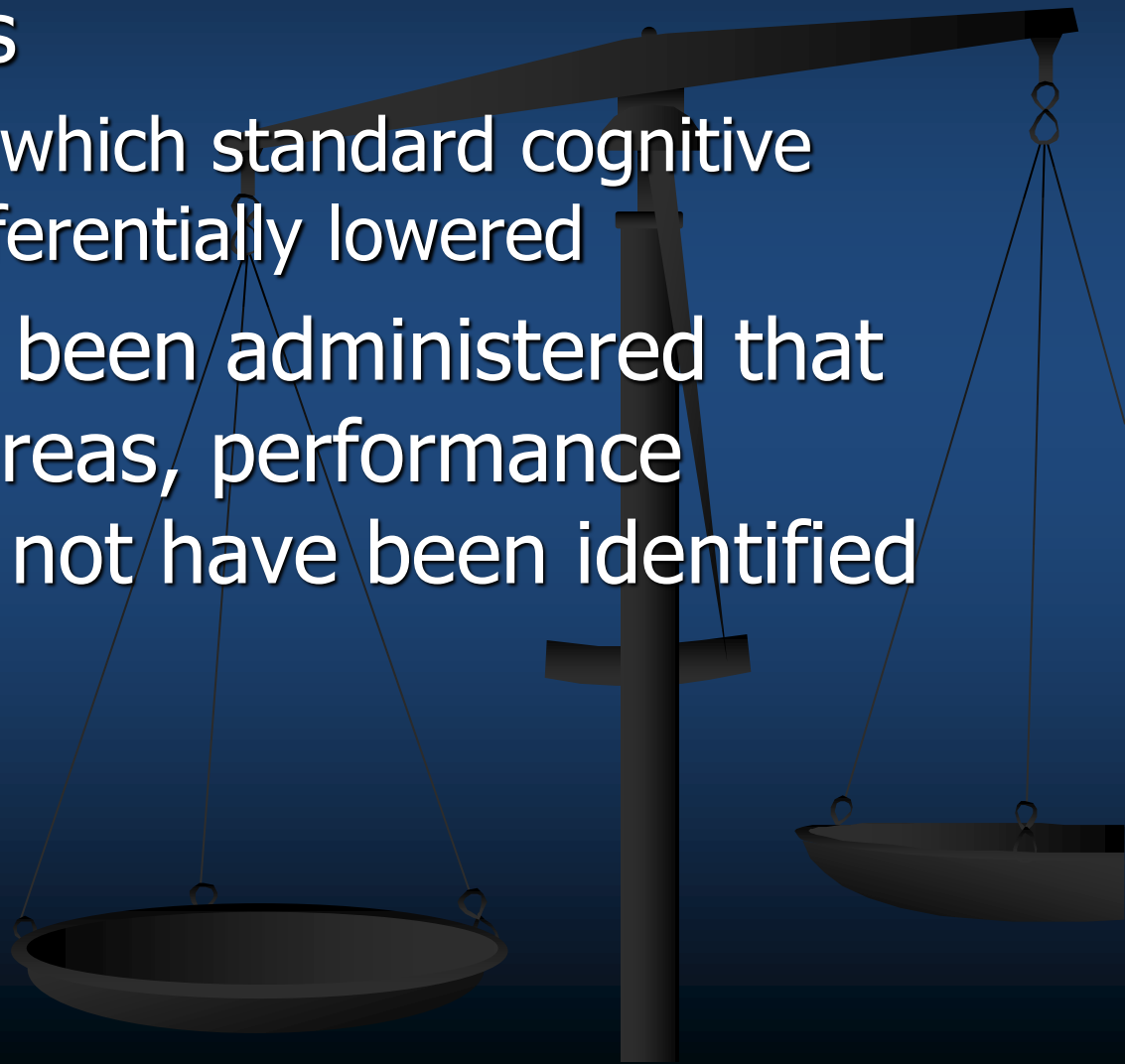
Case #5	56-year-old female mTBI litigant	Failed PVTs reflecting ▪ motor/sensory function ▪ thinking speed ▪ visual perceptual/memory Standard cognitive scores normal with exception of above areas
Case #6	66-year-old male mTBI litigant	Failed PVTs reflecting ▪ verbal memory Standard cognitive scores normal with the exception of low average score in verbal memory

Response bias only on *particular* tasks:

Case #7: Symptoms	PVTs Failed	PVTs Passed
Primarily language symptoms that began days after the accident and progressively became more severe: ▪ **Dysarthria** /prominent (incon-sistent) articulation errors ▪ **"Foreign accent"** syndrome and ESL grammatical errors: "How you say?" ▪ **Word –retrieval problems**	**Tests involving language and processing speed (2)** **Noncredible on sensory exam:** ▪ Errors on tactile testing ▪ noncredible hearing results	**Verbal memory (4)** **Visual memory (1)** **Attention/Math (2)** **Motor speed (1)**

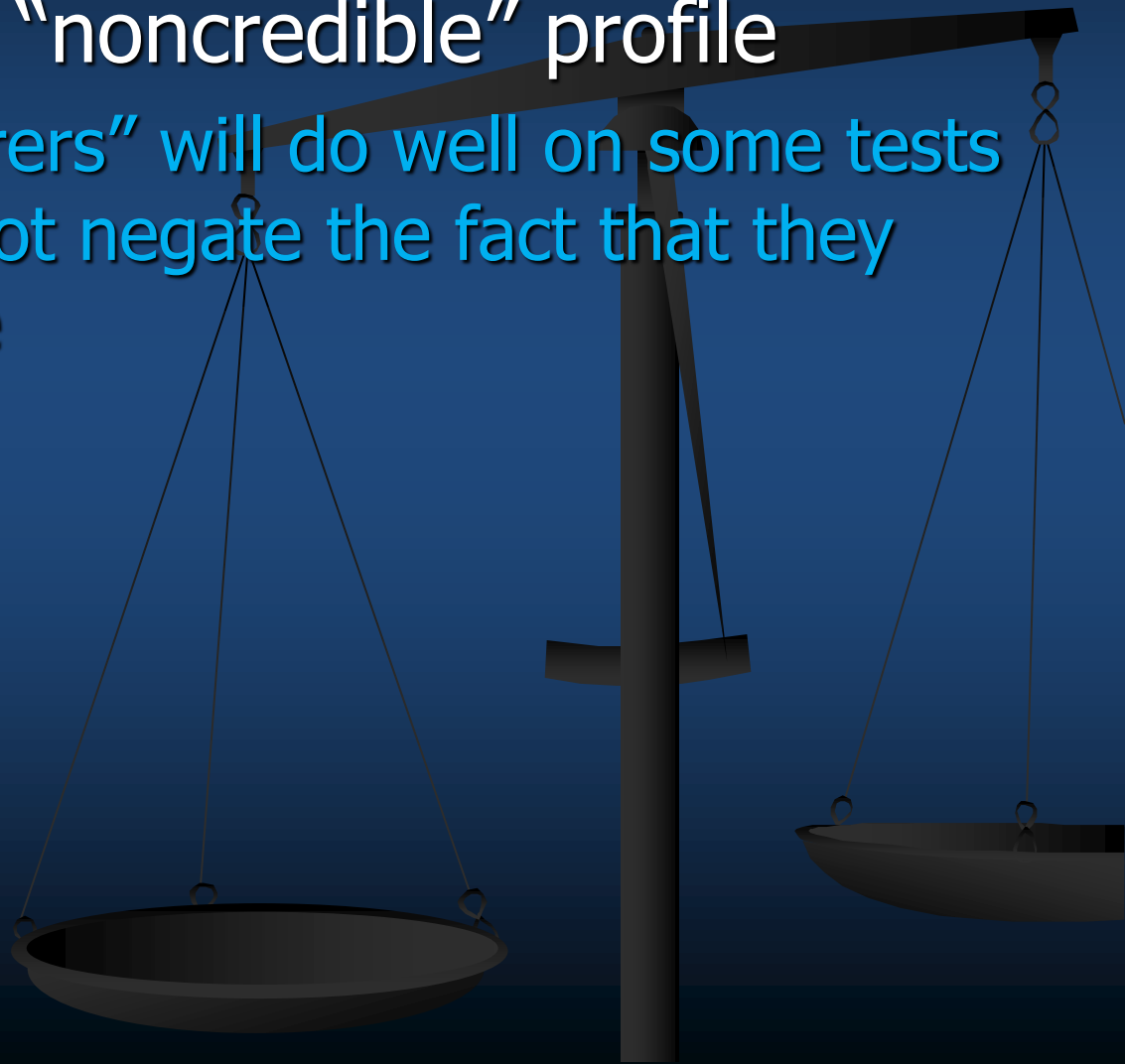
Response bias only on *particular* tasks:

- In these 3 cases
  - PVTs predicted which standard cognitive scores were differentially lowered
- If PVTs had not been administered that covered these areas, performance invalidity would not have been identified



Noncredible patients are heterogeneous

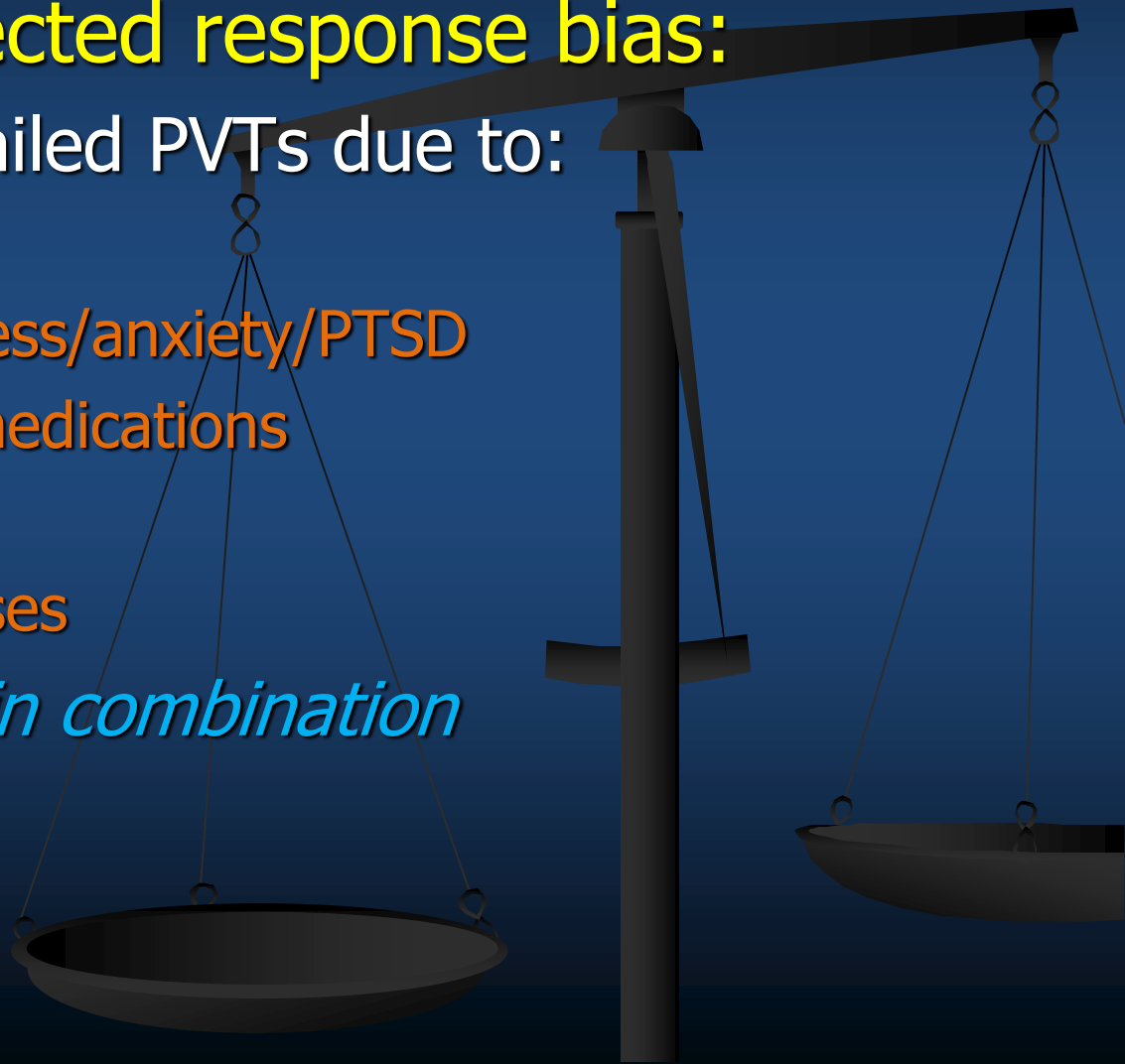
- There is no one "noncredible" profile
  - Some "malingerers" will do well on some tests and this does not negate the fact that they are not credible



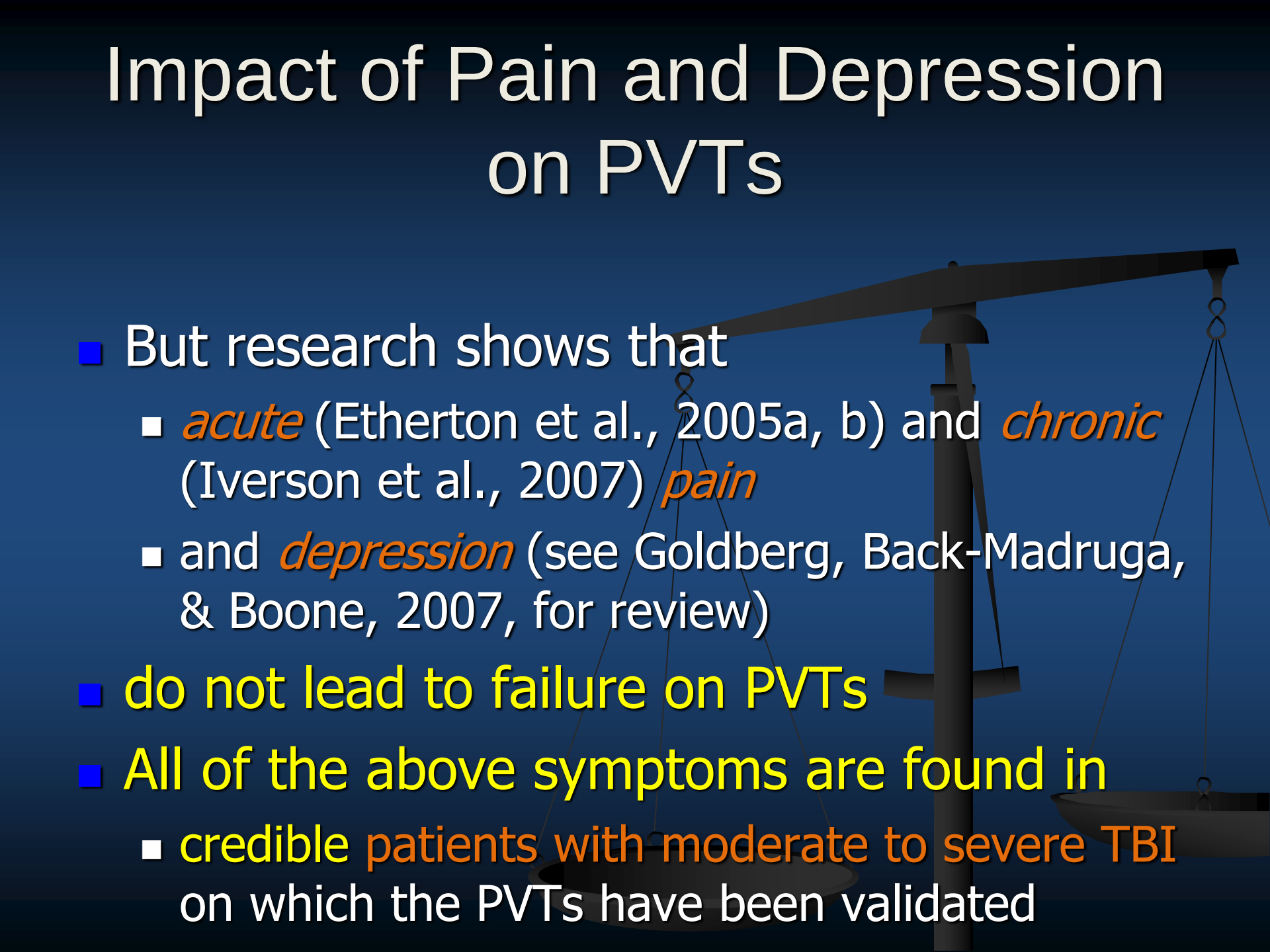
I. Failure to Appropriately Assess for Performance Validity

- B. Dismiss detected response bias:
  - Claim subject failed PVTs due to:
    - Pain
    - Depression/stress/anxiety/PTSD
    - Pain or other medications
    - Fatigue
    - Attentional lapses

Singly or in combination

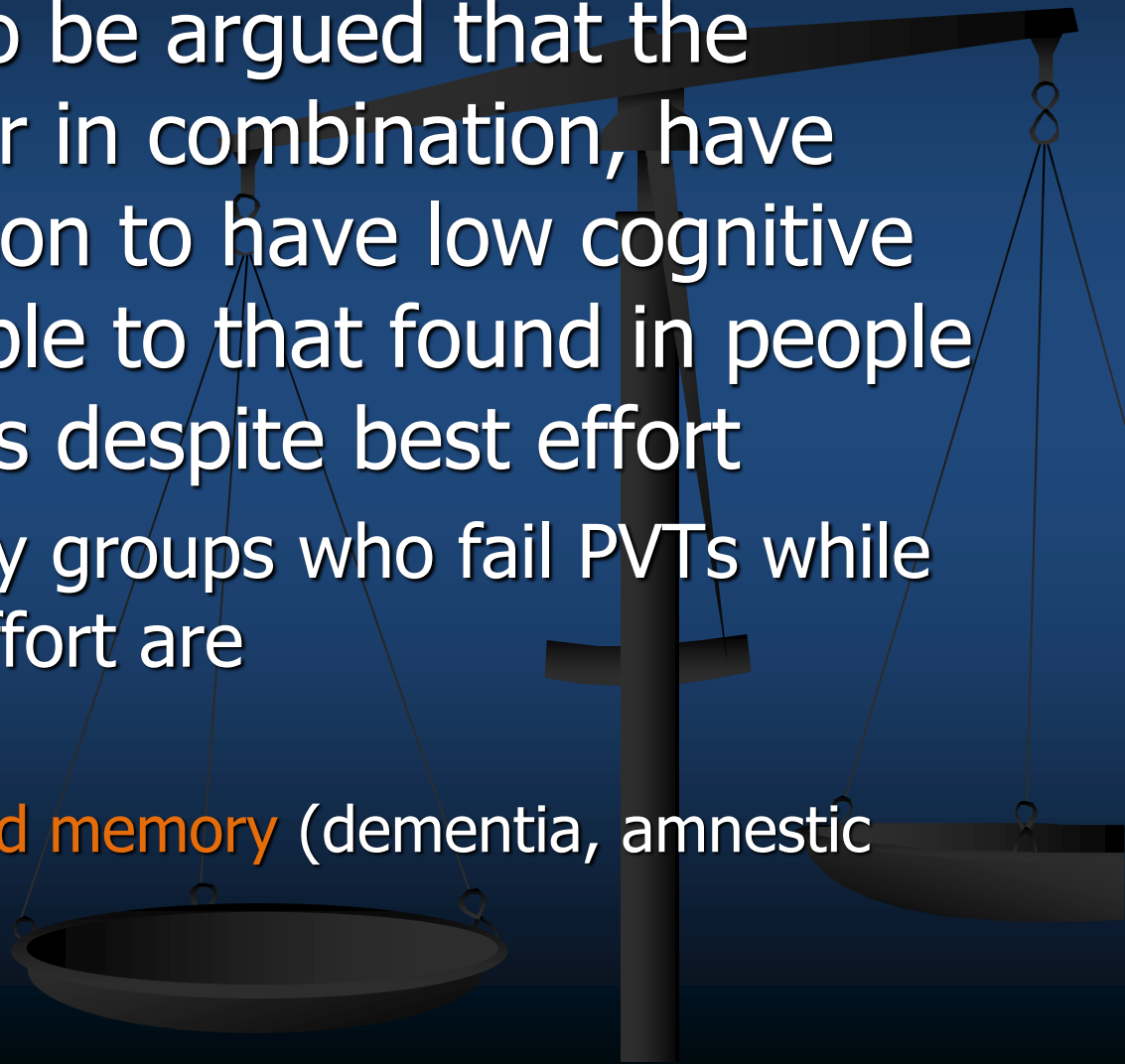


Impact of Pain and Depression on PVTs



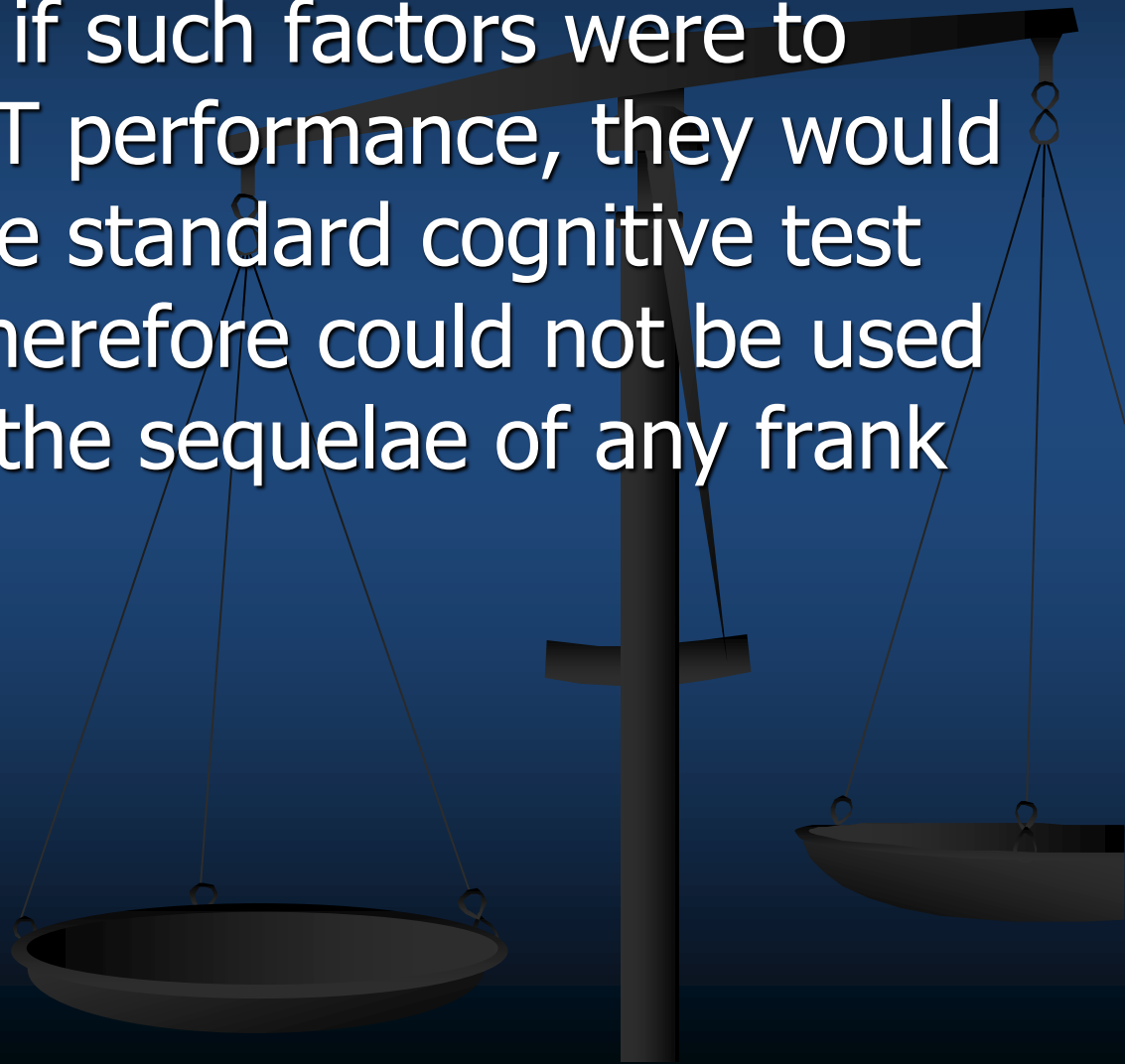
- But research shows that
  - *acute* (Etherton et al., 2005a, b) and *chronic* (Iverson et al., 2007) *pain*
  - and *depression* (see Goldberg, Back-Madruga, & Boone, 2007, for review)
- do not lead to failure on PVTs
- All of the above symptoms are found in
  - credible patients with moderate to severe TBI on which the PVTs have been validated

