

Cognitive Biases

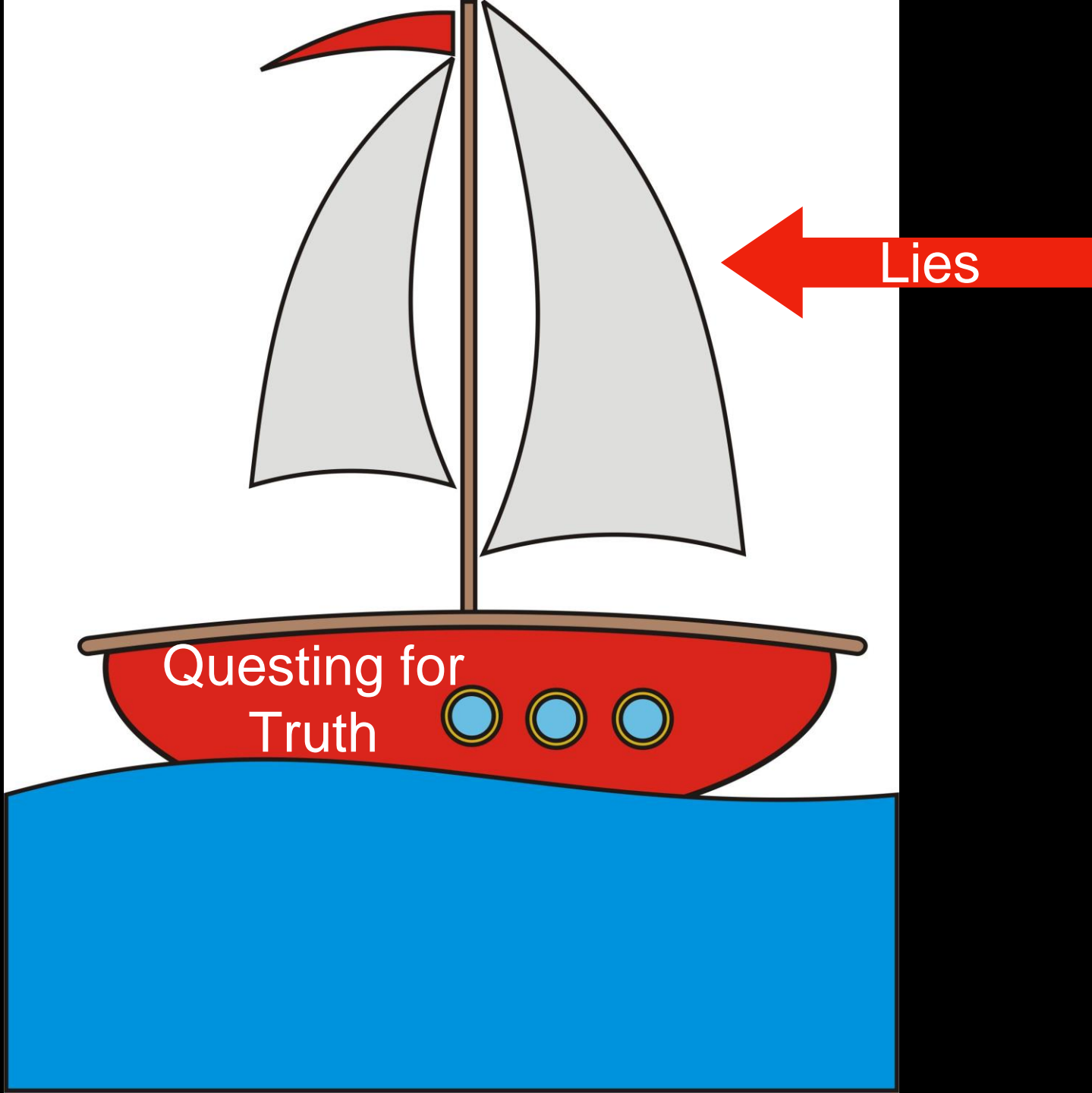
and Clinical Practice

Jake Feldman, MD MEd



UT Health
San Antonio

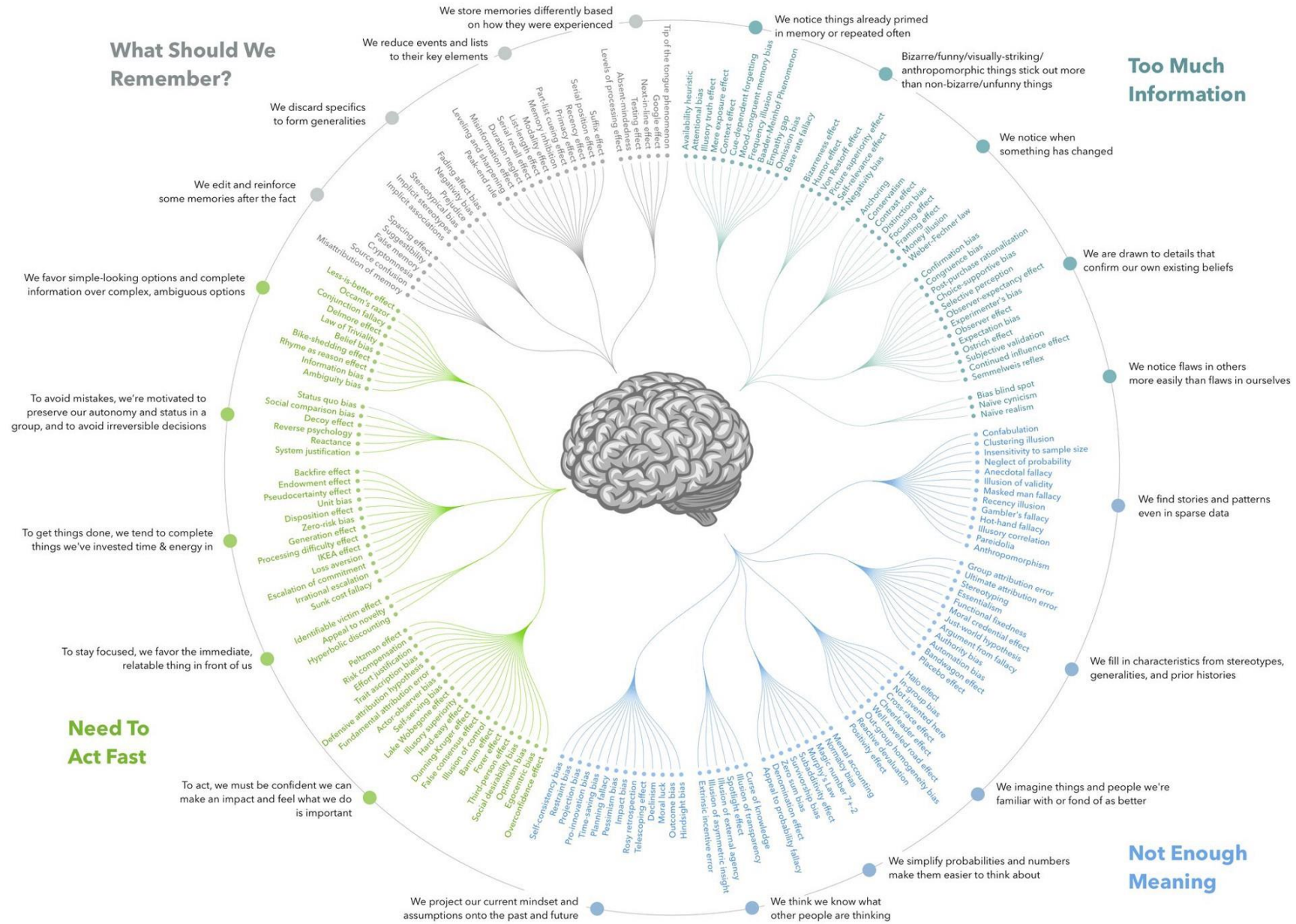




Questing for
Truth

Lies

COGNITIVE BIAS CODEX, 2016



Police bring in a guy from the magistrates office

“This is the third in the last hour”

Anchoring



Febrile PEDI Patient, ESI 5

“She looks great”

Triage cuing vs Framing



Young woman with fever

“It’s probably COVID”