- It would have to be argued that the factors, singly or in combination, have caused the person to have low cognitive ability comparable to that found in people who do fail PVTs despite best effort
  - The two primary groups who fail PVTs while exerting best effort are
    - low IQ
    - grossly impaired memory (dementia, amnestic disorder)



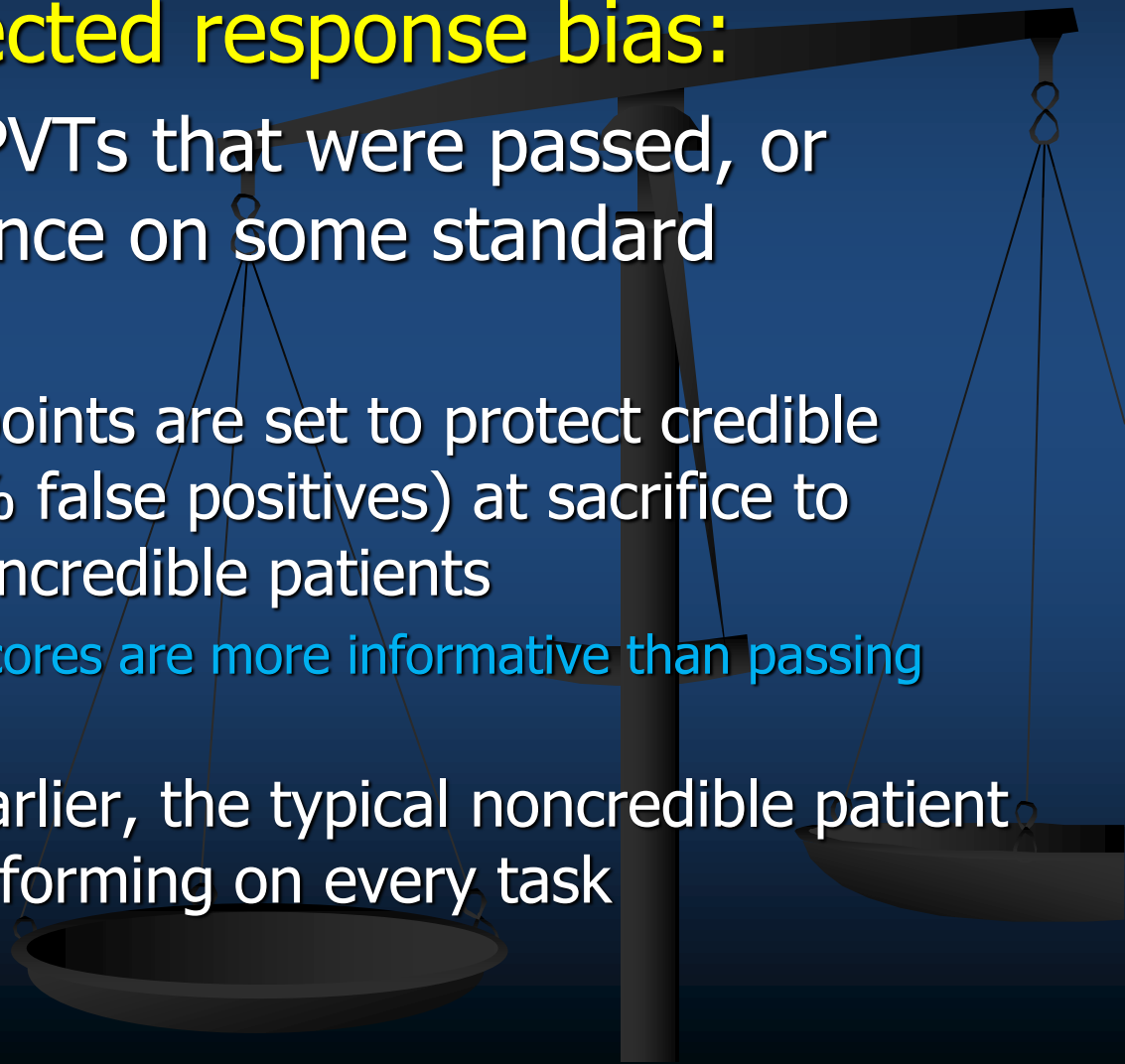
- If these conditions caused extremely low mental function, the effected people would lose the ability to drive, to care for themselves, etc.,
  - *"To further place the patient's performance in context, individuals with extremely low/mentally retarded IQ fail approximately 44% of effort indicators administered despite applying best effort (Dean et al., 2008), while the patient failed 91%. Thus, she performed worse than individuals with mental retardation yet she drives, parents, handles the family finances, and grocery shops. The patient's low cognitive scores, if accurate, would in fact require that she be reported to the DMV for removal of her license."*

- Also, obviously, if such factors were to contaminate PVT performance, they would also contaminate standard cognitive test results, which therefore could not be used as indicative of the sequelae of any frank brain injury

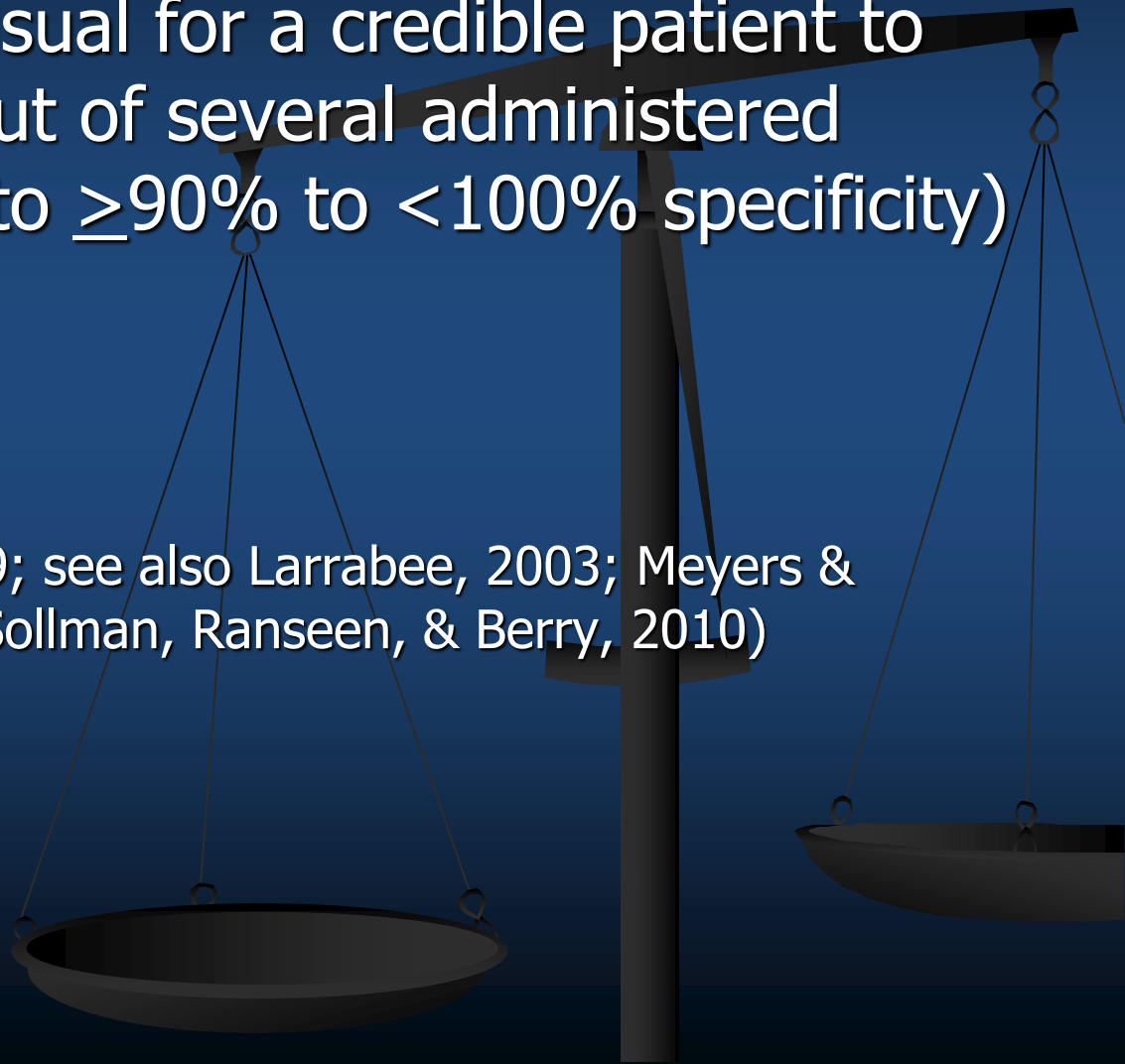


I. Failure to Appropriately Assess for Effort/Response Bias

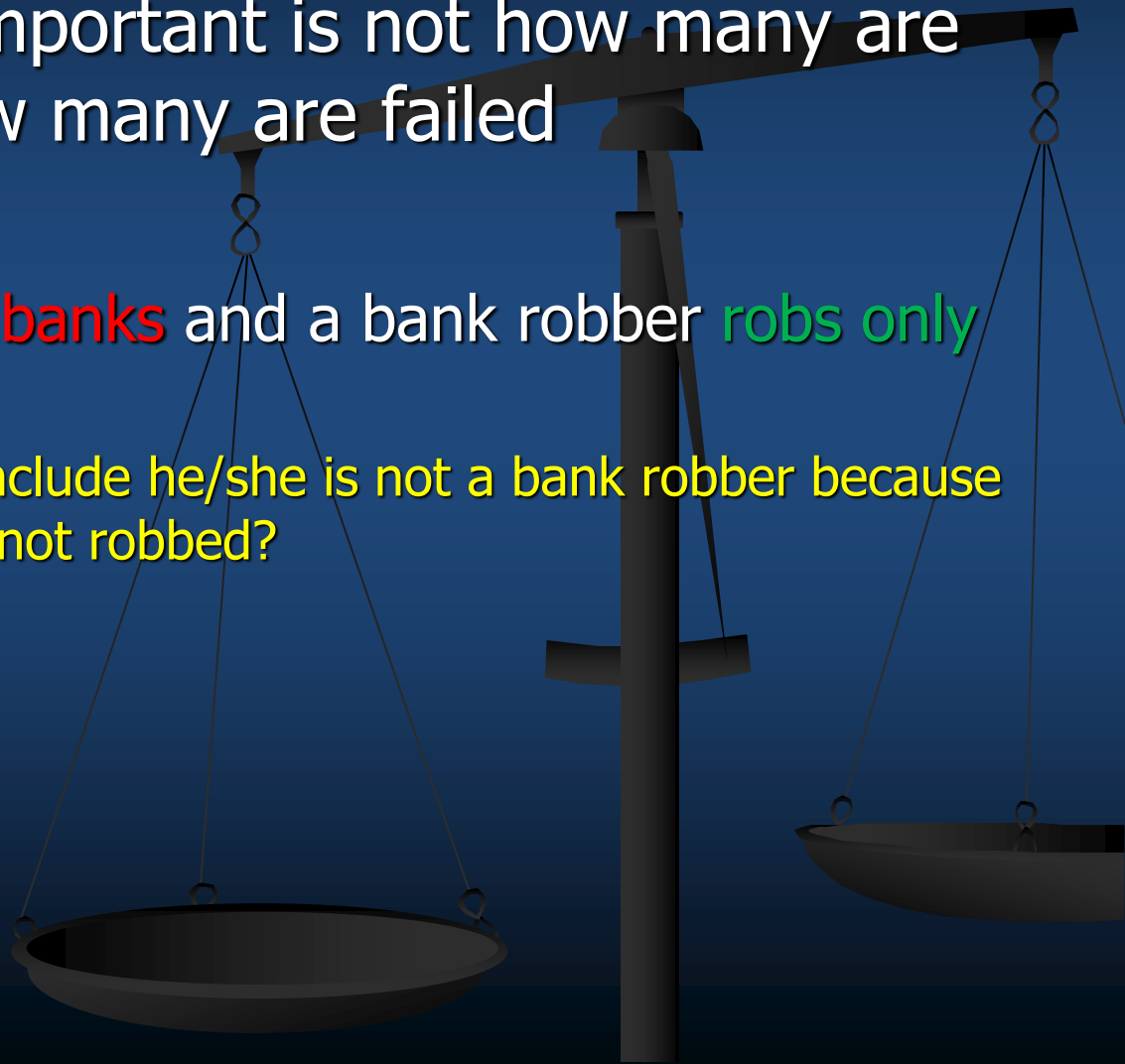
- B. Dismiss detected response bias:
  - By pointing to PVTs that were passed, or intact performance on some standard cognitive tasks
    - However, cut-points are set to protect credible patients (≤10% false positives) at sacrifice to detection of noncredible patients
      - Thus, failed scores are more informative than passing scores
    - As discussed earlier, the typical noncredible patient is not underperforming on every task



- While it is not unusual for a credible patient to fail a single PVT out of several administered (with cut-offs set to ≥90% to <100% specificity)
  - only 5% fail 2
  - 1.5% fail 3
  - and none fail 4
    - (Victor et al., 2009; see also Larrabee, 2003; Meyers & Volbrecht, 2003; Sollman, Ranseen, & Berry, 2010)

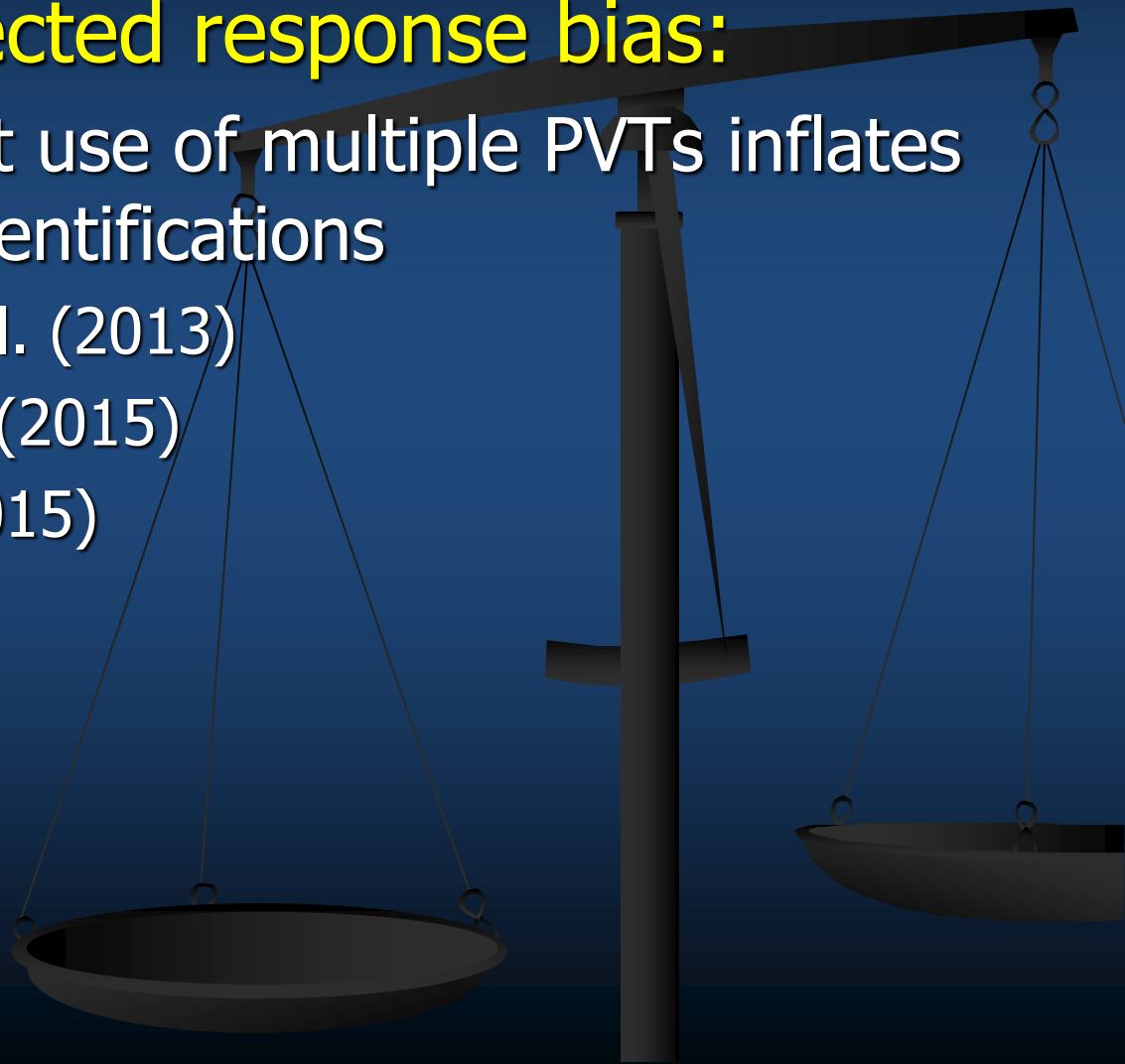


- Thus, what is important is not how many are passed, but how many are failed
- As analogy,
  - If there are 10 banks and a bank robber robs only 4,
    - would one conclude he/she is not a bank robber because 6 banks were not robbed?



I. Failure to Appropriately Assess for Effort/Response Bias

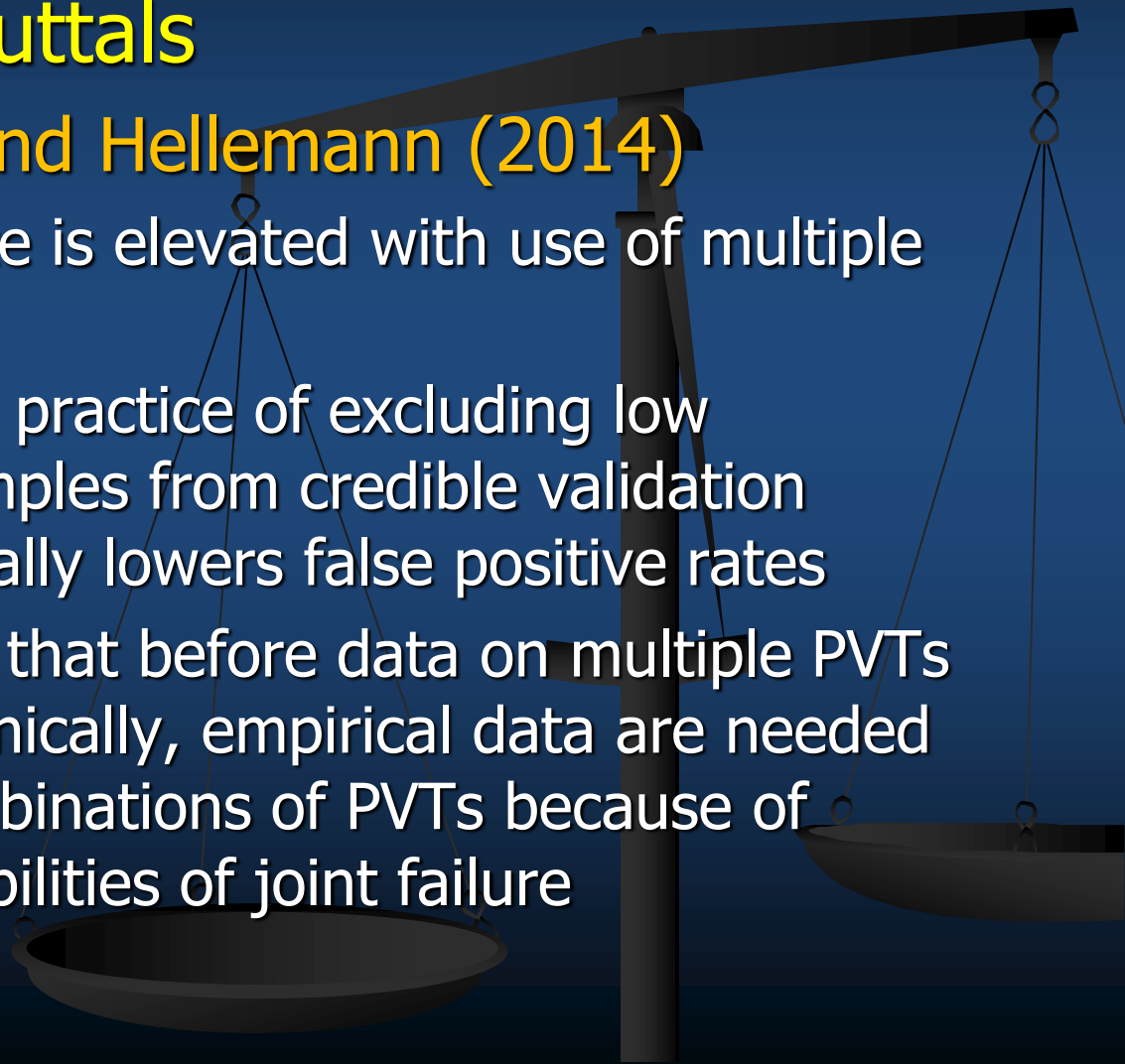
- B. Dismiss detected response bias:
  - By claiming that use of multiple PVTs inflates false positive identifications
    - Berthelson et al. (2013)
    - Silk-Eglit et al. (2015)
    - Bilder et al. (2015)



- Silk-Eglit et al. (2015)
  - Using clinical sample concluded that to maintain FP rate ≤10% when using 3, 7, 10, 14, and 15 "embedded" PVTs,
    - Noncredible performance would be indicated by failure on ≥1, ≥2, ≥3, ≥4, ≥5 PVTs, respectively
  - However, problems with study methodology
    - mTBI litigants were allowed to fail 1 PVT, and PVTs used for group assignment had low sensitivity (Rey 15, TOMM), raising likelihood that noncredible subjects were included in the credible group
    - Sample sizes small (24-25 per group)
    - Many of the embedded PVT scores were from the same test (therefore would be highly correlated and likely failed "as a group")

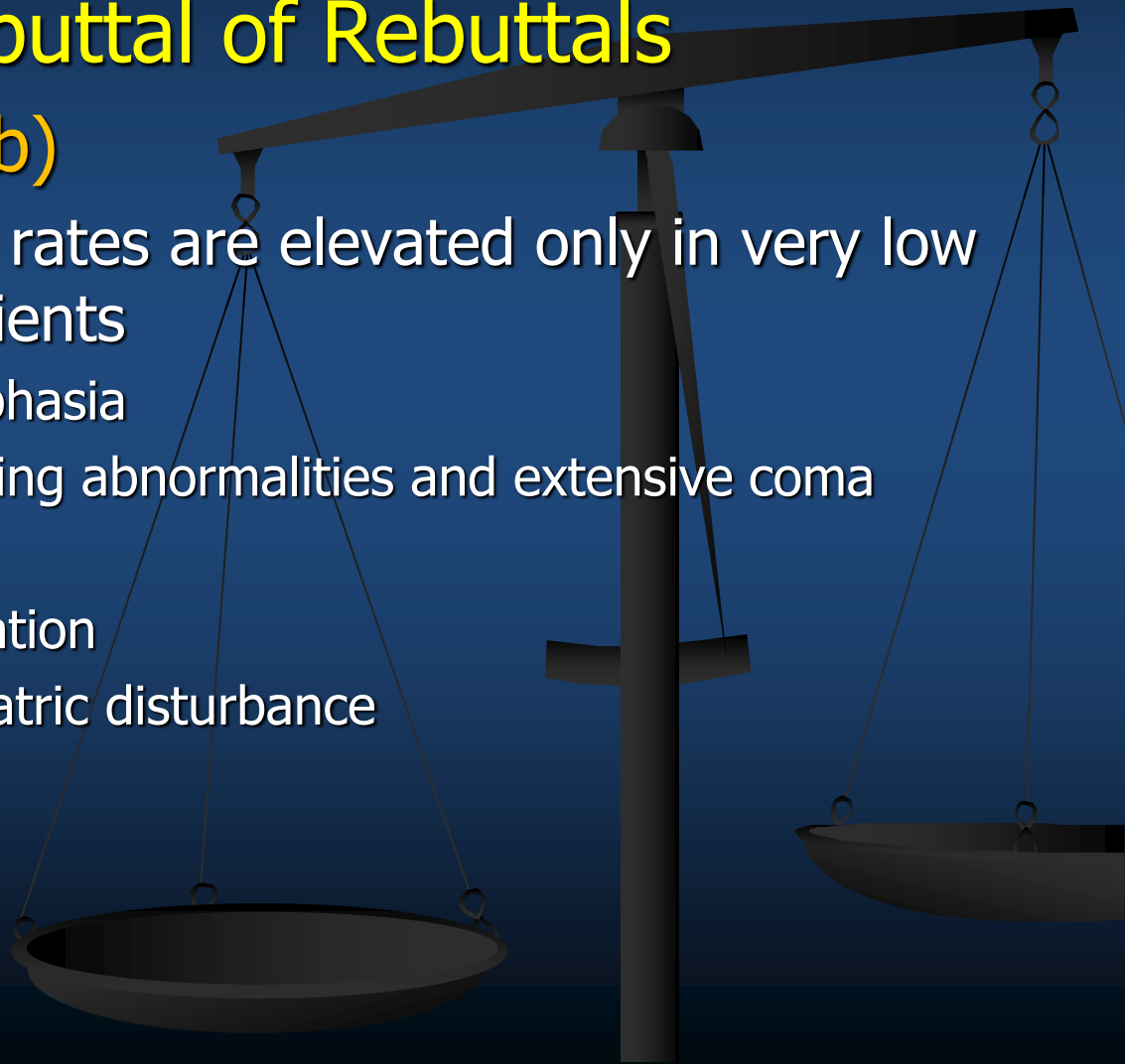
- Berthelson et al. (2013)
  - Used a Monte Carlo simulation and concluded
    - If require 3 failures, not more than 8 PVTs can be administered without unacceptable FP rate
  - Rebuttals
    - Davis and Millis (2014a) and Larrabee (2014a)
      - In actual neurologic and clinical populations, rate of PVT failures was lower than predicted by Berthelson et al. (2013)
      - No significant relationship between number of PVTs administered and number failed (r = .10) was found
      - Larrabee suggested that the simulation data were problematic because test scores do not have the normal distribution required for the analysis

- Rebuttal to Rebuttals
  - Bilder, Sugar, and Hellemann (2014)
    - Asserted FP rate is elevated with use of multiple PVTs
    - Suggested that practice of excluding low functioning samples from credible validation samples artificially lowers false positive rates
    - Recommended that before data on multiple PVTs can be used clinically, empirical data are needed on various combinations of PVTs because of differing probabilities of joint failure



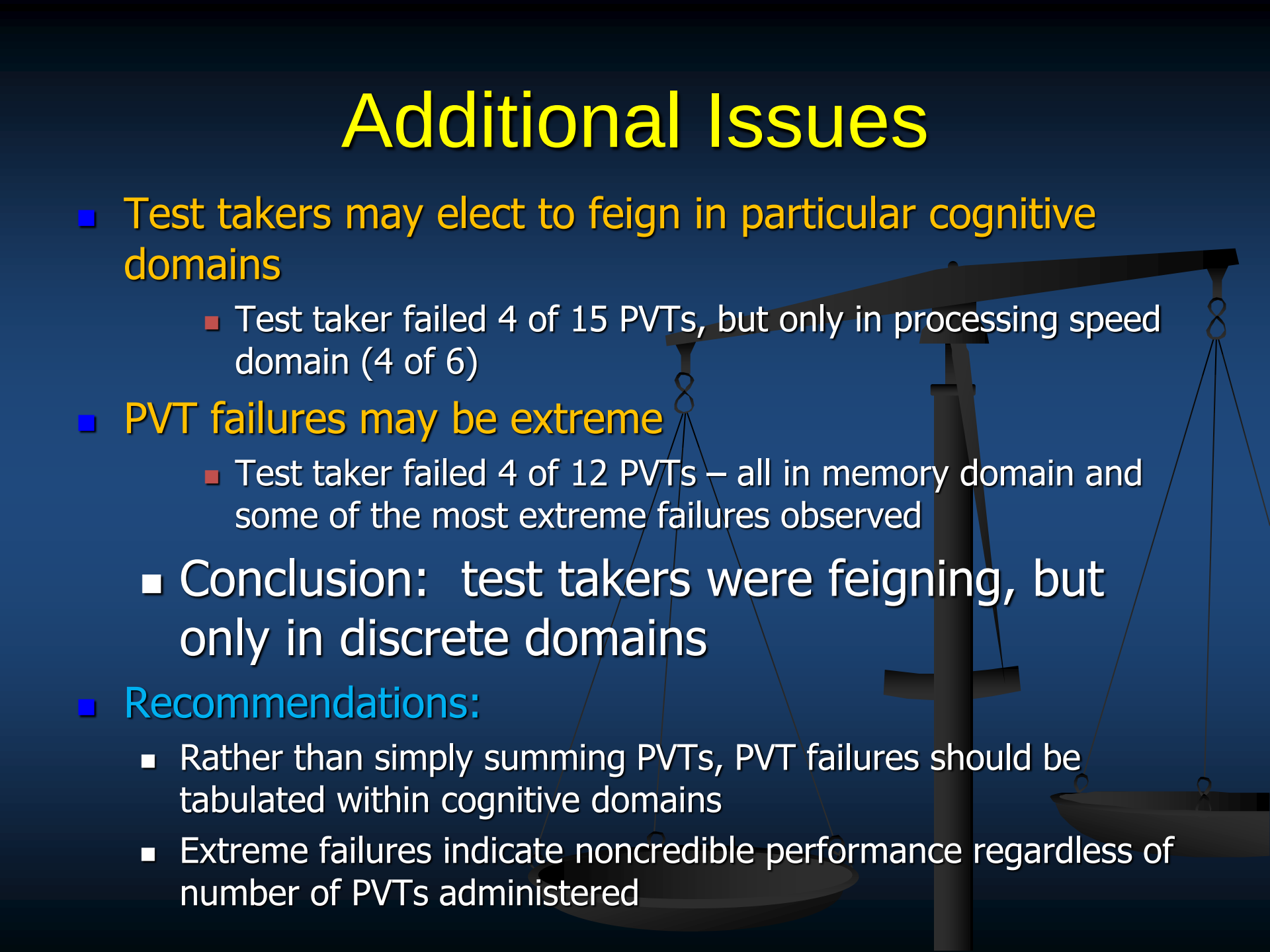
- Rebuttals to Rebuttal of Rebuttals
  - Davis and Millis (2014b)
    - Pointed out statistical limitations of the Bilder et al. analyses
    - Argued that the standards Bilder et al. are requiring for PVTs are not required of, or met by, standard neuropsychological instruments
    - Showed that claimed large increase in FP rate with multiple PVTs is actually low in absolute numbers
      - Predicted # PVT failures when 5 are administered is .55
      - Predicted # PVT failures when 9 are administered is 1.01
        - "doubling of error" but increase only from .5 to 1

- Rebuttals to Rebuttal of Rebuttals
  - Larrabee (2014b)
    - Argued that FP rates are elevated only in very low functioning patients
      - Stroke with aphasia
      - TBI with imaging abnormalities and extensive coma
      - Dementia
      - Mental retardation
      - Severe psychiatric disturbance



Additional Issues

- Test takers may elect to feign in particular cognitive domains
  - Test taker failed 4 of 15 PVTs, but only in processing speed domain (4 of 6)
- PVT failures may be extreme
  - Test taker failed 4 of 12 PVTs – all in memory domain and some of the most extreme failures observed
- Conclusion: test takers were feigning, but only in discrete domains
- Recommendations:
  - Rather than simply summing PVTs, PVT failures should be tabulated within cognitive domains
  - Extreme failures indicate noncredible performance regardless of number of PVTs administered

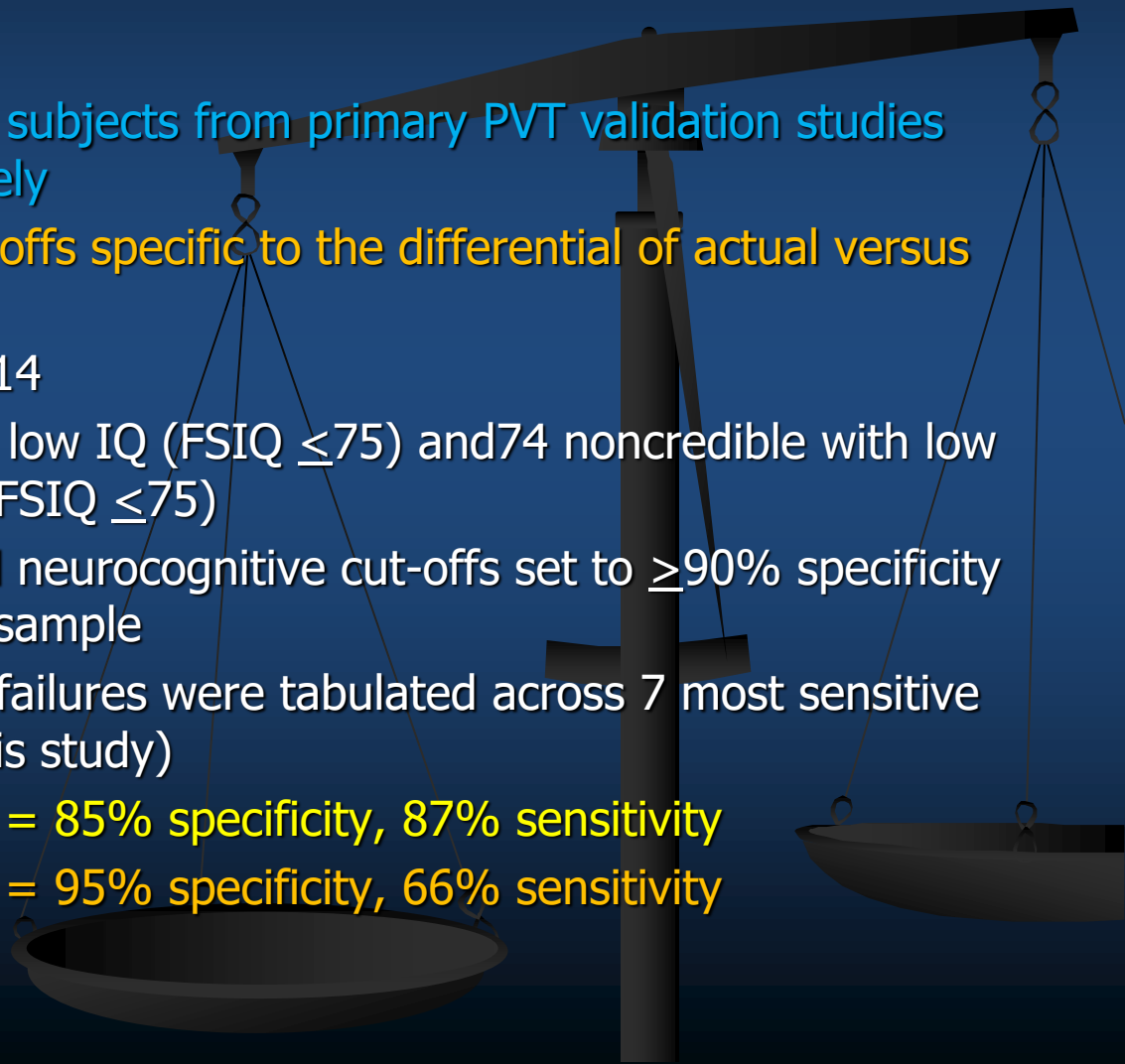


How to protect low functioning populations

- Bilder et al. (2014) was critical of removing low functioning individuals from credible samples
  - But the underlying assumption is incorrect
    - i.e., that a single cut-off could be developed for a population ranging from very low functioning to high functioning
  - Research shows that IQ is correlated with PVT performance in low IQ individuals, but not when IQ is low average or higher (e.g., Dean et al., 2008, Keary et al., 2013)

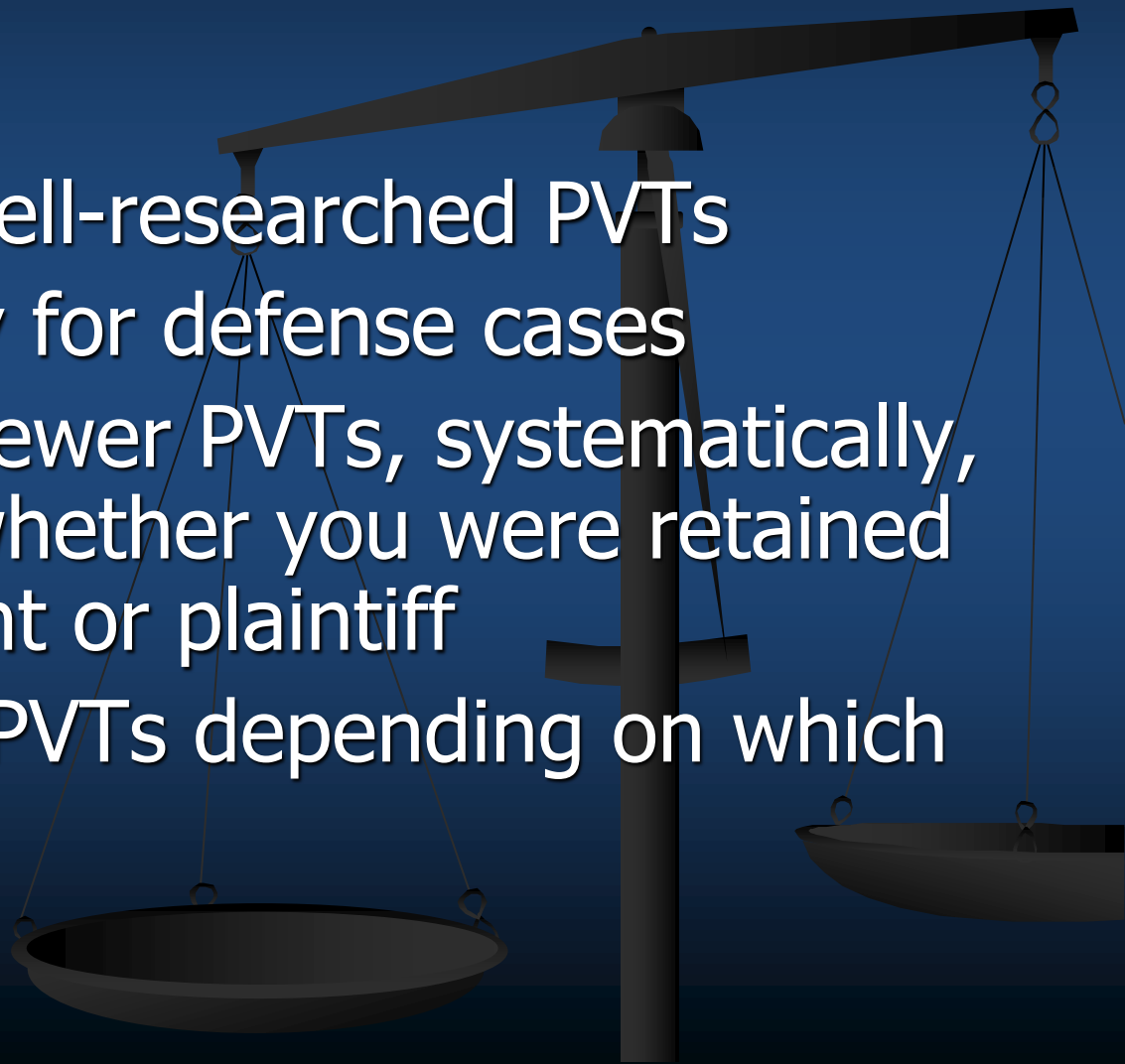
How to protect low functioning populations

- Best approach:
  - Remove low functioning subjects from primary PVT validation studies and study them separately
    - Developing PVT cut-offs specific to the differential of actual versus feigned low IQ
      - Smith et al., 2014
        - 55 credible low IQ (FSIQ ≤75) and74 noncredible with low IQ scores (FSIQ ≤75)
        - All PVT and neurocognitive cut-offs set to ≥90% specificity in credible sample
        - When PVT failures were tabulated across 7 most sensitive PVTs (in this study)
        - ≥2 failures = 85% specificity, 87% sensitivity
        - ≥3 failures = 95% specificity, 66% sensitivity



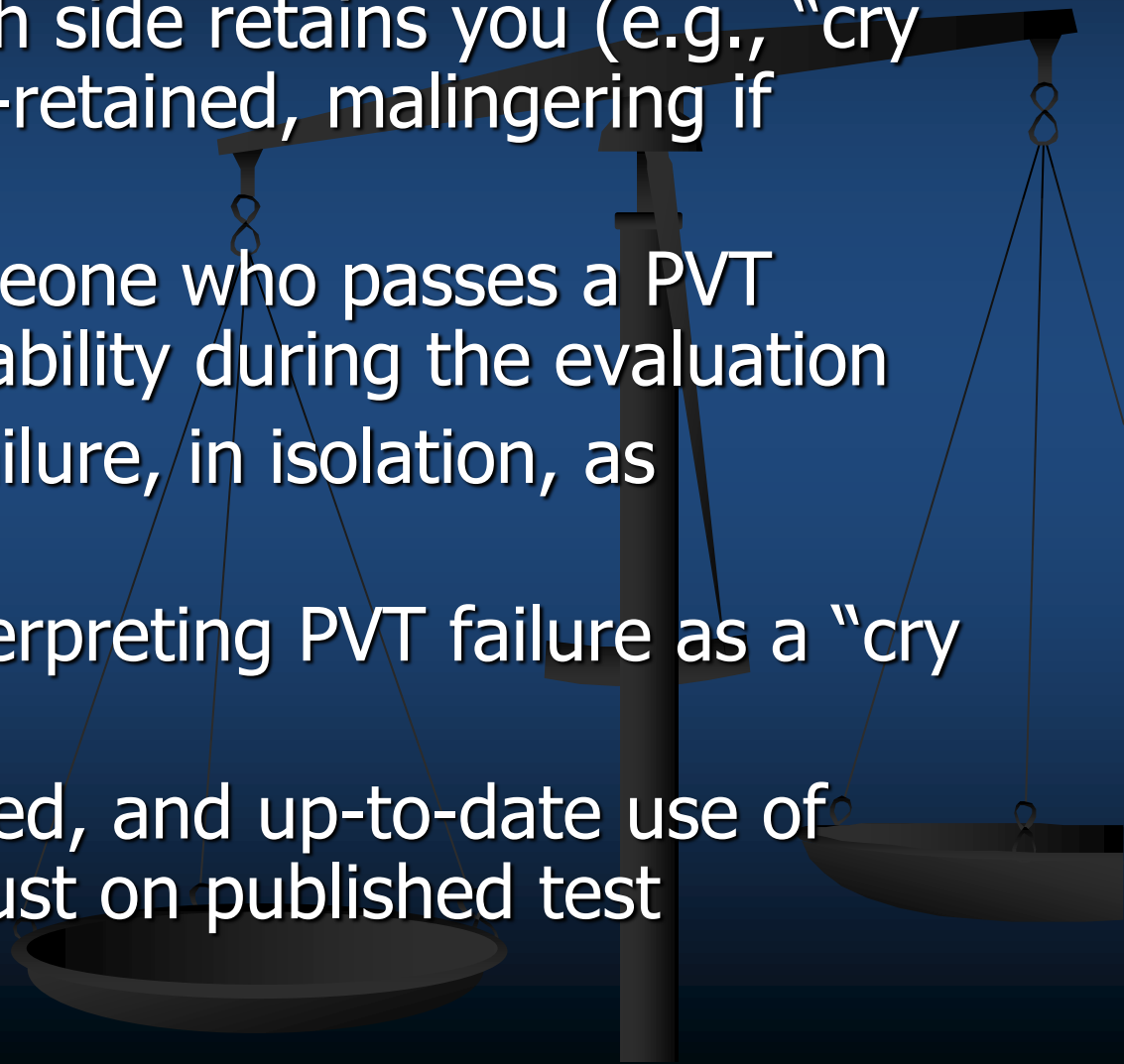
11 Ethical Concerns regarding performance validity assessment

(Iverson, 2006)



- Failing to use well-researched PVTs
- Using PVTs only for defense cases
- Using more or fewer PVTs, systematically, depending on whether you were retained by the defendant or plaintiff
- Using different PVTs depending on which side retains you