Premature closure

VS

Information Bias



Waiting Room Patient

Workup Completed

Diagnosis momentum



Additional biases

Search Satisfaction

Visceral Bias

Ordering Effect

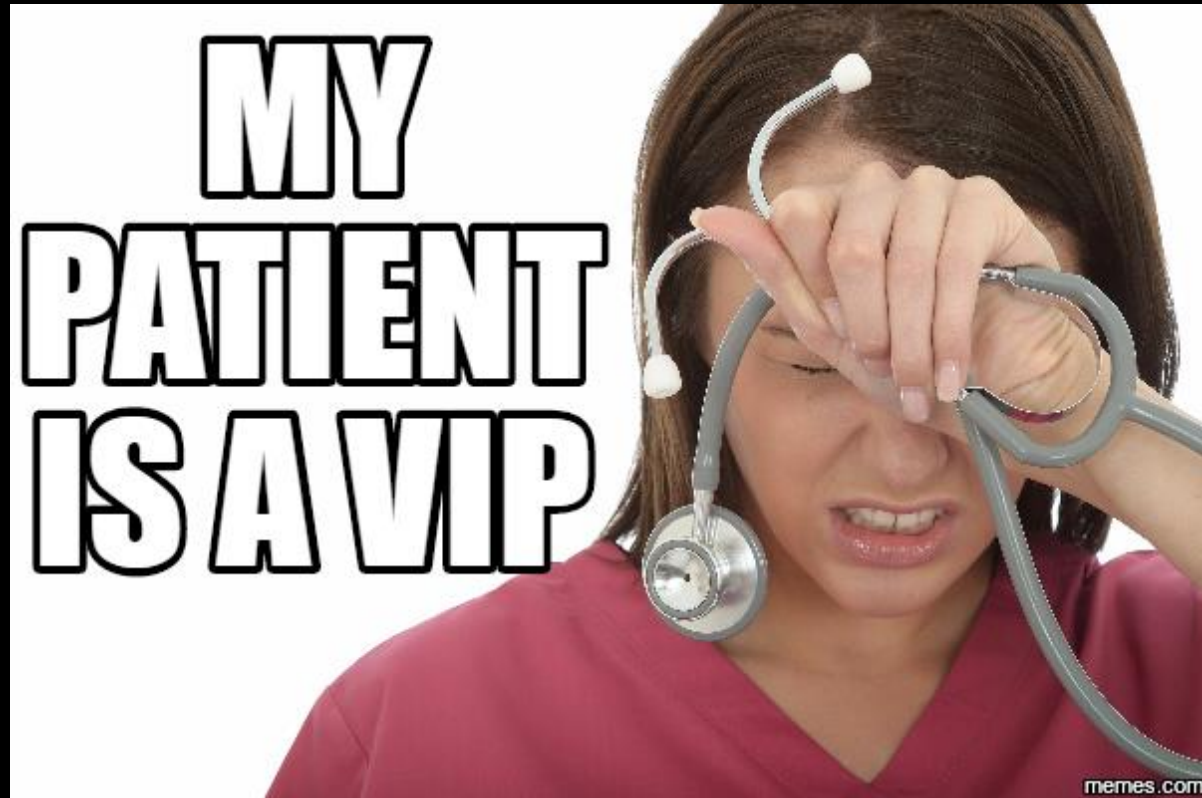


Additional biases

Search Satisfaction

Visceral Bias

Ordering Effect



Additional biases

Search Satisfaction

Visceral Bias

Ordering Effect

CREATION OF HYRULE - THE HERO OF TIME

The Legend of Zelda begins with the creation of Hyrule. The Hero of Time, Link, is born in the village of Hateno. He is raised by his grandfather, King of Hyrule, who is also the King of Hyrule. The Hero of Time is a young boy who is destined to save the world.

THE ADULT ERA

The Hero of Time is now a young man. He is still in the village of Hateno. He is still a young man who is destined to save the world.

THE CHILD ERA

The Hero of Time is now a young boy. He is still in the village of Hateno. He is still a young boy who is destined to save the world.

THE GREAT ERA

The Hero of Time is now a young man. He is still in the village of Hateno. He is still a young man who is destined to save the world.

THE REUNIFIED ERA

The Hero of Time is now a young man. He is still in the village of Hateno. He is still a young man who is destined to save the world.

THE TIMELINE SPLIT

The timeline splits into three main branches: the Adult Era, the Child Era, and the Great Era.

ADULT ERA

The Hero of Time is now a young man. He is still in the village of Hateno. He is still a young man who is destined to save the world.

CHILD ERA

The Hero of Time is now a young boy. He is still in the village of Hateno. He is still a young boy who is destined to save the world.

THE GREAT ERA

The Hero of Time is now a young man. He is still in the village of Hateno. He is still a young man who is destined to save the world.

THE TIMELINE UNIFIED

The timeline is unified into a single line. The Hero of Time is now a young man. He is still in the village of Hateno. He is still a young man who is destined to save the world.

HYRULE WARRIORS: AGE OF CALAMITY

The Hero of Time is now a young man. He is still in the village of Hateno. He is still a young man who is destined to save the world.

THE LEGEND OF ZELDA: BREATH OF THE WILD

The Hero of Time is now a young man. He is still in the village of Hateno. He is still a young man who is destined to save the world.



According to the Zelda encyclopedia, the Timeline can be interpreted in a number of ways, and may change depending on new discoveries that have come to light and on the players' imagination. So after studying the Timeline and referring to many Zelda Theorists, I've come up with my own version of the Timeline.

First Change is at the End of Calamity of Time, when Link, Epona, Ganon and lose the Master Sword. I believe that Link is sealed here, and the Timeline follows the Fallen Hero Timeline to a Link to the Past, mainly because there is no way that the other two timelines could exist when Link Dies.

Second Change, the Timeline split is caused by Link, the Hero of Legend's choice to "restore Hyrule to its former glory". This brings the actions of Ganon and Aghram, and I believe also creates the Great Timeline, thus explaining how "The Hero of Time Dies in one Timeline, but lives in another."

Third Change, although I don't totally agree with his idea, Chexery Collective shows why the Hyrule Fantasy and Adventure of Link should be on the Adult Timeline following Great Era, since the games' stories and complexity to prove his case, and I agree, they make more sense on that timeline. The "Legacy of Princess Zelda" doesn't make sense at the end of the Fallen Hero Timeline, where there have been other Zeldas before her, but it makes more sense in the Adult Timeline where the old Hyrule Kingdom is gone and a new one is established making her the first Zelda in a new Kingdom.

Fourth Change, I agree, I don't think Tamer's is the same Zelda Game to the to the Timeline because I like the Hero of Legend's story and it was an official Nintendo game released for the Satellaview in Japan and was the first Zelda game to have some of the most interesting events during the Oracle Series and Link's Awakening (Link with the Hyrule Kingdom's placement of those games).

Fifth Change is about Hyrule Warriors to the Timeline, and even though many Zeldas theorists have proven that it can't fit in the Timeline, but I like the game and it kinda connects a plethora of the wild to the three other timelines.

Sixth Change, about Ganon, of Hyrule and Zelda, the wand of Ganon. I really like the Hero of Legend and wanted to make some changes, so I added a sister to Link, to the past, graphically, its characters look like there, all TTP counterparts, and its musical instruments could influence the musical instruments from Link's Awakening.

Seventh Change, about Zelda, Wand of Ganon, as with AST and CE2, I add this game so I can make more stories with the Hero of Legend. Now I know how and the CE2 Games are. I watch three cutscenes, so unlike the previous stories, where I skip, come to the original ones, changing bits of it so it connects better with the previous game and the complexity of CE2. I'm going to start this story to its bare bones and totally rewrite it, showing Ganon and their incredible tale. The purpose will not be a future telling, since the position has already been filled by the Fortune Teller. I think it will be a fun challenge to rewrite these Zelda Games with a good story, hopefully.

The events of Legend of Time are ignored. The Legend of Time starts Hyrule to protect the Oracle of Time and search for the Master Sword. The way this story goes is ignored by the Story as it is not to Hyrule, he returns the Oracle and the Master Sword to Hyrule. The Oracle and the Master Sword are the same as in the Legend of Time.

Legend of Time: The Twin Zans (Link) are the names of the Princess Zelda and Ganon. The Legend of Time is about the Princess Zelda and Ganon. The Legend of Time is about the Princess Zelda and Ganon.