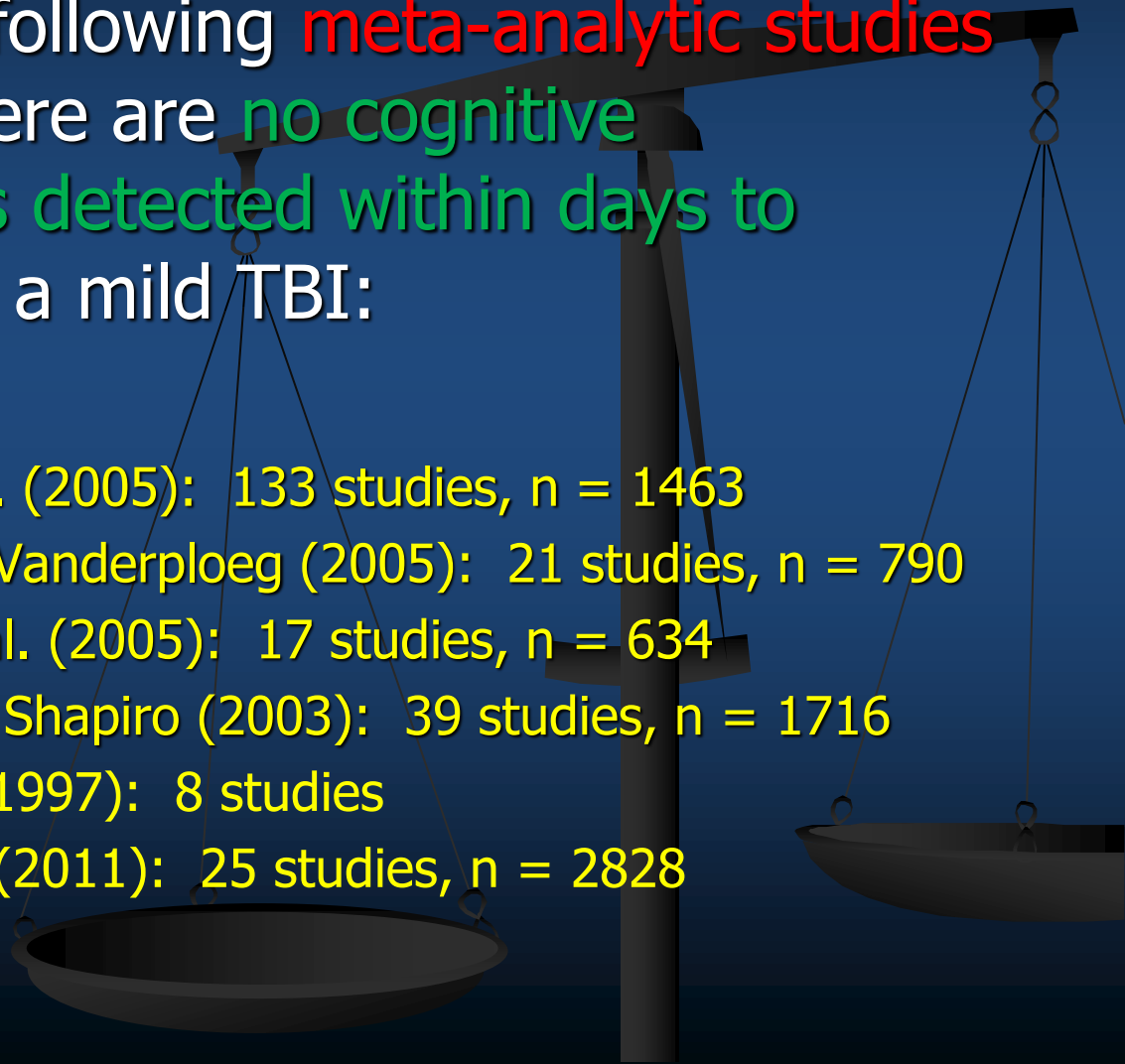
- Warning or prompting patients immediately before administration of a PVT
- Interpreting PVTs differently, systematically, depending on which side retains you (e.g., "cry for help" if plaintiff-retained, malingering if defense-retained)
- Assuming that someone who passes a PVT performed to true ability during the evaluation
- Interpreting PVT failure, in isolation, as malingering
- Inappropriately interpreting PVT failure as a "cry for help"
- Competent, informed, and up-to-date use of tests (do not rely just on published test manuals)



II. Failure to Draw Conclusions Consistent with Research

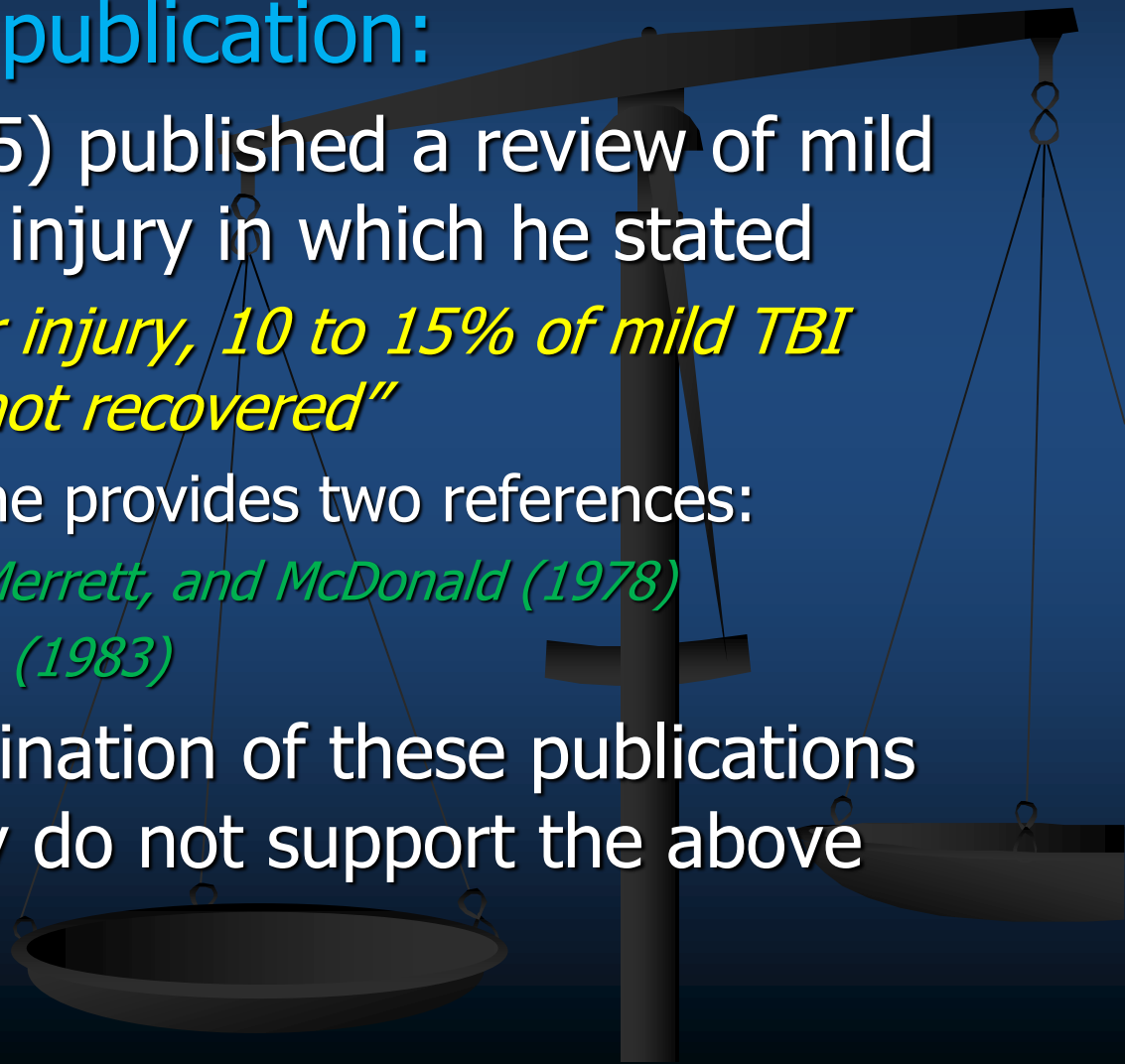
- Many reports conclude that observed cognitive abnormalities are due to long-term effects of mTBI
  - But a recent book summarizing the research on mild traumatic brain injury (McCrea, 2007), published under the auspices of the American Academy of Clinical Neuropsychology, concludes
    - "no indication of permanent impairment on neuropsychological testing by three months postinjury" (p. 117)

- Further, the following meta-analytic studies show that there are no cognitive abnormalities detected within days to months after a mild TBI:
  - Belanger et al. (2005): 133 studies, n = 1463
  - Belanger and Vanderploeg (2005): 21 studies, n = 790
  - Frencham et al. (2005): 17 studies, n = 634
  - Schretlen and Shapiro (2003): 39 studies, n = 1716
  - Binder et al. (1997): 8 studies
  - Rohling et al. (2011): 25 studies, n = 2828



Basis of the claimed *10%-15% mTBI* who do not recover?

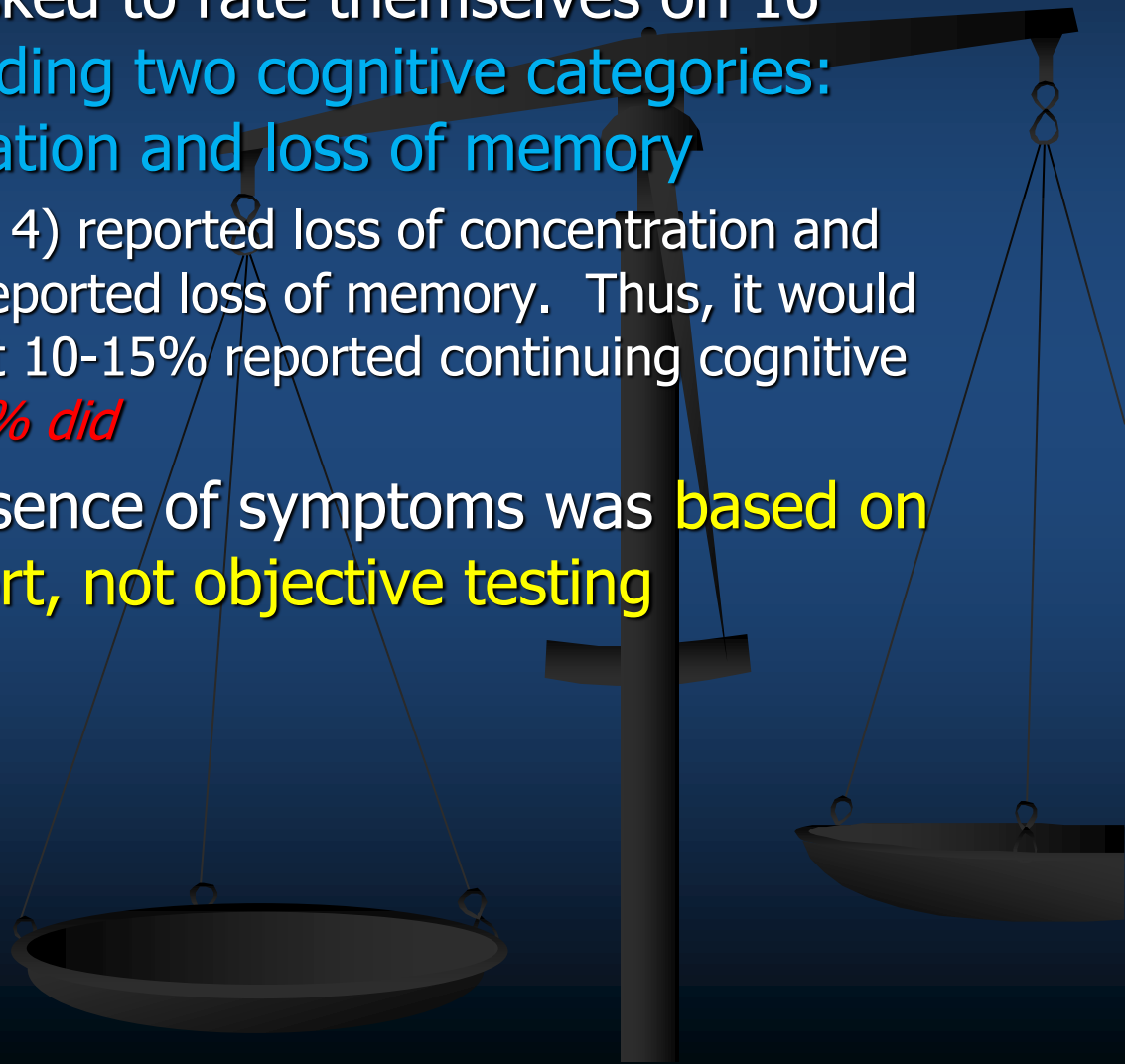
- Most influential publication:
  - Alexander (1995) published a review of mild traumatic brain injury in which he stated
    - *"at 1 year after injury, 10 to 15% of mild TBI patients have not recovered"*
    - and for which he provides two references:
      - *Rutherford, Merrett, and McDonald (1978)*
      - *McLean et al. (1983)*
  - However, examination of these publications shows that they do not support the above statement



Rutherford et al. (1978)

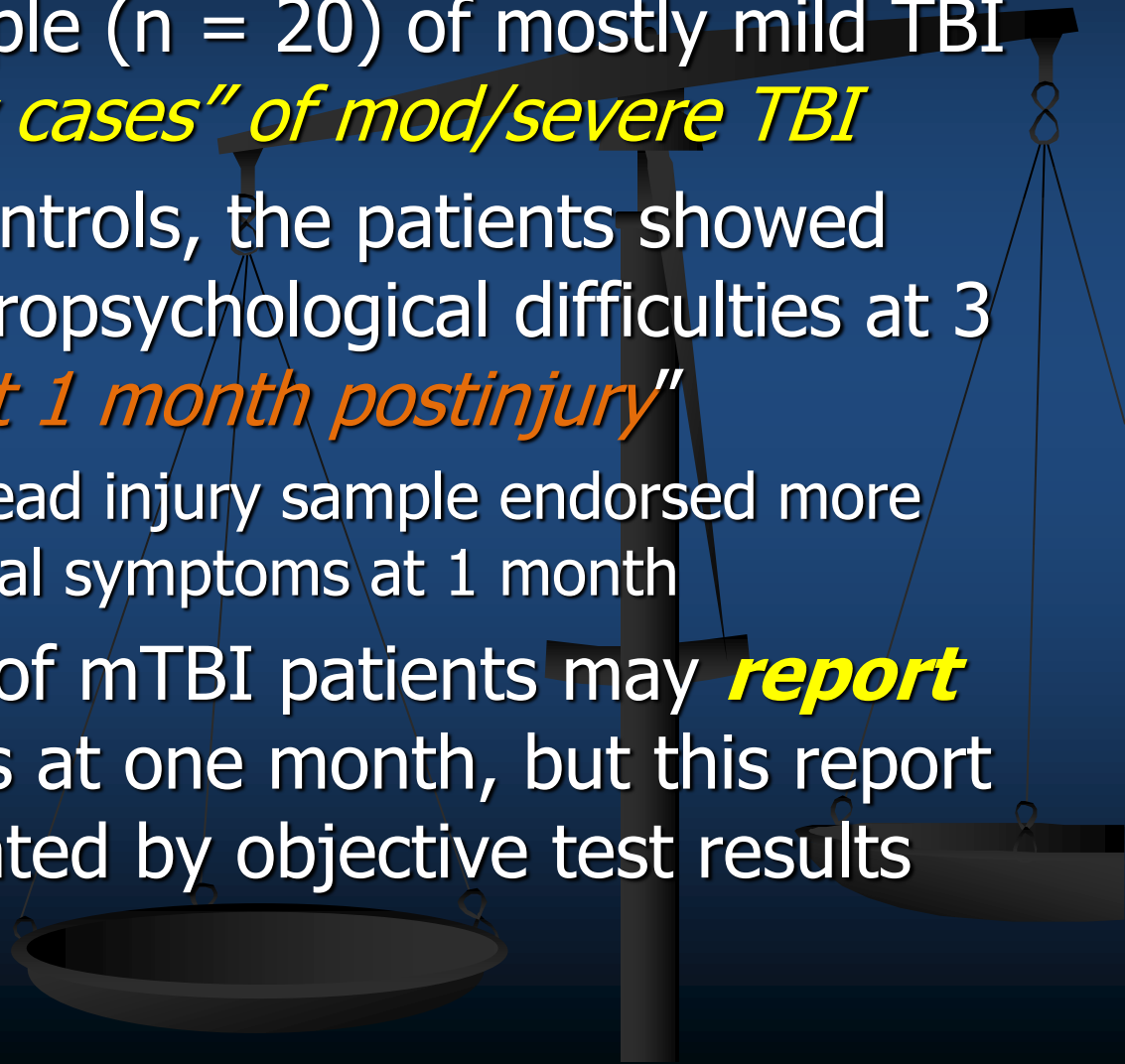
- Of 131 mild concussion patients, 14.5% still reported symptoms at 1 year
  - However, *"Of the 19 patients who had symptoms at 1 year, 8 were involved in lawsuits and 6 had been suspected of malingering 6 weeks after their accident. Five of these patients were both involved in lawsuits and suspected of malingering"*
  - Further, info was recorded as *to "whether it was known that the patient was making a legal claim for compensation,"* which suggests that in some cases compensation-seeking was present but not known to the examiners

- Patients were asked to rate themselves on 16 symptoms, including two cognitive categories: loss of concentration and loss of memory
  - only 3.1% (n = 4) reported loss of concentration and 3.8% (n = 5) reported loss of memory. Thus, it would not be true that 10-15% reported continuing cognitive symptoms; *<4% did*
- Further, the presence of symptoms was based on patient self-report, not objective testing



McLean et al. (1983)

- Very small sample (n = 20) of mostly mild TBI but with *"a few cases" of mod/severe TBI*
- compared to controls, the patients showed "significant neuropsychological difficulties at 3 days, *but not at 1 month postinjury*"
  - although the head injury sample endorsed more postconcussional symptoms at 1 month
- Thus, a subset of mTBI patients may ***report*** more symptoms at one month, but this report is not corroborated by objective test results



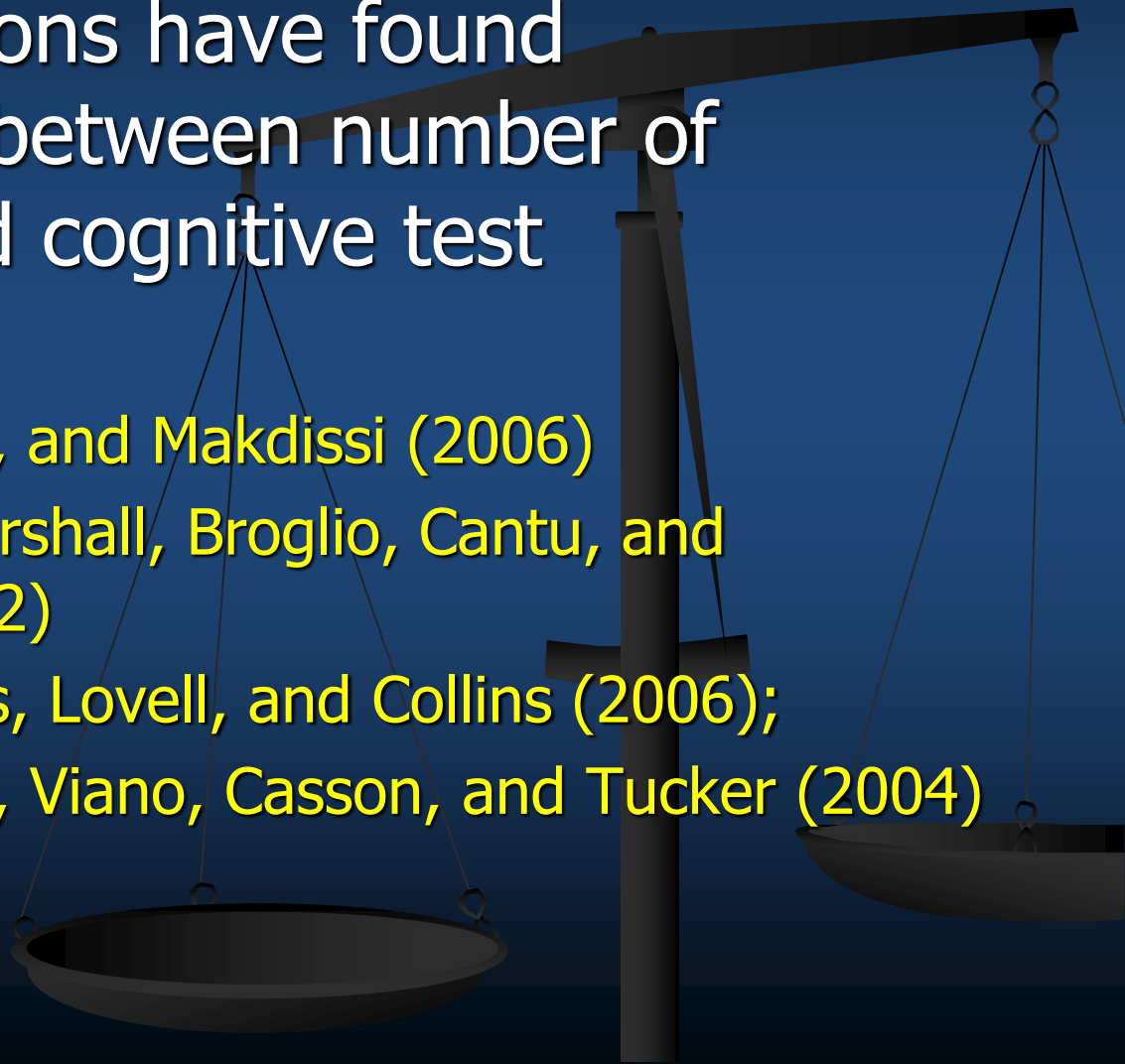
- Dikmen and Levin (1993) note that studies cited as documenting long term cognitive symptoms in mTBI
  - "were flawed by *inclusion of patients with preexisting conditions* (e.g., previous head injury) and failure to use appropriate controls to correct for these conditions"
  - They suggest that "subsequent controlled studies have *indicated time-limited neuropsychological impairments that disappear by 1 to 3 months postinjury*"

What about impact of multiple concussions?

- Some argue that while a single concussion may not result in permanent cognitive sequelae, more than one does,
  - i.e., that while the mTBI associated with the accident in question may not have resulted in cognitive problems in a person with no history of TBI,
    - the fact that the plaintiff had a previous concussion rendered him/her an "eggshell" plaintiff who was predisposed to chronic cognitive problems from any subsequent mTBI

What does the literature say?

- Most investigations have found no relationship between number of concussions and cognitive test performance
  - Collie, McCrory, and Makdissi (2006)
  - Guskiewicz, Marshall, Broglio, Cantu, and Kirkendall (2002)
  - Iverson, Brooks, Lovell, and Collins (2006);
  - Pellman, Lovell, Viano, Casson, and Tucker (2004)



What does the literature say?