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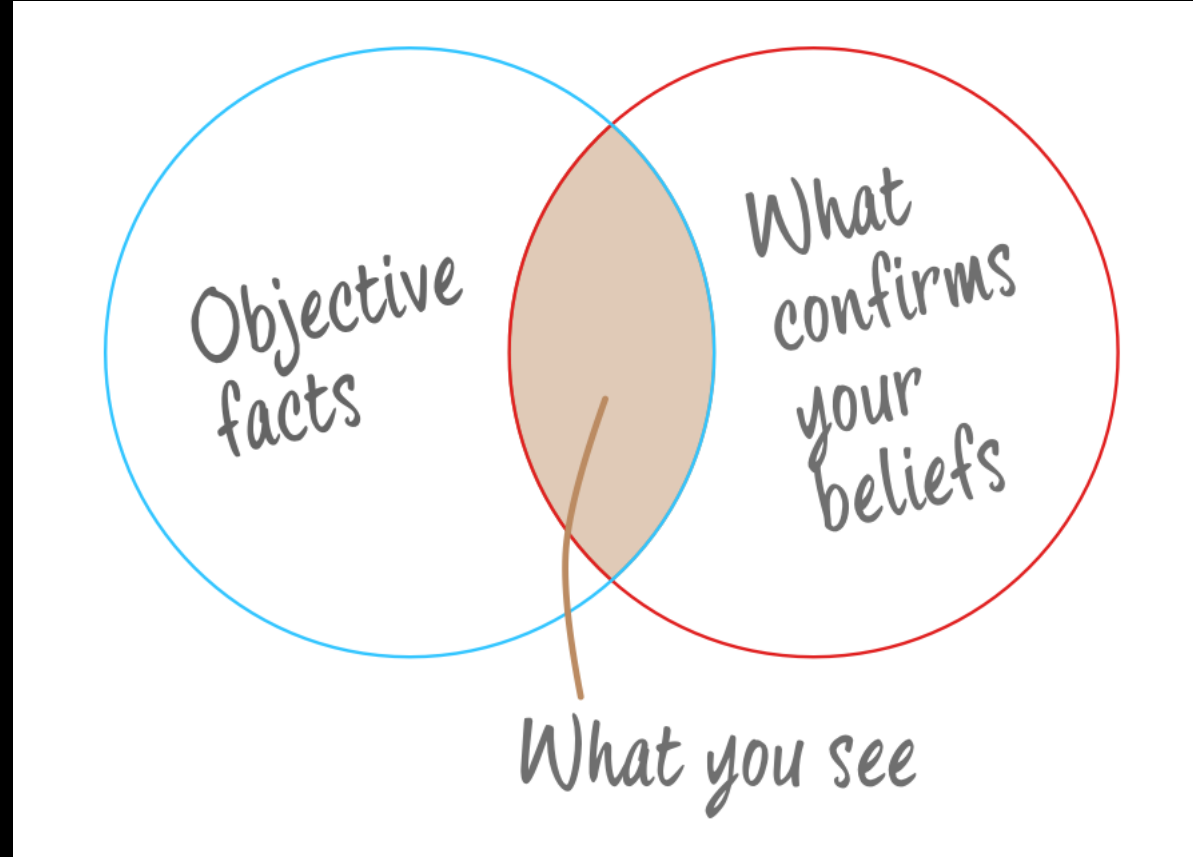
The Successor of Legend of Time is about the Princess Zelda and Ganon. The Legend of Time is about the Princess Zelda and Ganon.