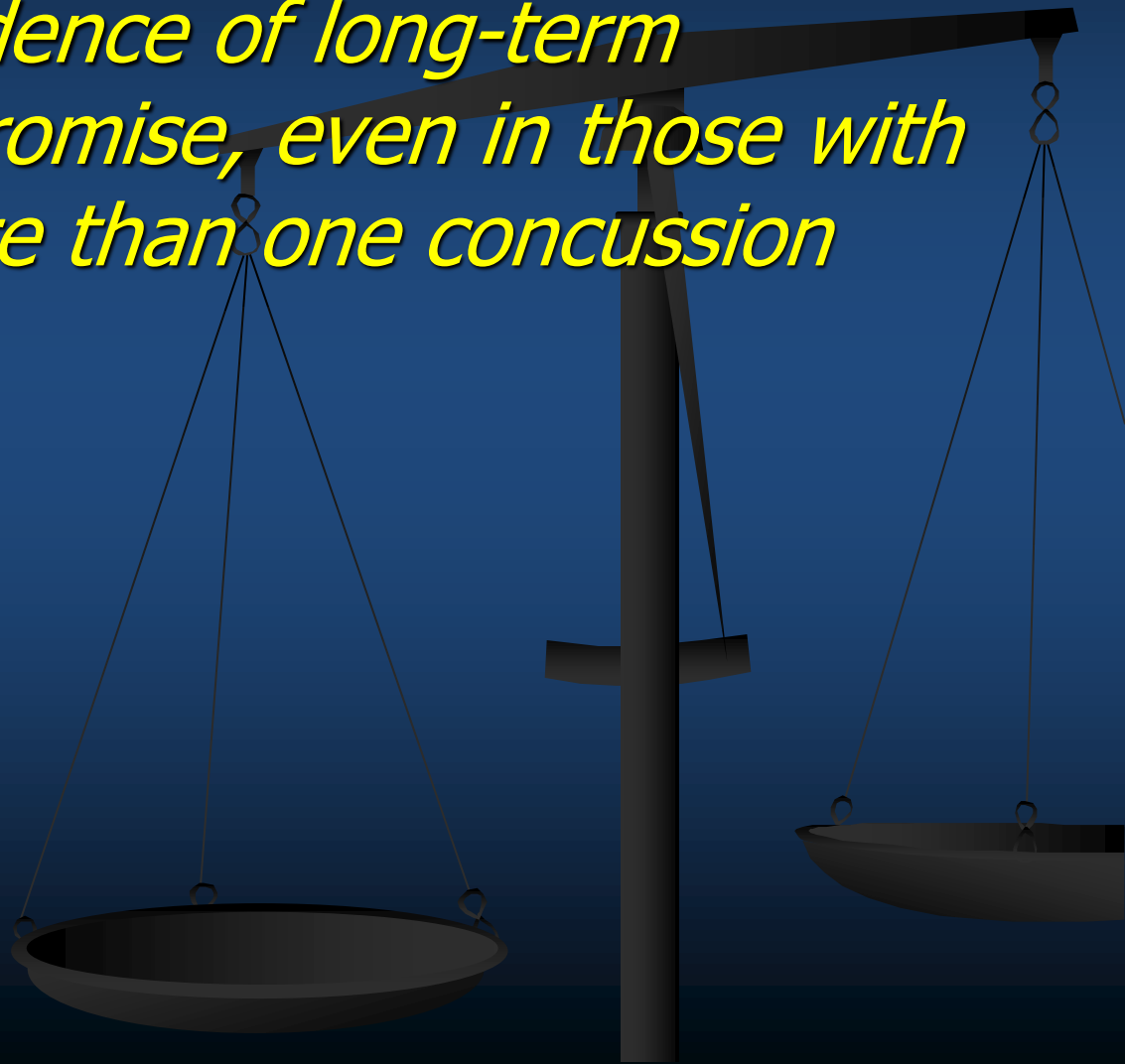
- Bijur, Haslum, and Golding (1996)
  - found that increasing numbers of mTBI in children were significantly related to lowered scores on measures of intelligence, and reading and math,
    - but the same negative impact on cognition was found for number of non brain-injury traumas
  - leading the authors to conclude that
    - "cognitive deficits associated with multiple mild head injury are due to social and personal factors related to multiple injuries and not to specific damage to the head"

What does the literature say?

- Recent meta-analysis comparing effects of one self-reported TBI versus more than one (Belanger et al.,2010), found that the
  - *"overall effect of multiple mTBI on neuropsychological functioning was minimal (d = .06) and not significant"*;
  - in examining specific cognitive domains, poorer performance with multiple TBI was found on measures of delayed memory and executive functioning, although effect sizes were small (*d = .16* and .24, respectively) and *"their clinical significance is unclear"*

Conclusions re: mTBI

- *No credible evidence of long-term cognitive compromise, even in those with histories of more than one concussion*



III. Failure to Consider All Possible Etiologies

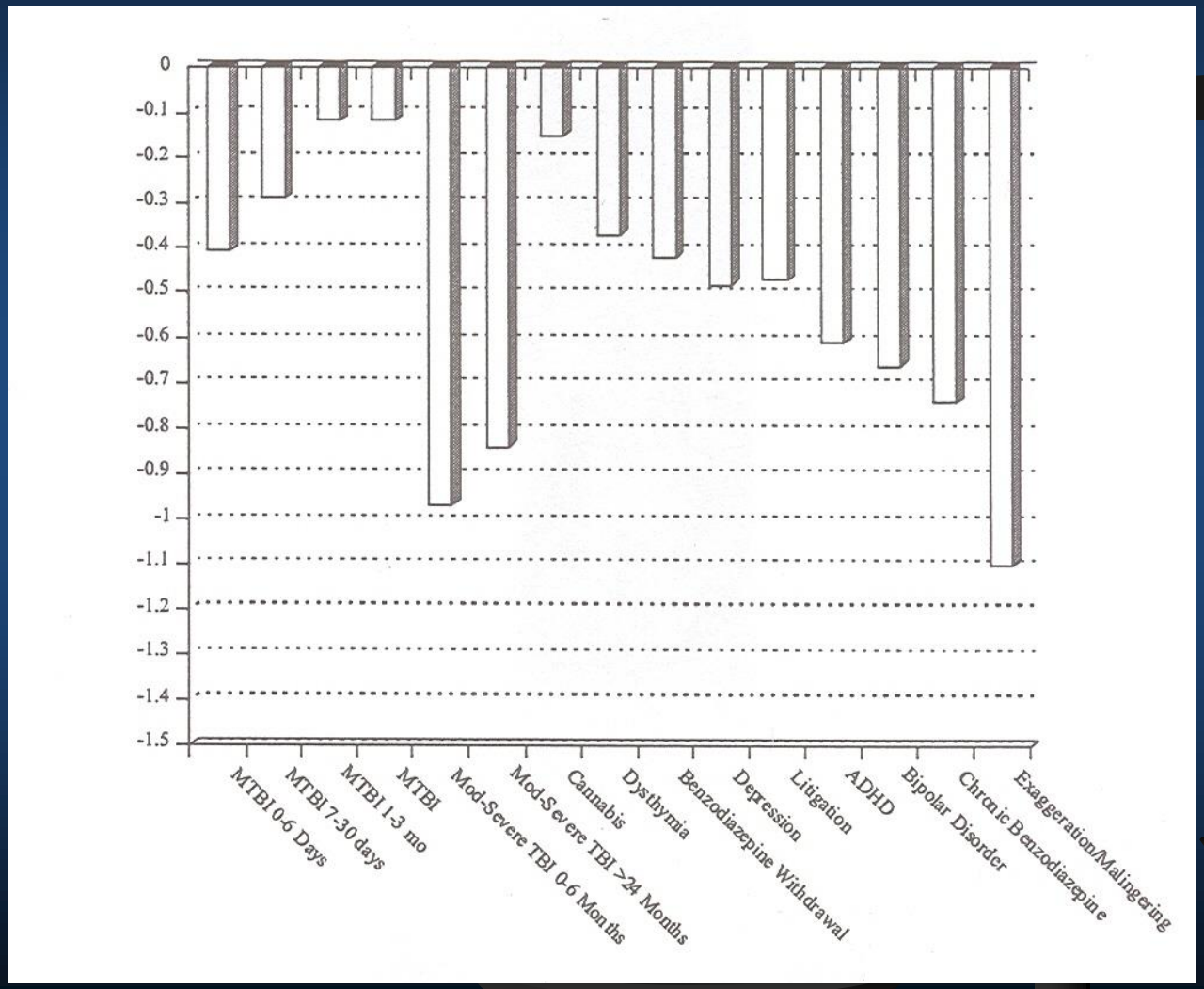
- Premature foreclosure:
  - *"a common mistake in clinical practice is automatically to attribute the cause of the difficulties observed in patients seen long after the injury to the head injury"*
  - *"learning disabilities, psychiatric problems, neurological disorders (e.g., epilepsy), and particularly previous head injuries and alcohol abuse are prevalent in the population with head injury … these conditions in themselves are known to be associated with neuropsychological and psychosocial problems"*
    - (Dikmen & Levin, 1993)

Conditions/characteristics that can be associated with lowered cognitive scores

- Substance abuse by patient or exposure in utero
- Chronic medical illnesses such as hypertension, diabetes, sleep apnea, COPD, HIV, hepatitis
- Learning disability or attention deficit disorder
- Low educational level or history of special education
- Medications
- Psychiatric conditions – depression, psychosis
- Neurologic conditions – brain infections, moderate to severe TBI, progressive dementia
- Language (e.g., ESL) and cultural issues

- All of the above have a more major impact on cognitive scores than mTBI

Effect Sizes on Cognition (Iverson, 2006)

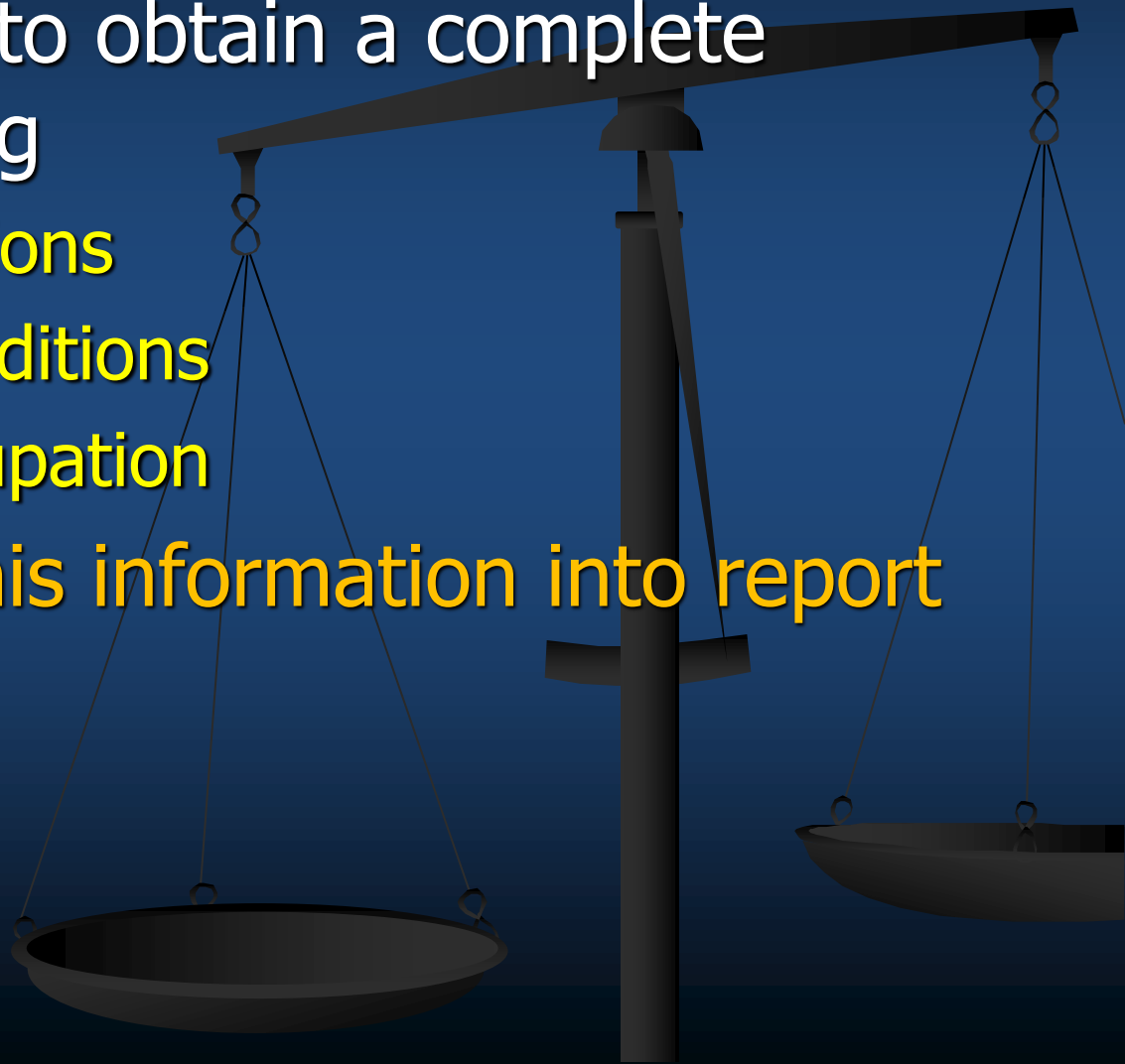


Does mTBI predispose to depression?

- Recent meta-analysis of the relationship between mTBI and psychiatric symptoms (depression, anxiety, psychosocial disability, reduced coping)
  - 11 studies were suitable for inclusion and represented a total of 352 mTBI patients and 765 controls
  - Effect sizes were smaller when studies were weighted, indicating that unweighted effect sizes were unduly influenced by studies with small n's and highly variable findings
  - Effect sizes ranged from -.28 to .26, did not significantly differ from zero (p = .76), and were considered "meaningless"
- The authors concluded that *"mTBI may have a very small to no measurable effect on psychological and psychosocial symptom reporting"*
  - Panayiotou, Jackson, and Crowe (2010)

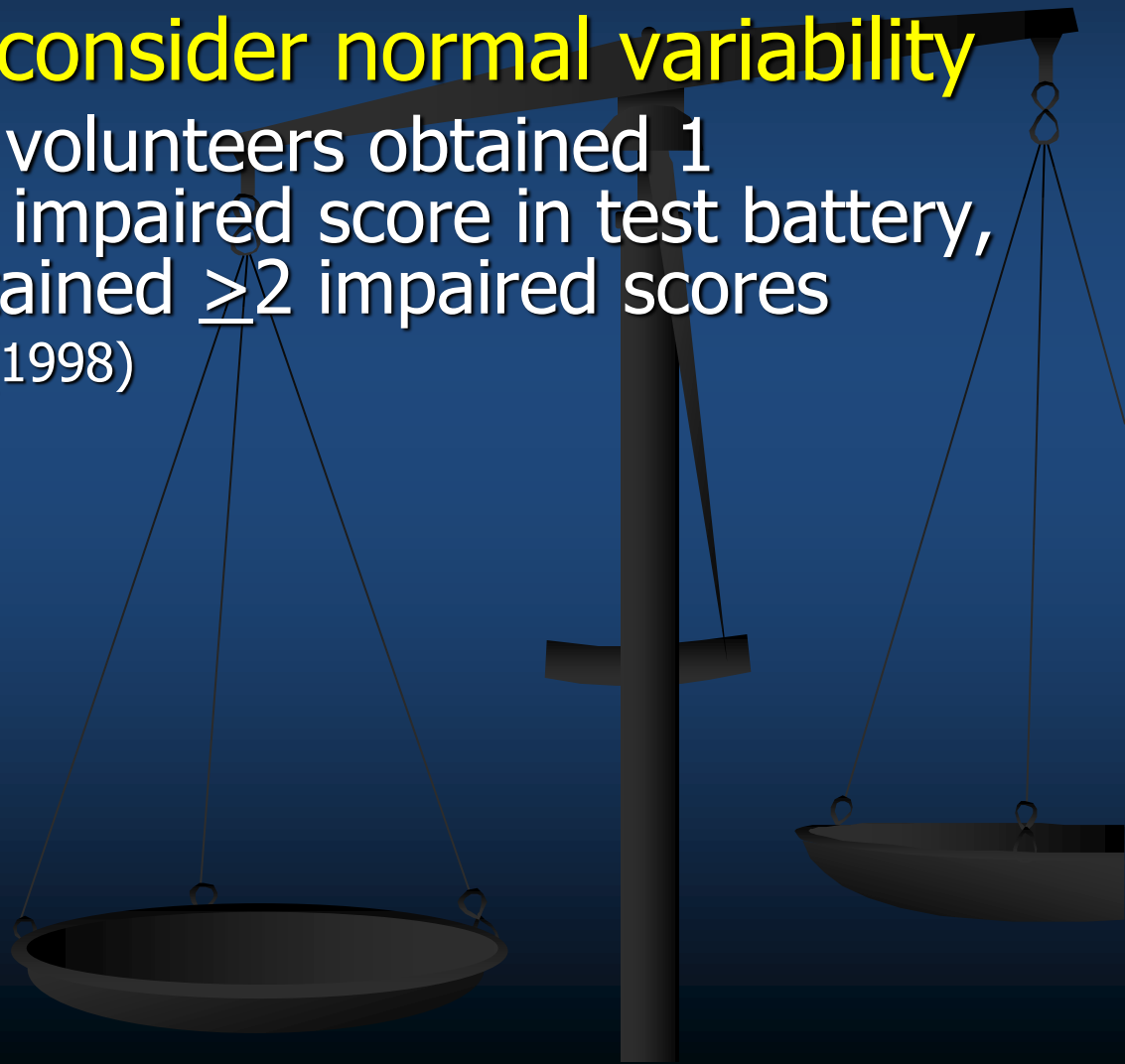
In Conclusion

- It is imperative to obtain a complete history regarding
  - medical conditions
  - psychiatric conditions
  - education/occupation
- and integrate this information into report conclusions



IV. Over-interpretation of Lowered Scores

- A. Failure to consider normal variability
  - ¾ of normal volunteers obtained 1 borderline to impaired score in test battery, and 20% obtained ≥2 impaired scores
    - Palmer et al. (1998)

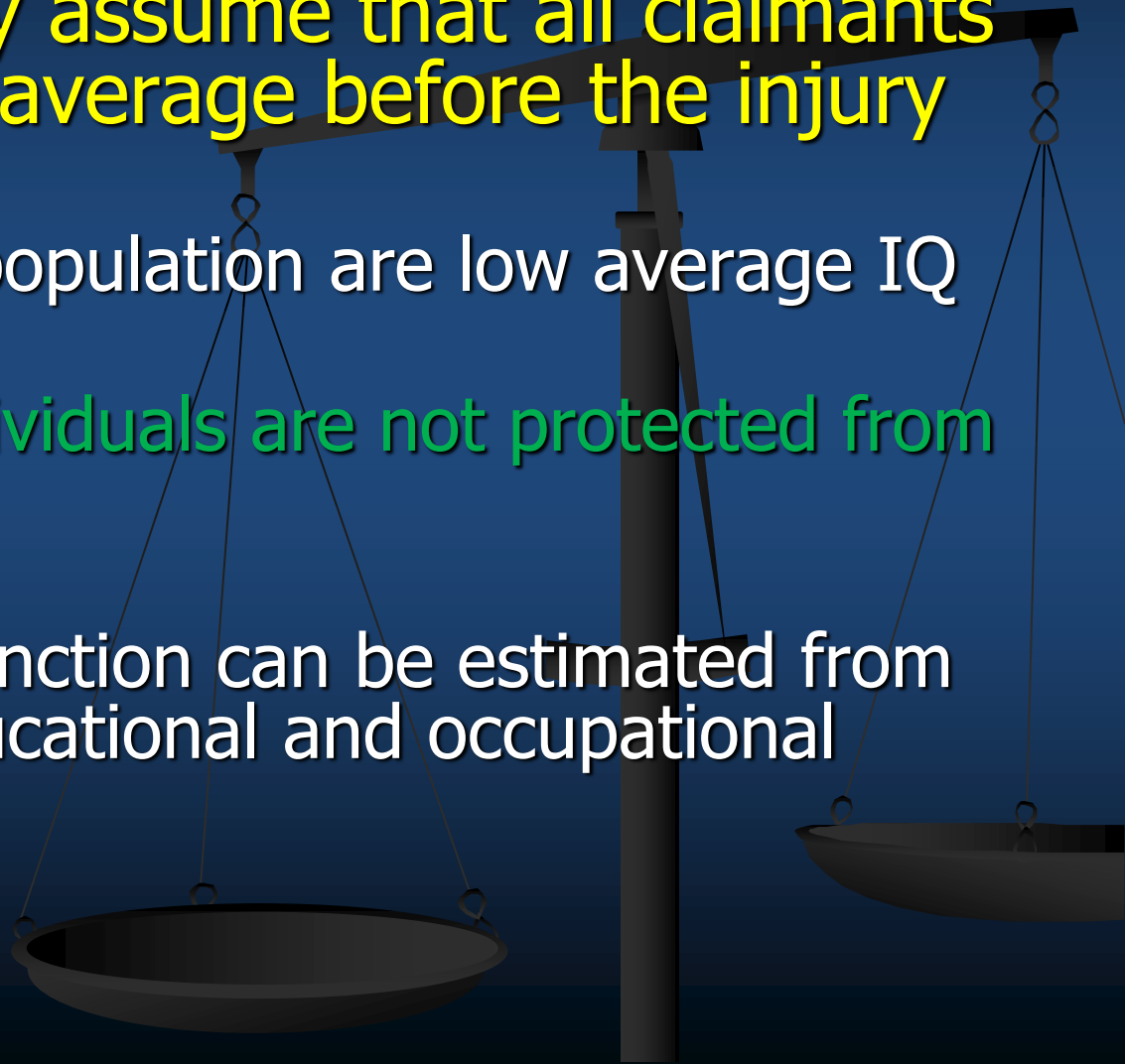


IV. Over-interpretation of Lowered Scores

- A. Failure to consider normal variability
  - Marked intraindividual variability is common in normal adults
    - z-score discrepancies ranged from 1.6 SD to 6.0 SD; 66% of subjects had discrepancy values that exceeded 3 SDs
      - Schretlen, Munro, Anthony, and Pearlson (2003)
  - Review article: "abnormal performance on some proportion of neuropsychological tests is psychometrically normal"
    - Binder, Iverson, and Brooks (2009)

IV. Over-interpretation of Lowered Scores

- B.) Incorrectly assume that all claimants were at least average before the injury
  - 25% of the population are low average IQ or lower
    - These individuals are not protected from injury
  - Premorbid function can be estimated from preinjury educational and occupational background

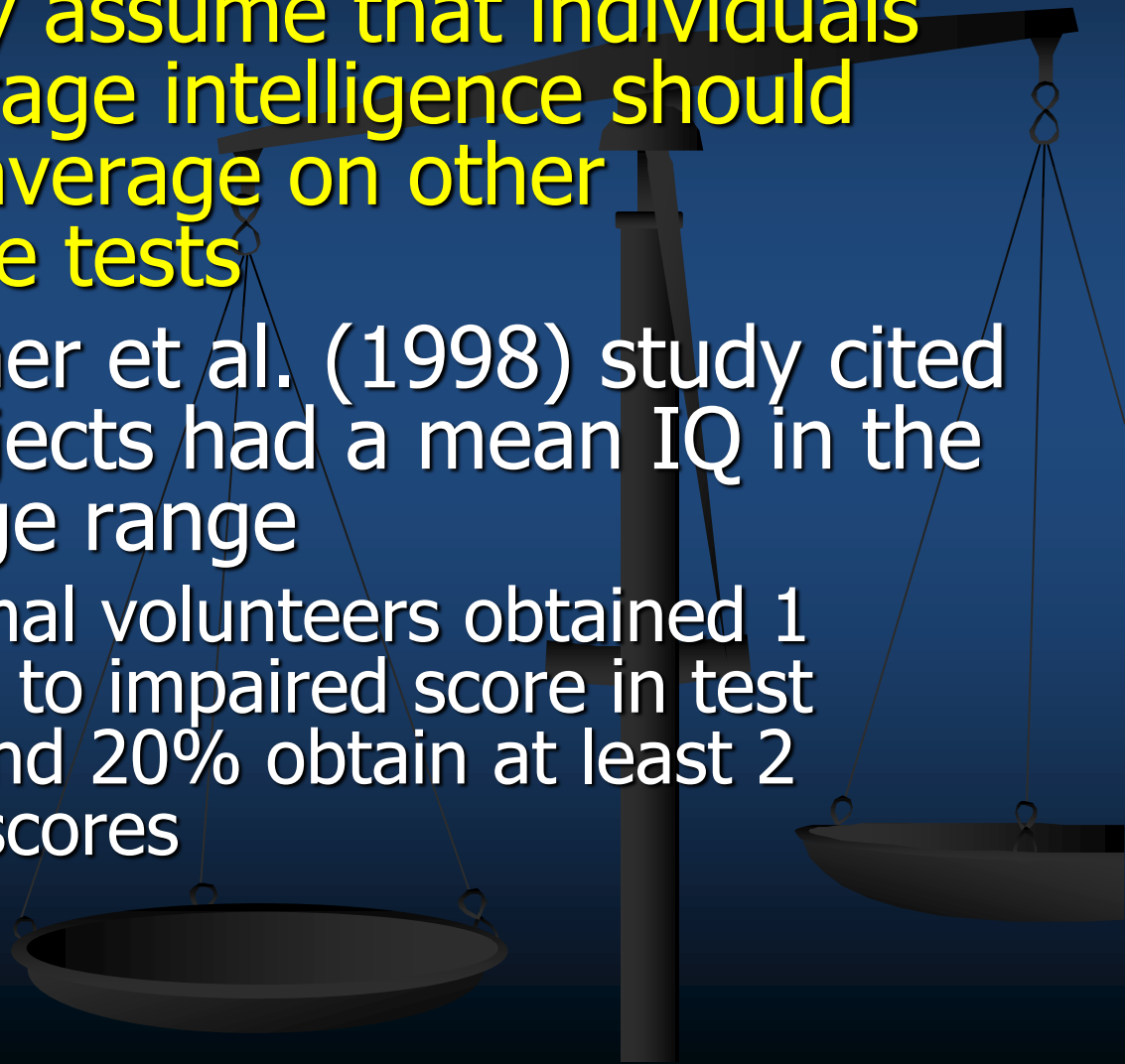


IV. Over-interpretation of Lowered Scores

- C.) Refer to low average scores (9^{th}-24^{th} percentile) as "impairments"
  - 16% of normal population obtains scores at this level
  - Better to use IQ labels so a common rubric is employed across tests:
    - Impaired = $\leq 2^{nd}$ percentile
    - Borderline impaired = 3^{rd}-8^{th} percentile
    - Low Average = 9^{th}-24^{th} percentile
    - Average = 25^{th}-74^{th} percentile
    - High Average = 75^{th}-90^{th} percentile
    - Superior = 91^{st} – 97^{th} percentile
    - Very Superior = $\geq 98^{th}$ percentile