Additional biases

Confirmation Bias

Affective Error

Availability Bias



Additional biases

Confirmation Bias

Affective Error

Availability Bias

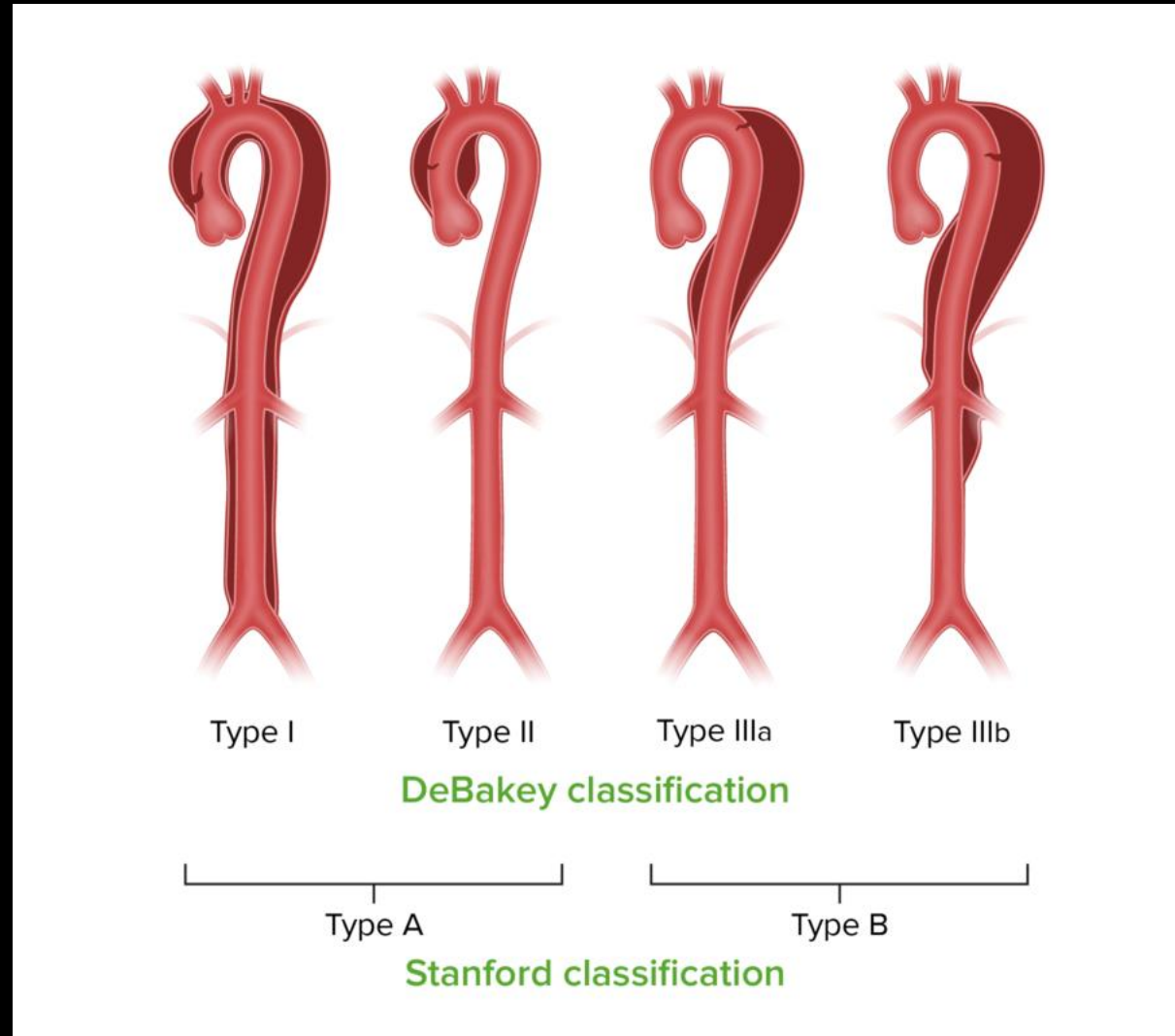


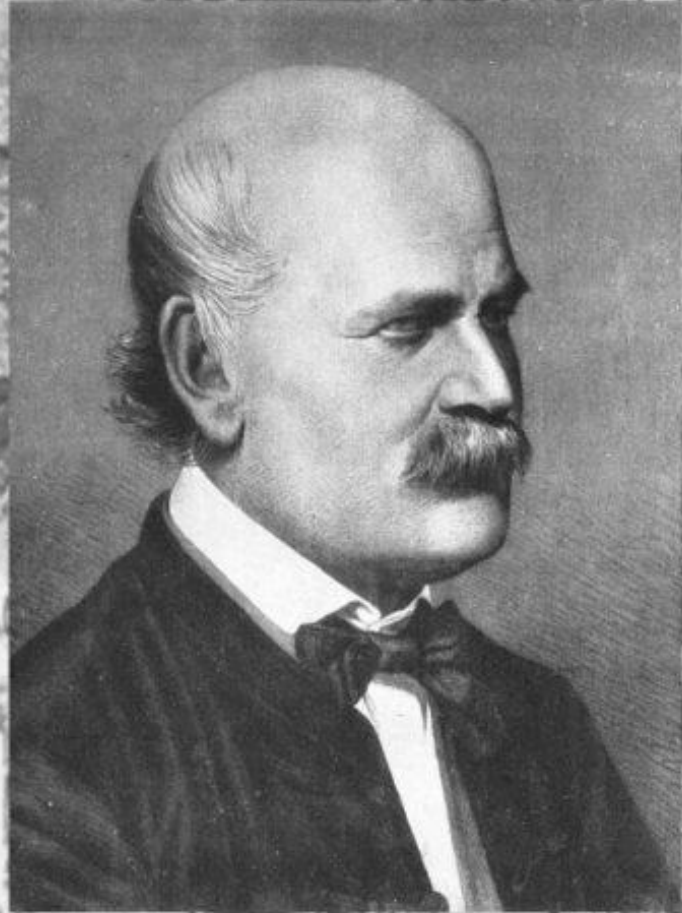
Additional biases