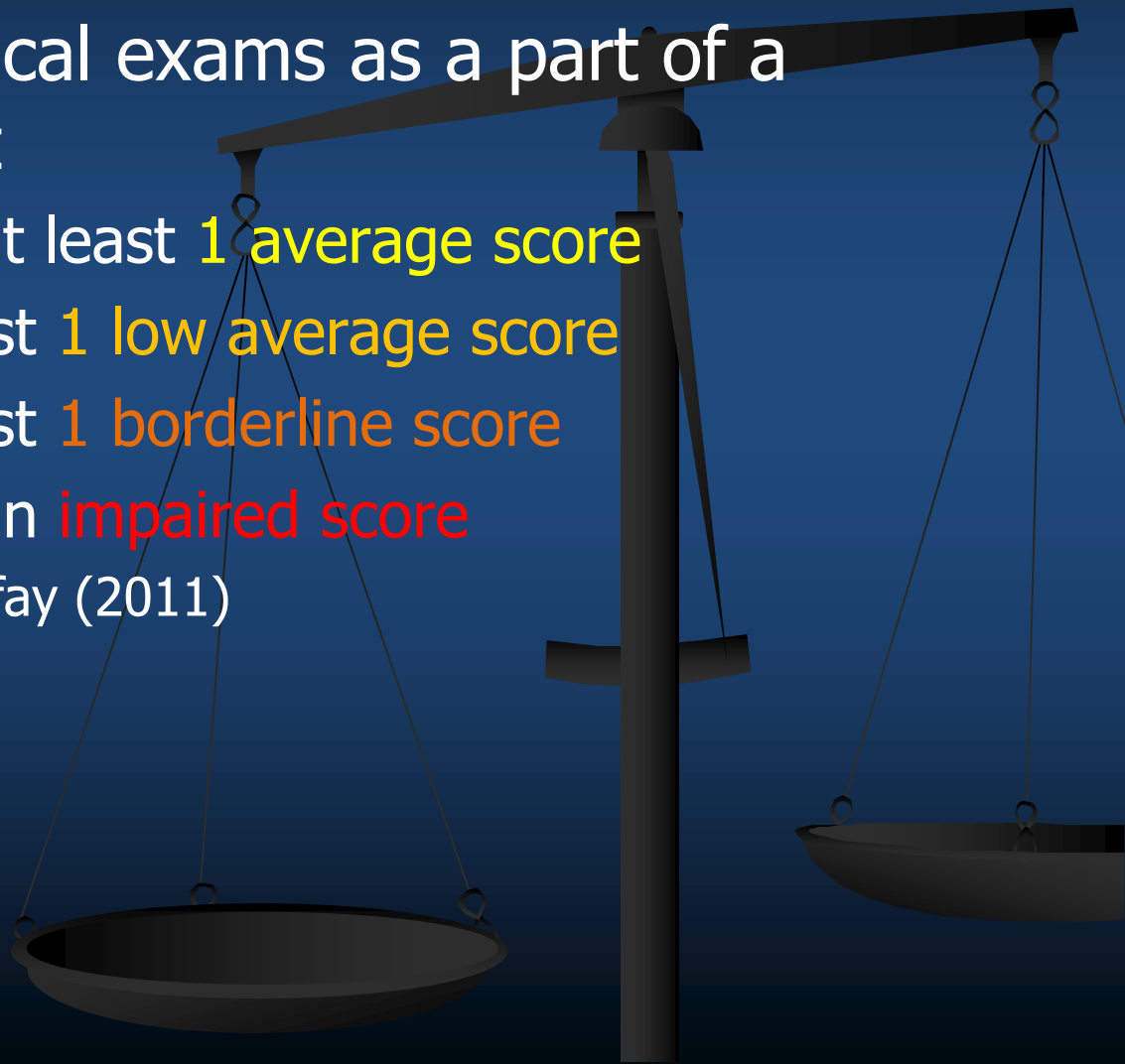
IV. Over-interpretation of Lowered Scores

- D.) incorrectly assume that individuals of above average intelligence should score above average on other neurocognitive tests
  - In the Palmer et al. (1998) study cited above, subjects had a mean IQ in the high average range
    - ¾ of normal volunteers obtained 1 borderline to impaired score in test battery, and 20% obtain at least 2 impaired scores



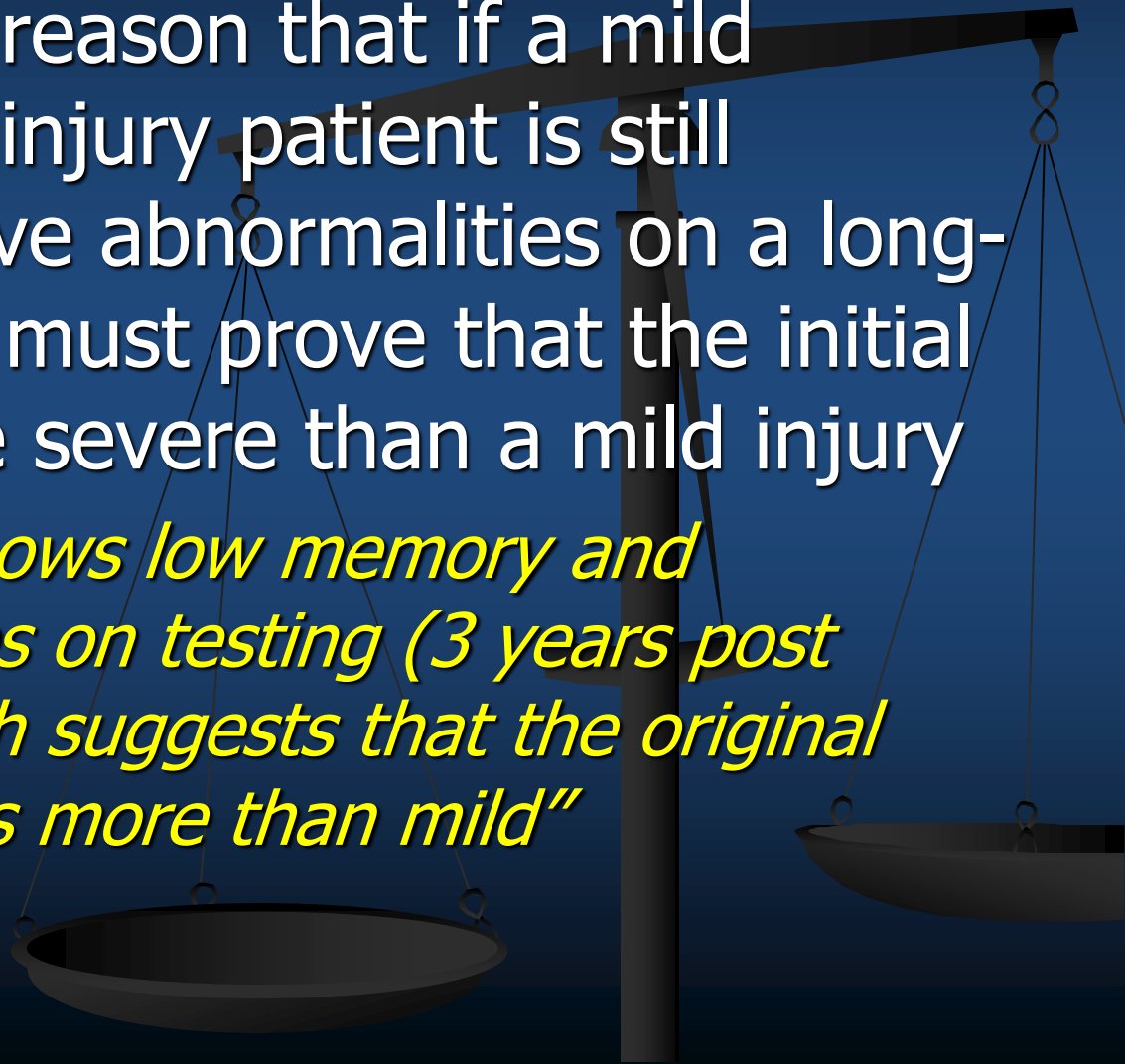
- IQ scores are not good predictors of cognitive function when individuals are above average in intelligence
  - multiple studies have shown that individuals with high intelligence do not obtain uniformly elevated scores on cognitive exam:
    - Diaz-Asper, Schretlen, and Pearlson (2004)
    - Hawkins and Tulsky (2001)
    - Russell (2001)
  - leading Greiffenstein (2008) to conclude that the belief that above average scores should be consistently found across cognitive tasks in individuals with above average IQ is a neuropsychological "myth."

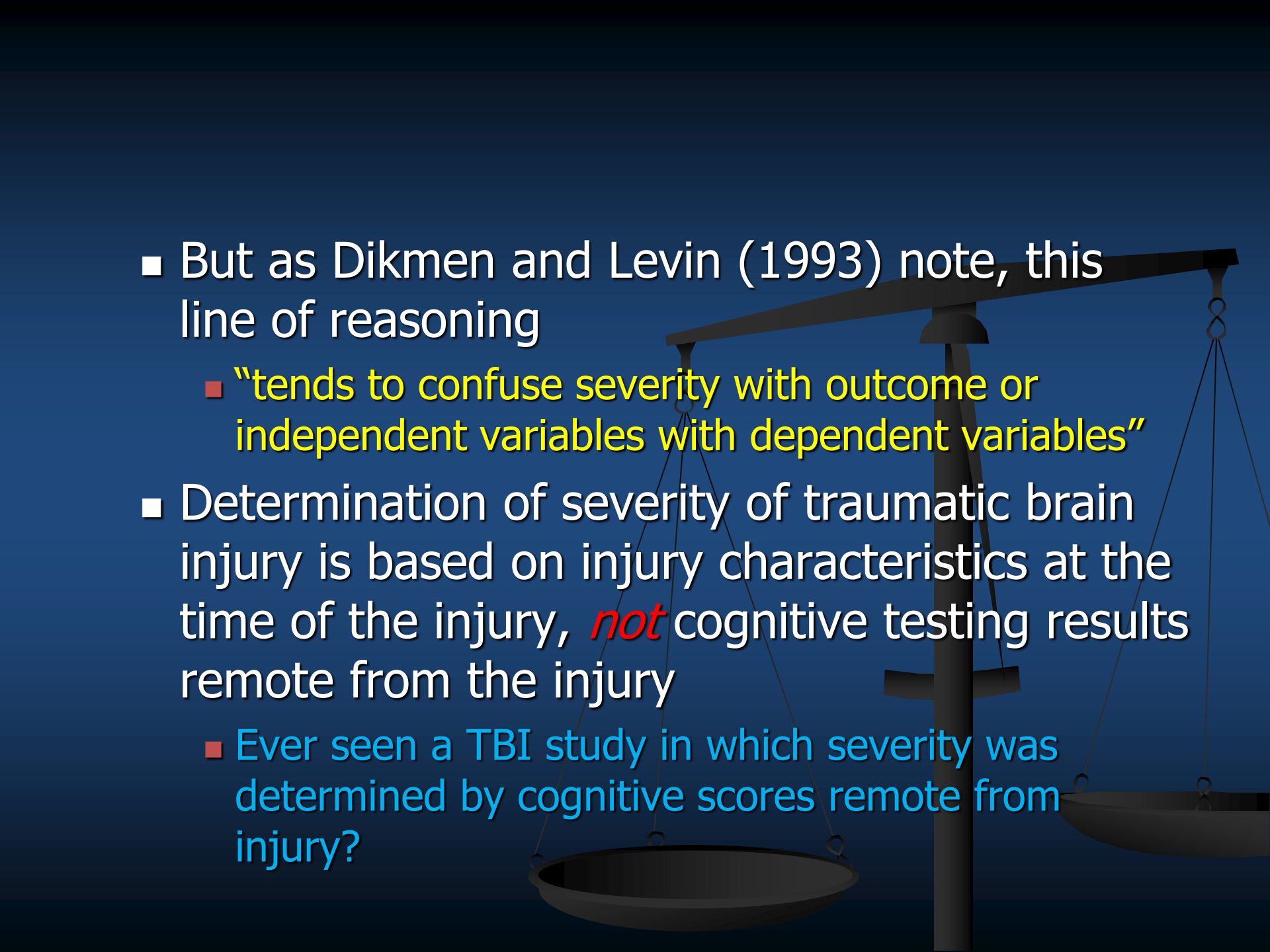
- In a particularly relevant study, 20 professors with Ph.D. degrees and with negative medical and psychiatric histories were administered neuropsychological exams as a part of a research project
  - 65% obtained at least 1 average score
  - 30% had at least 1 low average score
  - 10% had at least 1 borderline score
  - 15% obtained an impaired score
    - Zakzanis & Jeffay (2011)



V. Claim that Low Cognitive Scores Document Brain Injury

- Some clinicians reason that if a mild traumatic brain injury patient is still showing cognitive abnormalities on a long-term basis, this must prove that the initial injury was more severe than a mild injury
  - *"The patient shows low memory and executive scores on testing (3 years post accident), which suggests that the original brain injury was more than mild"*



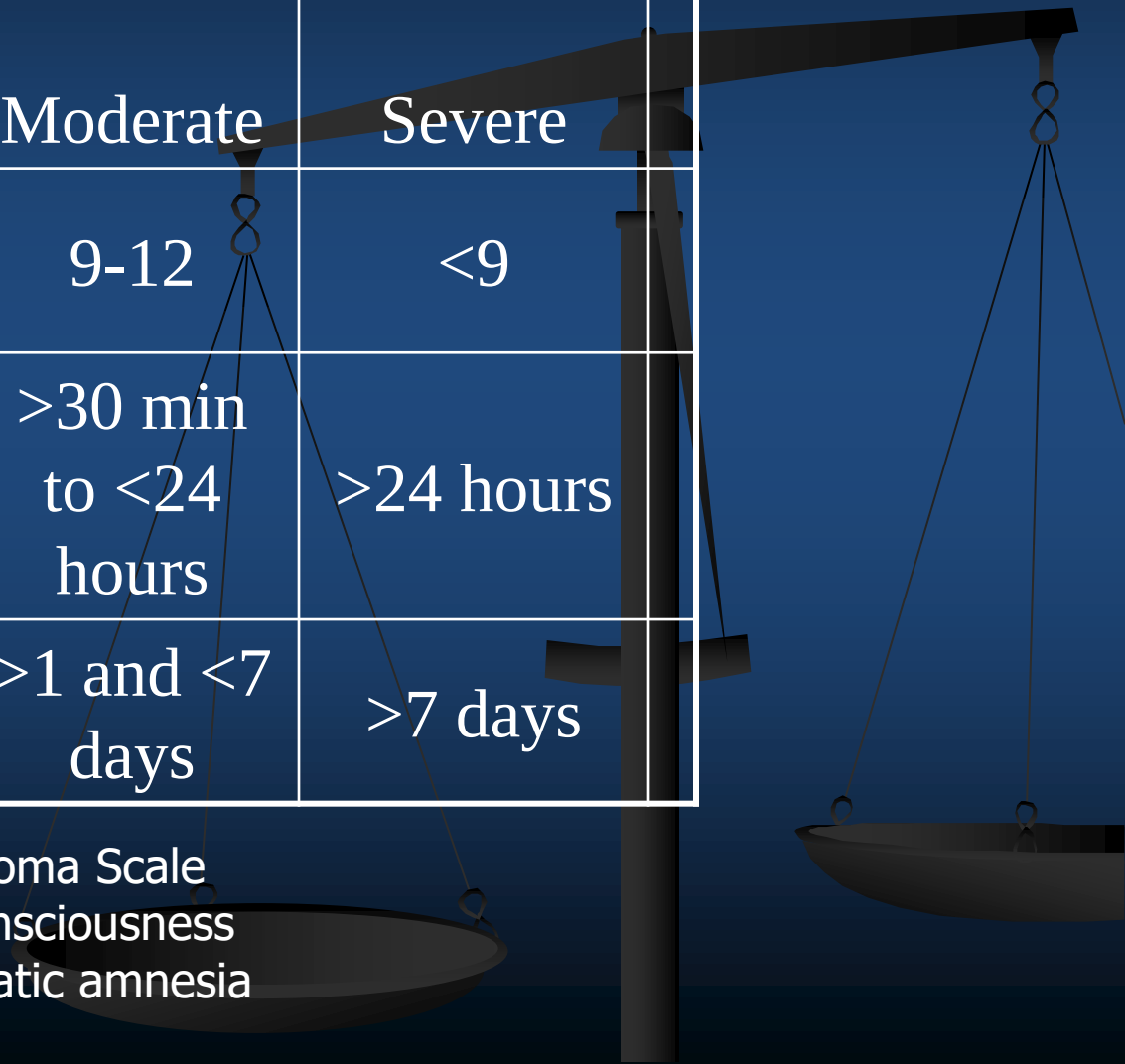


- But as Dikmen and Levin (1993) note, this line of reasoning
  - "tends to confuse severity with outcome or independent variables with dependent variables"
- Determination of severity of traumatic brain injury is based on injury characteristics at the time of the injury, *not* cognitive testing results remote from the injury
  - Ever seen a TBI study in which severity was determined by cognitive scores remote from injury?

TBI Classification

	Mild	Moderate	Severe
GCS	≥13	9-12	<9
LOC	<30 min.	>30 min to <24 hours	>24 hours
PTA	≤1 day	>1 and <7 days	>7 days

GCS = Glasgow Coma Scale
LOC = Loss of Consciousness
PTA = Post traumatic amnesia



VI. Misinterpretation of the MMPI-2/RF

- Myths or Facts?

- 1) In personal injury litigants, elevations on somatic complaints scales are consistent with expected concern over the injuries sustained in the accident
  - *"Objective testing data revealed an individual who is experiencing ….somatic or bodily preoccupation, not unlike many individuals with history of traumatic illnesses or injuries, consistent with sequelae of traumatic brain injury."*

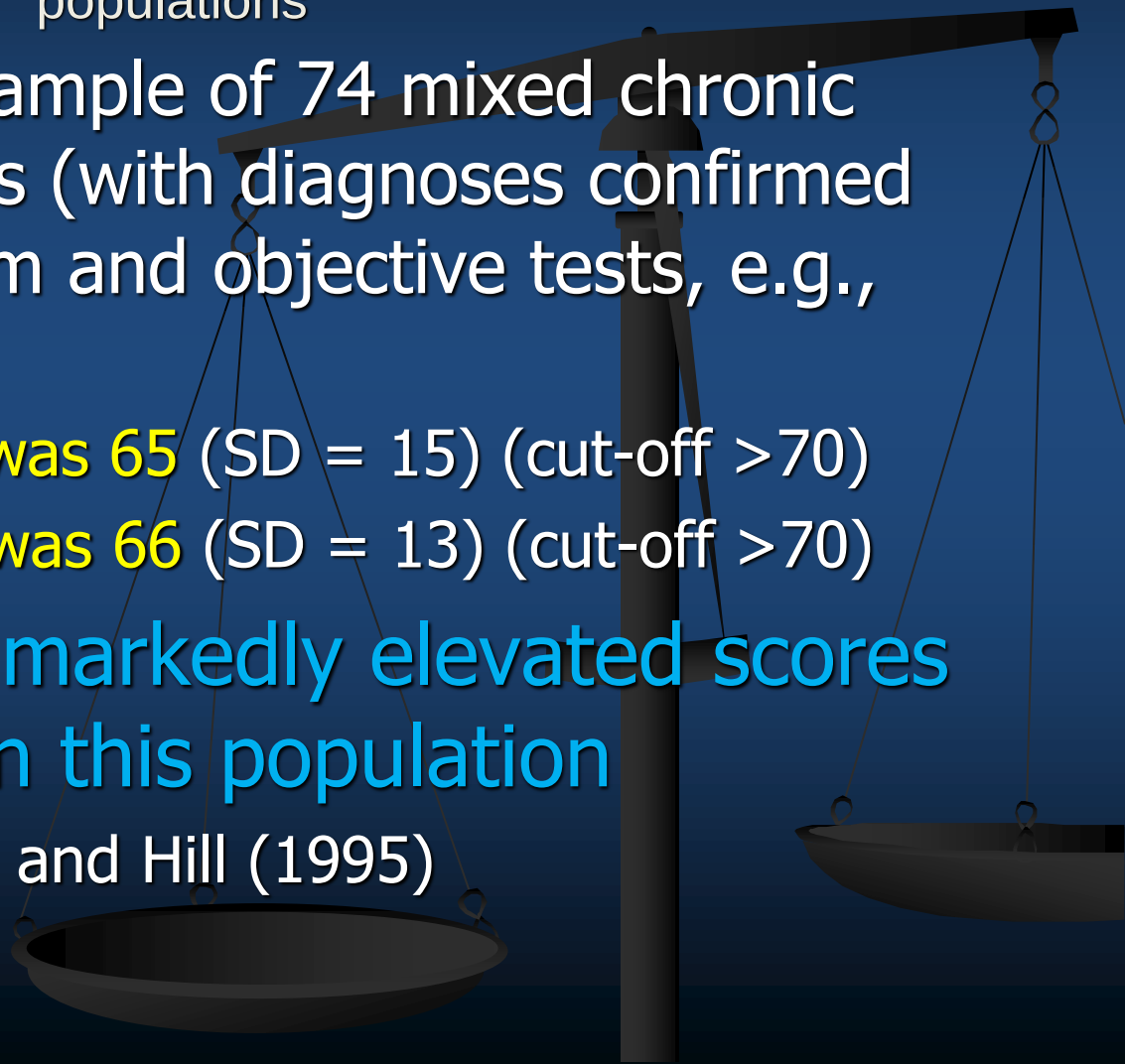
VI. Misinterpretation of the MMPI-2/RF

- Myths or Facts?
- 2) The hypochondriasis/somatic complaints scales were not developed on medical/neurologic patients and should not be used in this population
- 3) Elevations on validity scales indicate a "cry for help" rather than malingering
- 4) The FBS scale misdiagnoses persons with actual disabilities as malingering