Confirmation Bias

Affective Error

Availability Bias





Themes of Cognitive Errors

External Factors

Other's Feelings

Patient Location

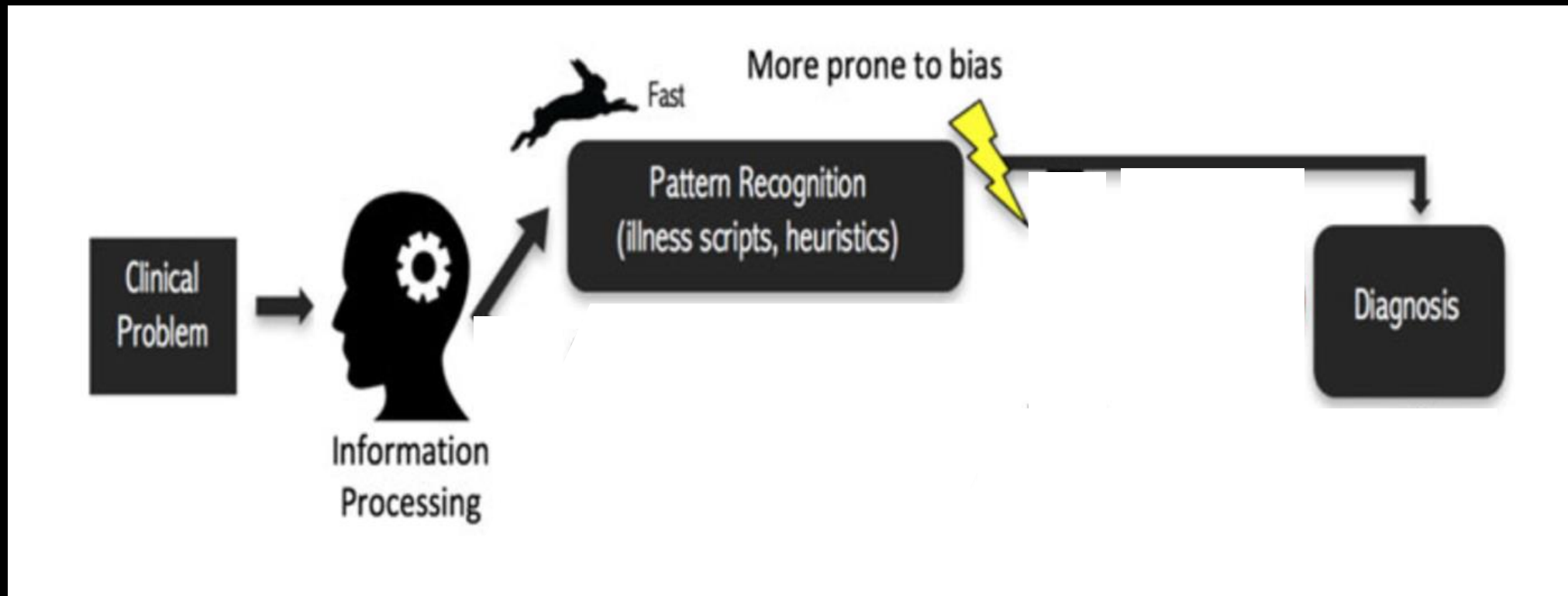
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Internal Factors

What you "know"

Your Feelings

Heuristics vs Analytics



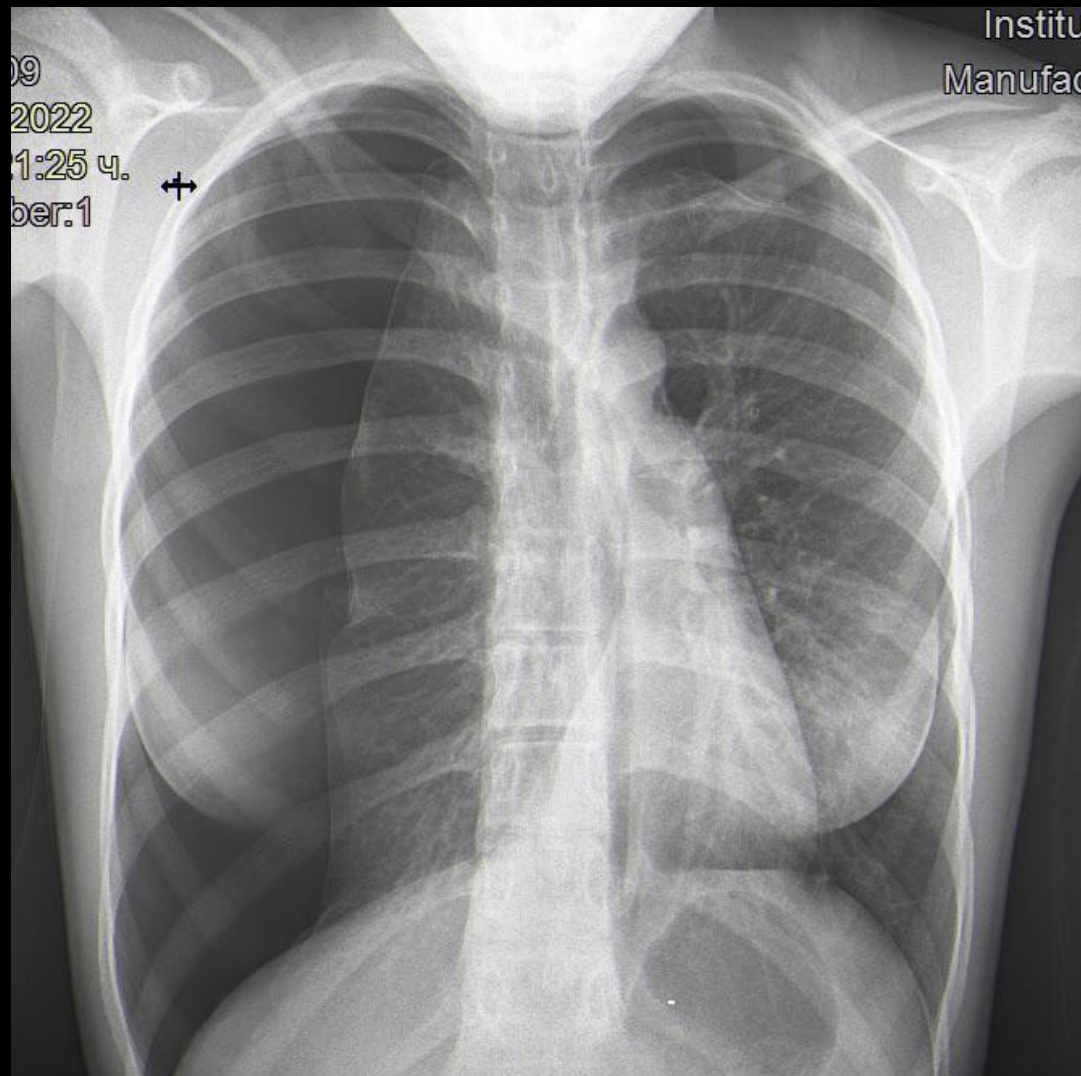
Type I vs Type II

Quick vs Slow



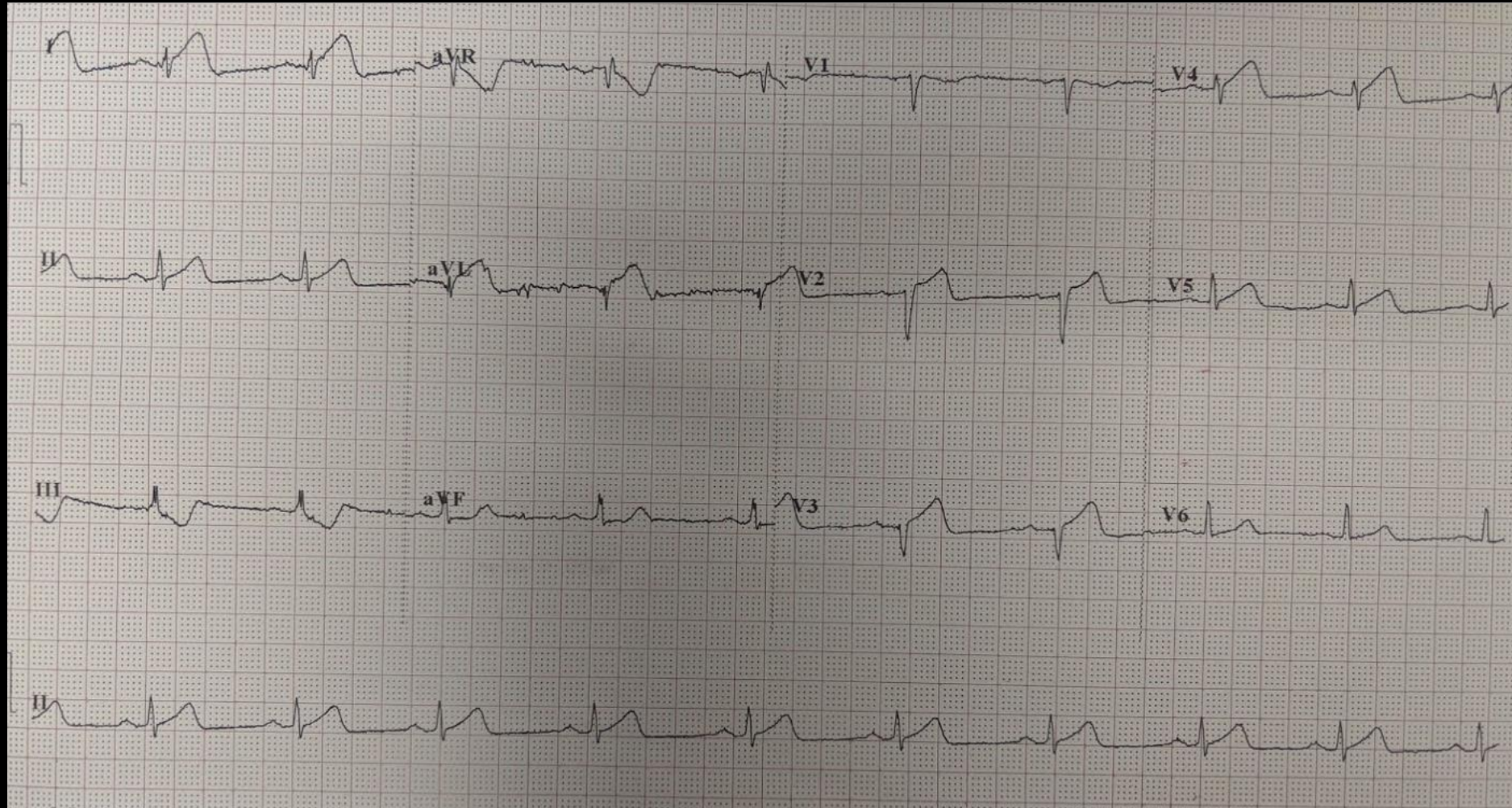
Type I vs Type II