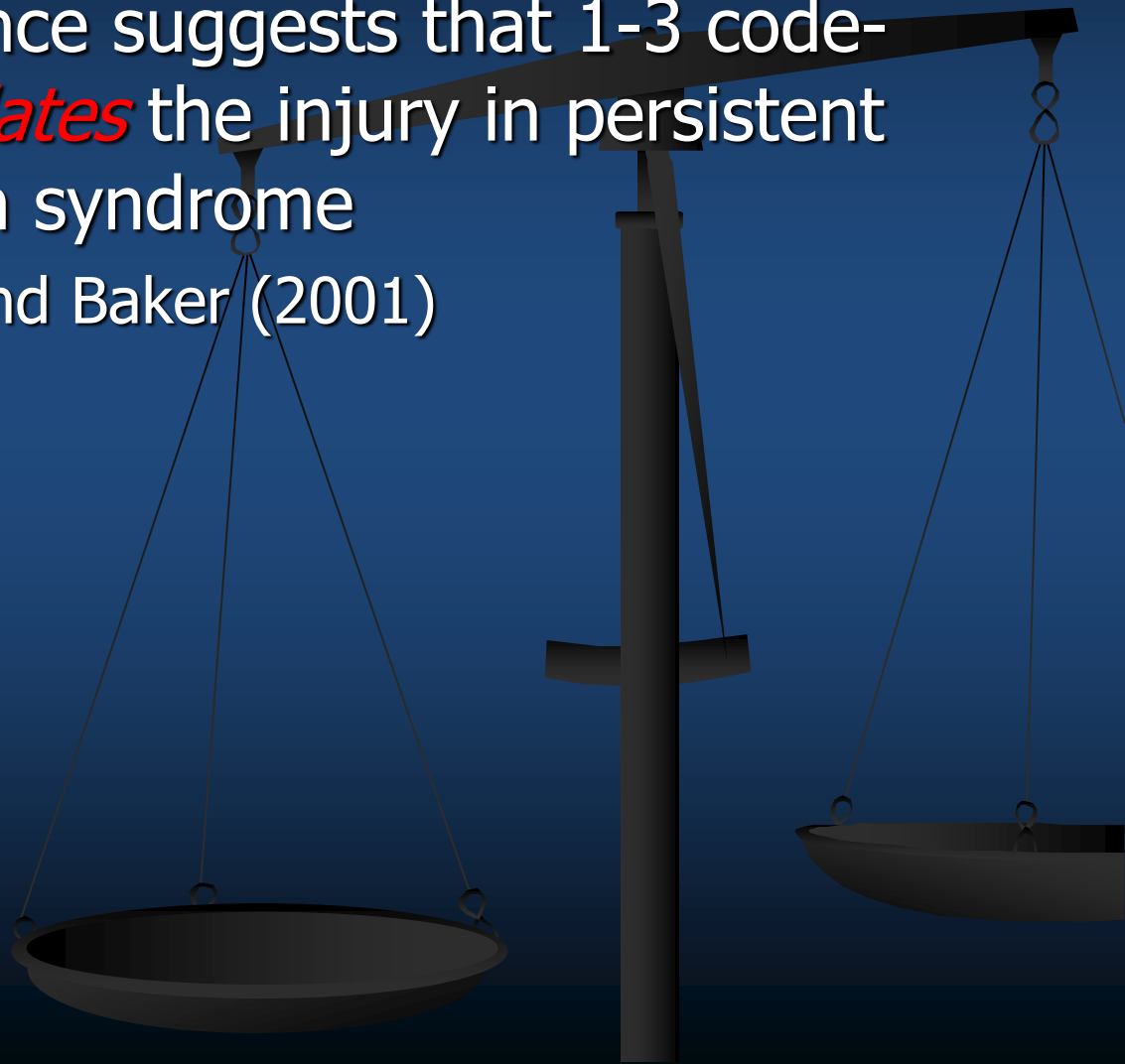
Myths #1 and #2:

Elevations on Somatic Complaints scales do not reflect overreport in injured litigants, and the scales were not developed/validated on true medical patients and therefore should not be used in medical populations

- MMPI data for a sample of 74 mixed chronic neurologic patients (with diagnoses confirmed by neurologic exam and objective tests, e.g., MRI, EEG),
  - mean Hs T score was 65 (SD = 15) (cut-off >70)
  - mean Hy T score was 66 (SD = 13) (cut-off >70)
- confirming that markedly elevated scores are not typical in this population
  - Cripe, Maxwell, and Hill (1995)



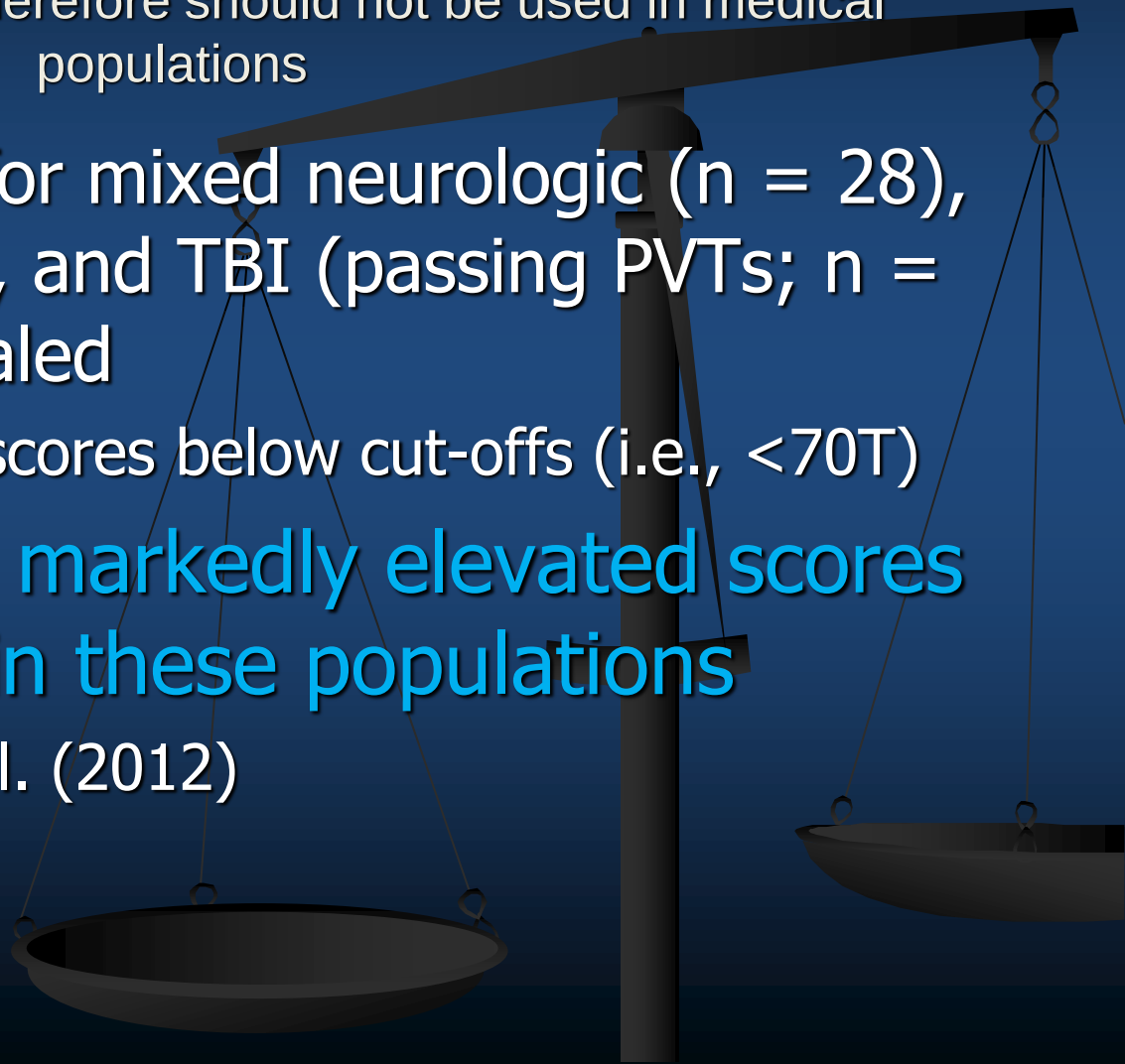
- Available evidence suggests that 1-3 code-type likely *predates* the injury in persistent post-concussion syndrome
  - Greiffenstein and Baker (2001)



Myths #1 and #2:

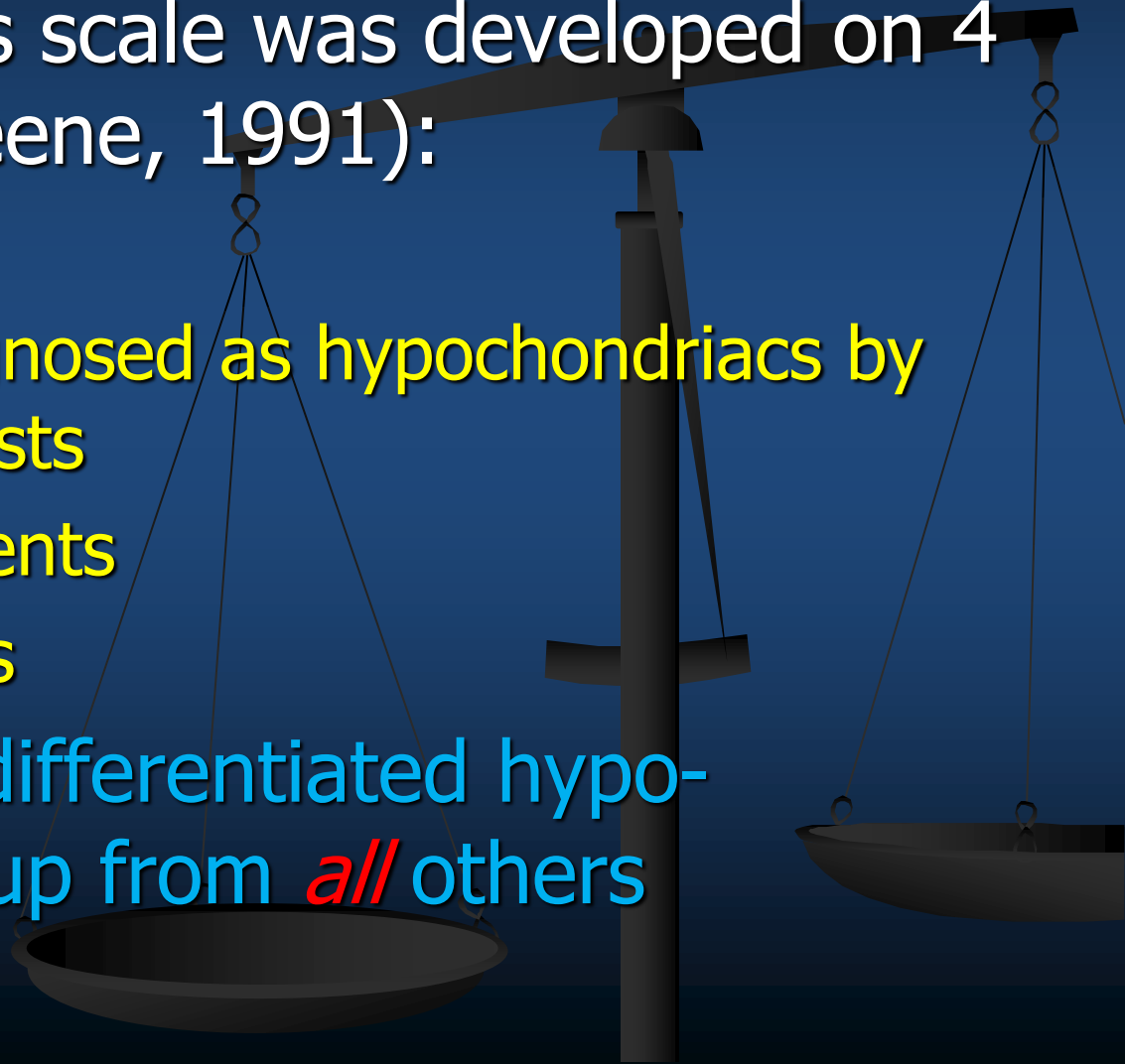
Elevations on Somatic Complaints scales do not reflect overreport in injured litigants, and the scales were not developed/validated on true medical patients and therefore should not be used in medical populations

- MMPI-2-RF data for mixed neurologic (n = 28), epilepsy (n = 50), and TBI (passing PVTs; n = 27) patients revealed
  - all mean validity scores below cut-offs (i.e., <70T)
- confirming that markedly elevated scores are not typical in these populations
  - Schroeder et al. (2012)

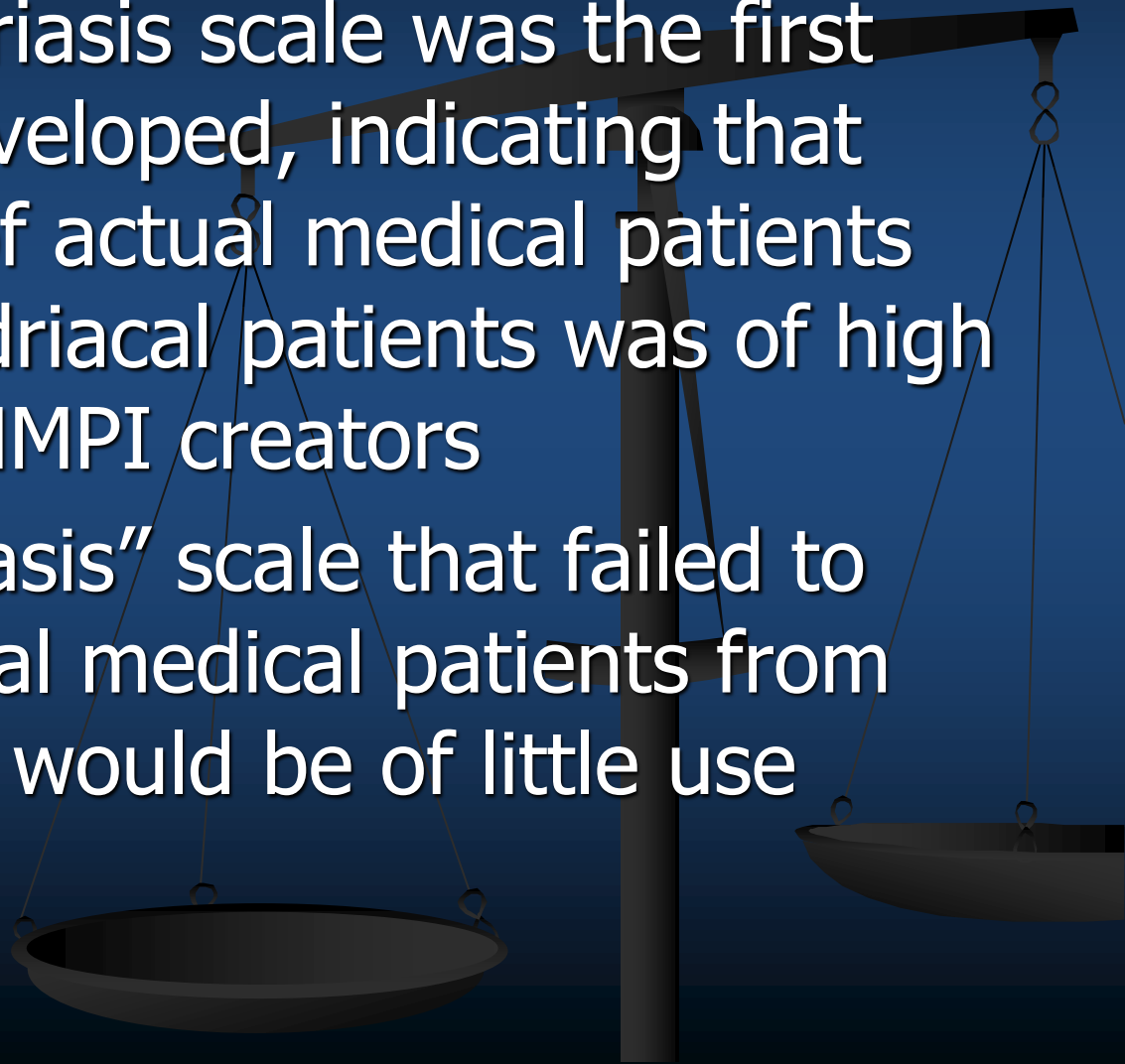


Development of Hypochondriasis Scale (CS1)

- Hypochondriasis scale was developed on 4 groups (see Greene, 1991):
  - Normals
  - Individuals diagnosed as hypochondriacs by treating therapists
  - Psychiatric patients
  - Medical patients
- The final scale differentiated hypo-chondriacal group from *all* others



- The hypochondriasis scale was the first clinical scale developed, indicating that differentiation of actual medical patients from hypochondriacal patients was of high priority to the MMPI creators
- A “hypochondriasis” scale that failed to distinguish actual medical patients from hypochondriacs would be of little use



Myth #3:

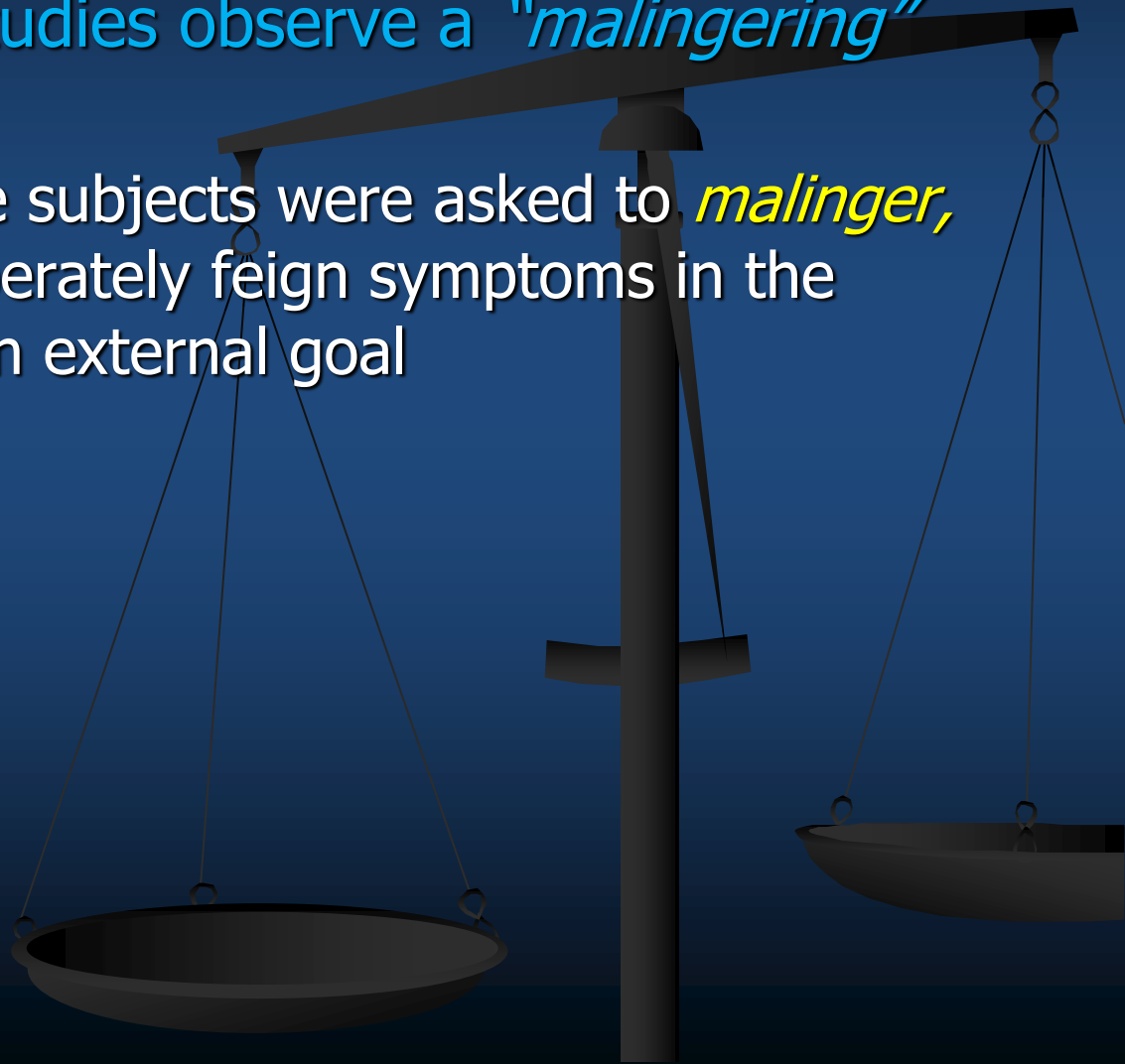
Elevated Validity scales = "cry for help"

- Some argue that elevated validity scales represent an attempt by patients to insure that their psychological distress is noted
  - "Cry for help" was coined to describe those patients who appeared to be feigning/exaggerating psychiatric symptoms on the MMPI in ***the absence of any apparent external goal*** (Berry et al., 1996)
- Therefore, would not be appropriate for use in settings where there is external incentive

What is empirical underpinning for "cry for help" conclusion?

- Search of pubmed located only *3 studies:*
  - Rogers et al. (1995):
    - Psychiatric outpatients were asked to complete the MMPI-2 in an honest condition and then when simulating the goal of immediate hospitalization for severe psychiatric problems. In the second condition, significantly higher scores were found on all F-family over-reporting scales
  - Berry et al. (1996):
    - Psychiatric clinic patients given a scenario in which they were experiencing significant psychiatric symptoms and placed on a waiting list; they were told to complete the MMPI-2 in a manner that would enable them to receive treatment more quickly. Their MMPI-2 pattern was indistinguishable from that seen in frank malingerers

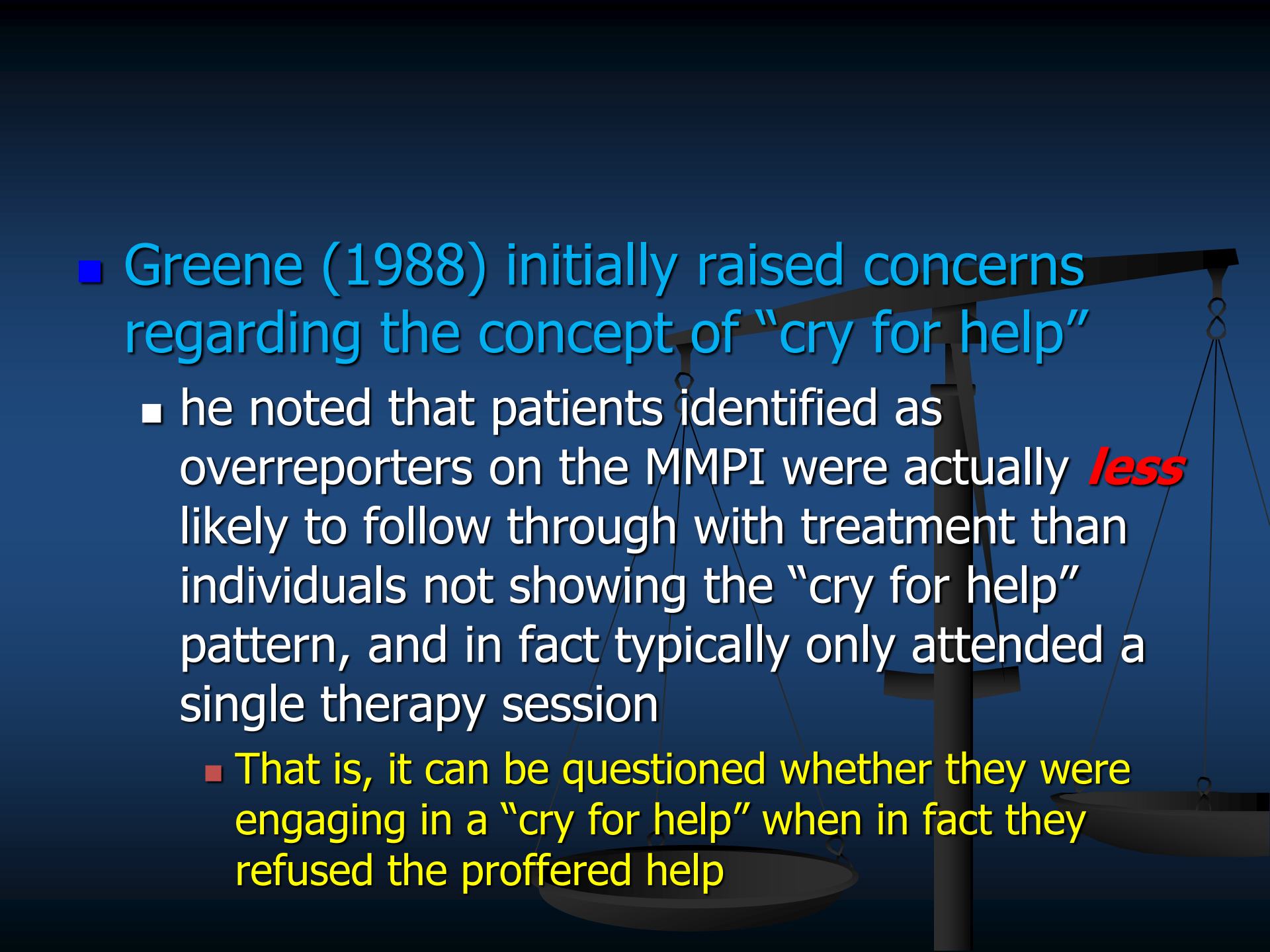
- Why did these studies observe a *"malingering"* profile?
  - Because the subjects were asked to *malinger,* i.e., to deliberately feign symptoms in the service of an external goal



Third study:

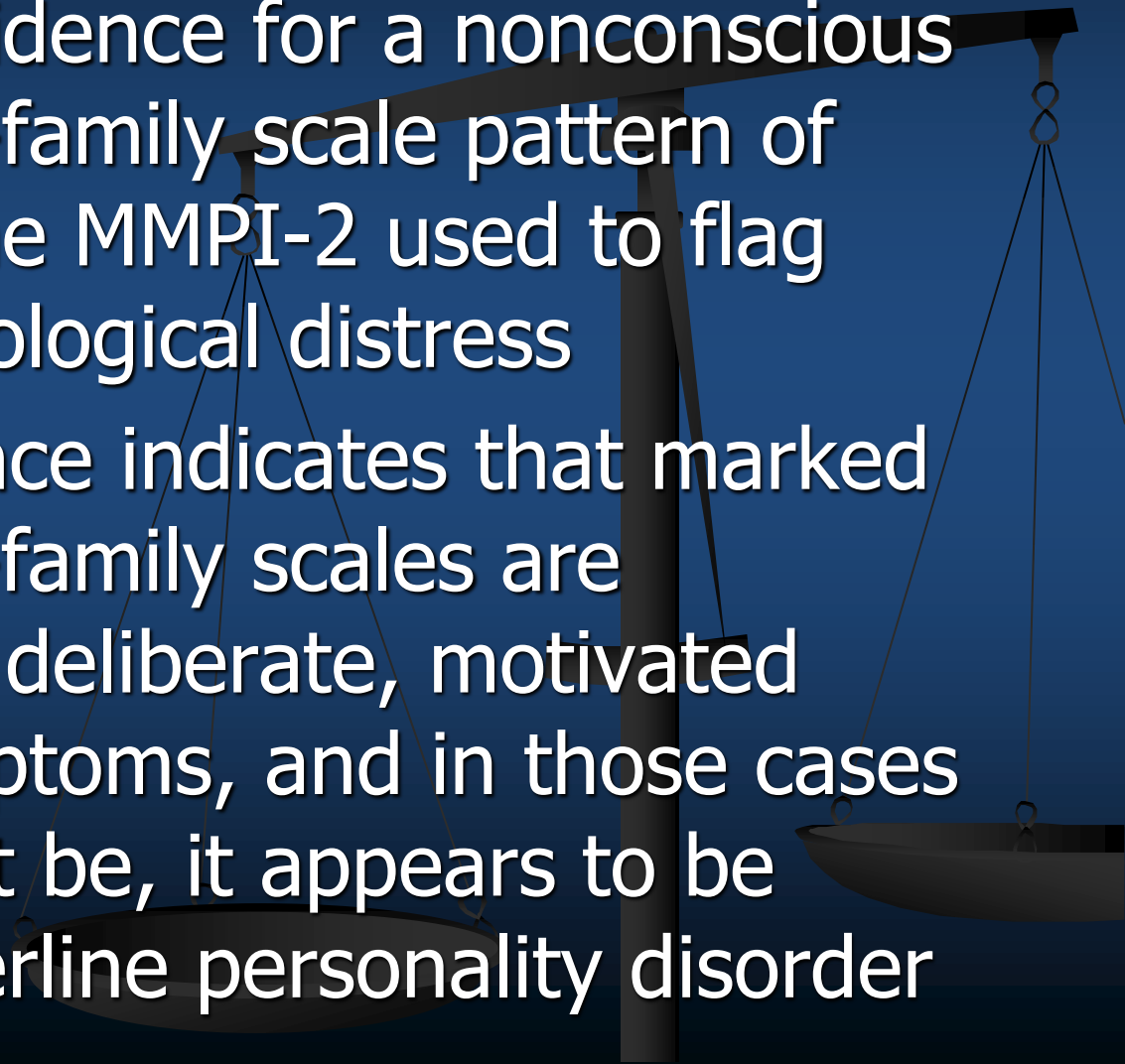
- Post and Gasparikova-Krasnec (1979)
  - 20 psychiatric inpatients who obtained MMPI F-K scores >11 (referred to as a "plea for help") showed
    - poorer impulse control and more "acting out" on the unit (sexual acting out, aggression, self-inflicted physical harm)
    - more requirements for seclusion
    - caused more "feelings of frustration" in staff
  - Thus, it appears that the over-reporters had the tell-tale signs of borderline personality disorder
    - So, if a report were to refer to a "cry for help", it would also need to indicate the likely presence of BPD

- Greene (1988) initially raised concerns regarding the concept of "cry for help"
  - he noted that patients identified as overreporters on the MMPI were actually ***less*** likely to follow through with treatment than individuals not showing the "cry for help" pattern, and in fact typically only attended a single therapy session
    - That is, it can be questioned whether they were engaging in a "cry for help" when in fact they refused the proffered help



Conclusions regarding "Cry for Help"

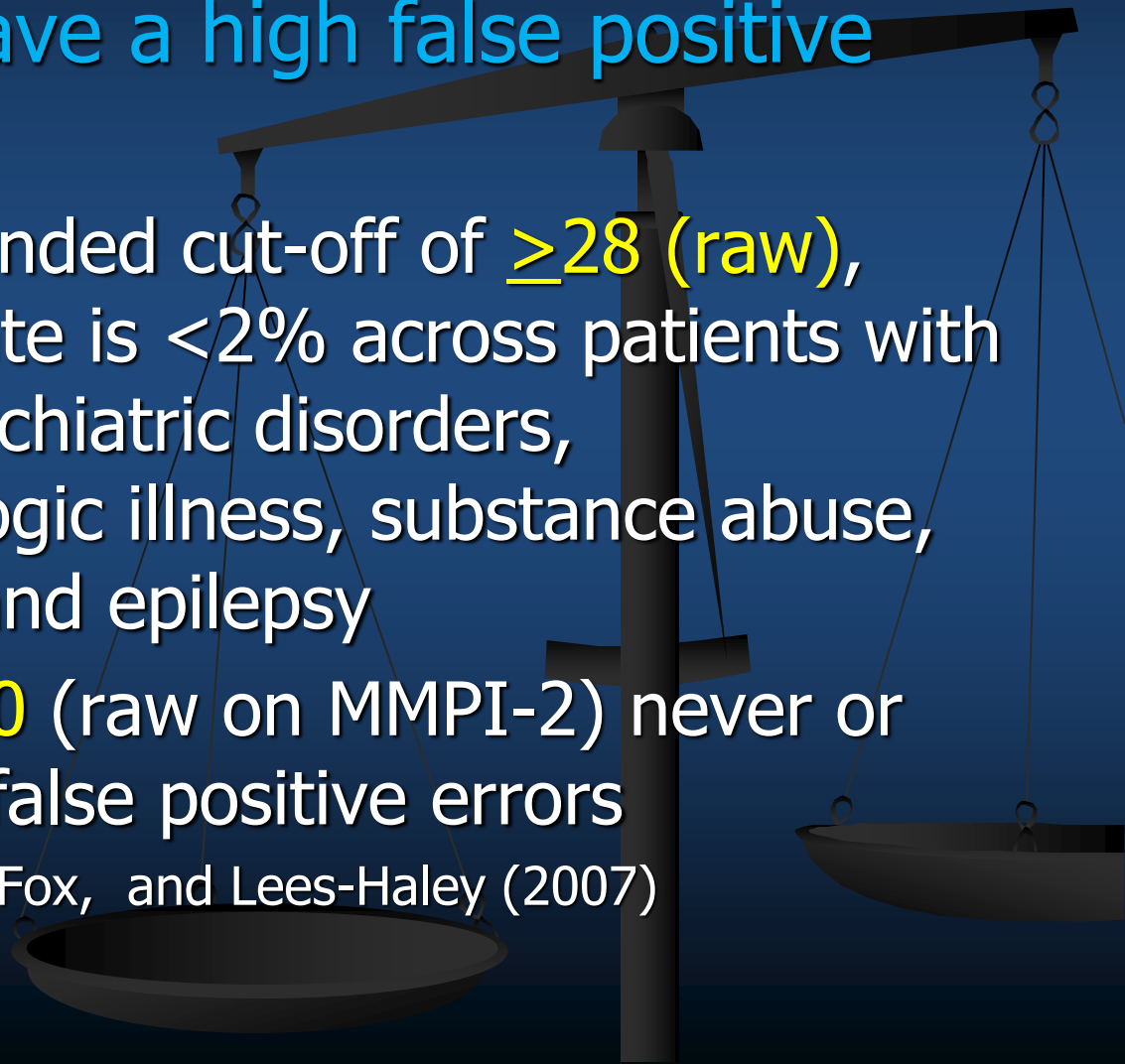
- No empirical evidence for a nonconscious "cry for help" F-family scale pattern of elevations on the MMPI-2 used to flag extent of psychological distress
- Available evidence indicates that marked elevations on F-family scales are associated with deliberate, motivated feigning of symptoms, and in those cases when it may not be, it appears to be related to borderline personality disorder



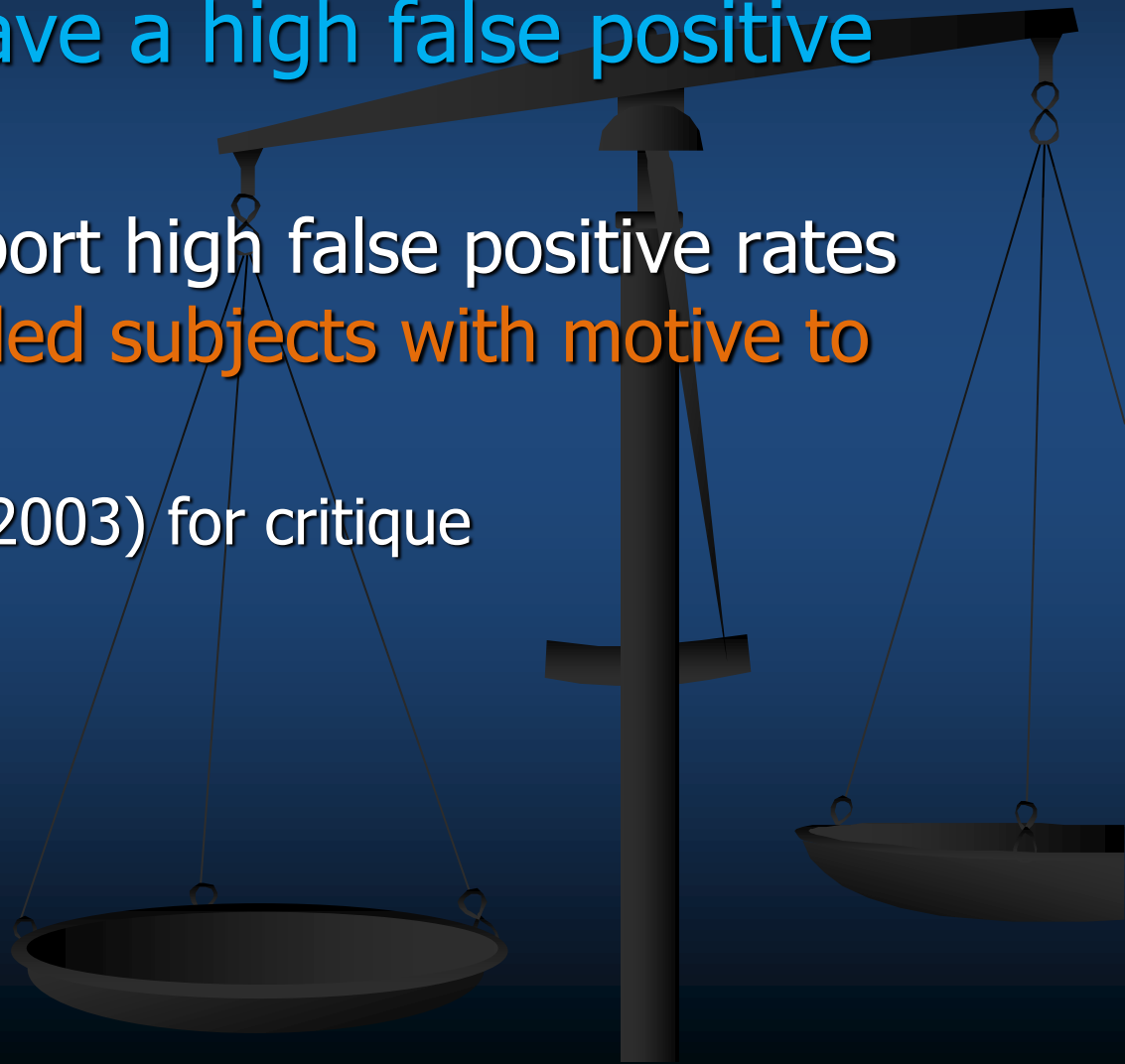
Myth #4:

FBS misidentifies credible patients as malingerers

- FBS does not have a high false positive rate
  - Using recommended cut-off of ≥28 (raw), false positive rate is <2% across patients with severe TBI, psychiatric disorders, medical/neurologic illness, substance abuse, brain disease, and epilepsy
  - Scores above 30 (raw on MMPI-2) never or rarely produce false positive errors
    - Greiffenstein, Fox, and Lees-Haley (2007)

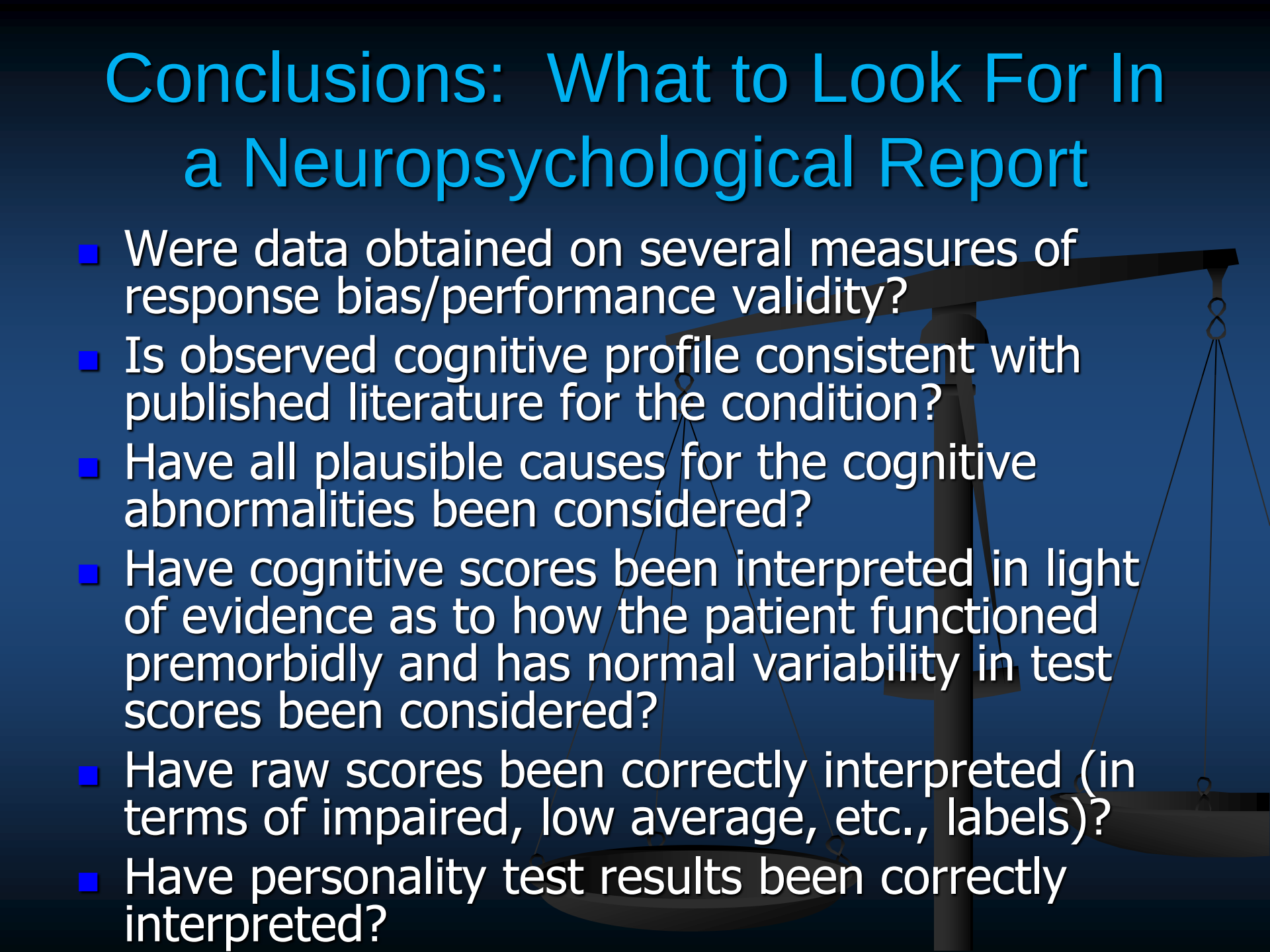


- FBS does not have a high false positive rate
  - Studies that report high false positive rates have not excluded subjects with motive to feign
    - See Larrabee (2003) for critique



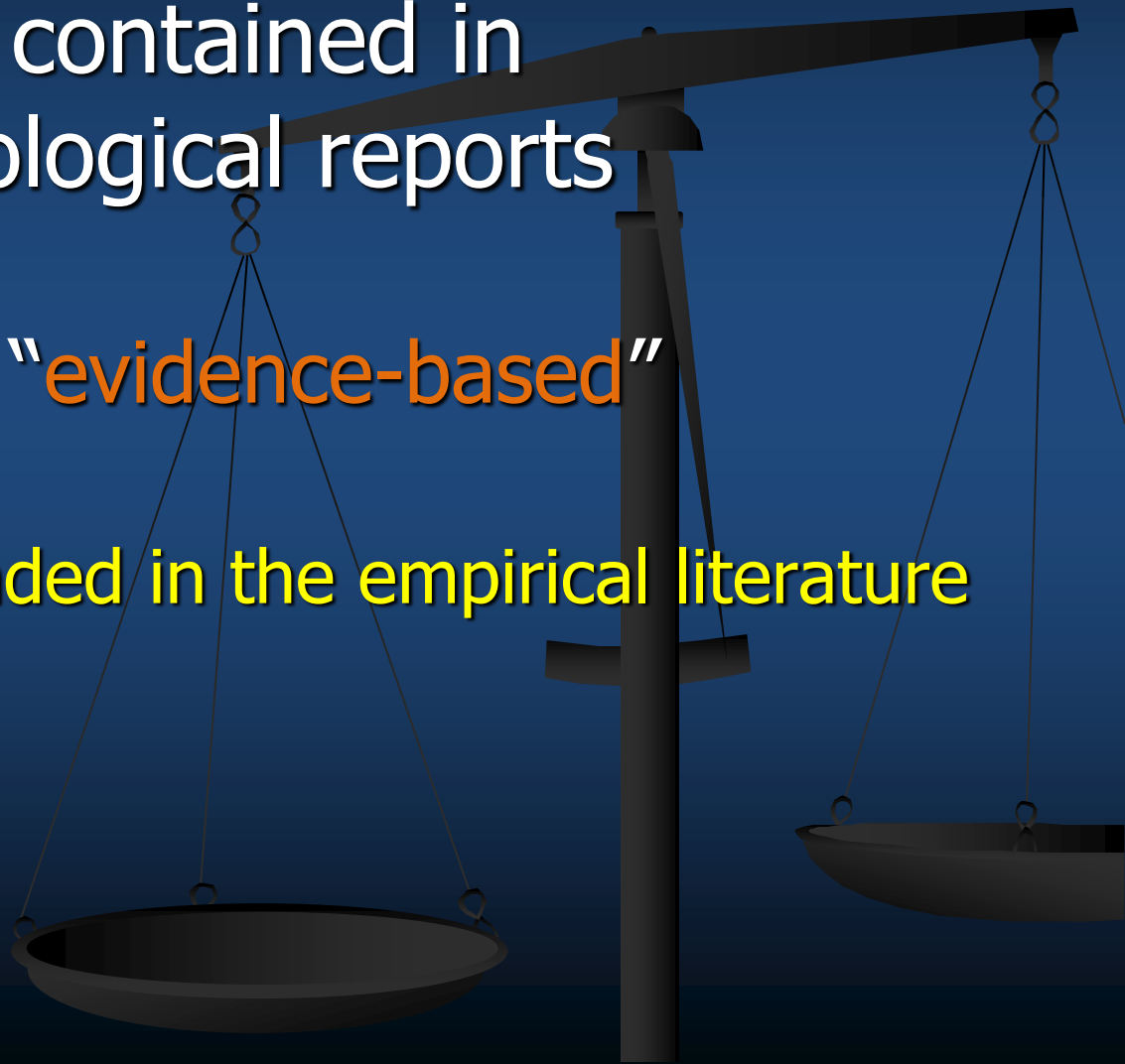
Conclusions: What to Look For In a Neuropsychological Report

- Were data obtained on several measures of response bias/performance validity?
- Is observed cognitive profile consistent with published literature for the condition?
- Have all plausible causes for the cognitive abnormalities been considered?
- Have cognitive scores been interpreted in light of evidence as to how the patient functioned premorbidly and has normal variability in test scores been considered?
- Have raw scores been correctly interpreted (in terms of impaired, low average, etc., labels)?
- Have personality test results been correctly interpreted?



Take home message:

- Conclusions contained in neuropsychological reports
  - Need to be "evidence-based"
    - i.e., grounded in the empirical literature



Questions?