Quick vs Slow



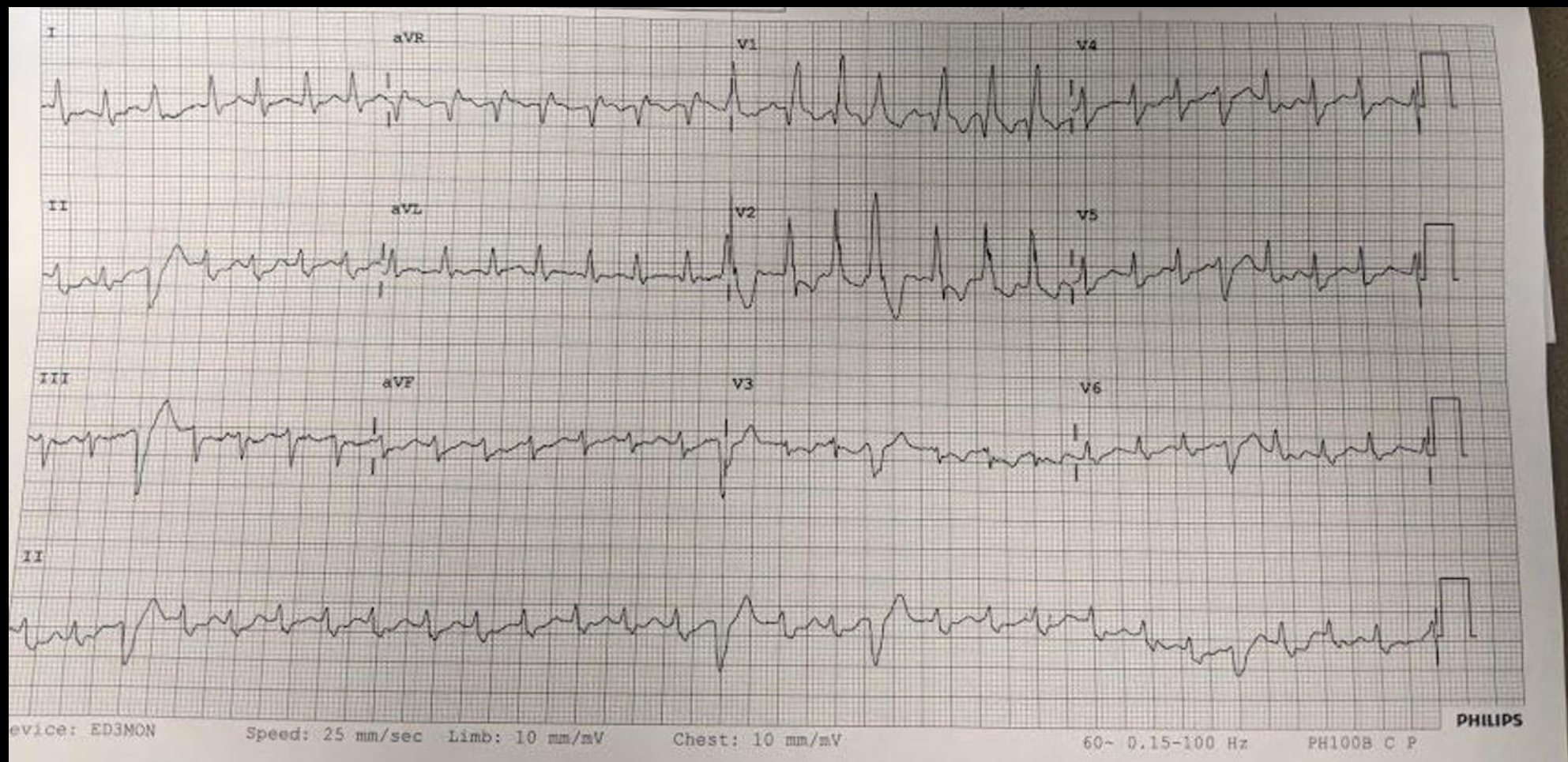
Type I vs Type II

Quick vs Slow



Type I vs Type II

Quick vs Slow



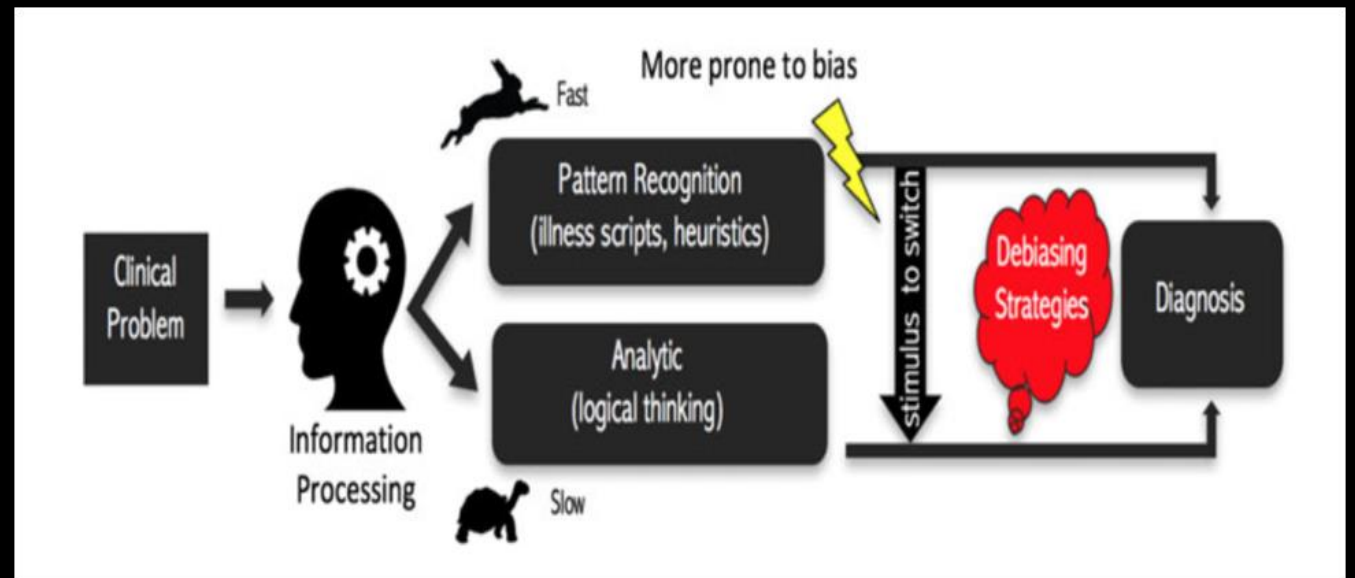
Pattern Recognition

- Type I Thinking
 - Unconscious
 - Prone to Error



Pattern Recognition

- Type I Thinking
 - Unconscious
 - Prone to Error
- Type II Thinking
 - Analytic
 - Slow
 - Safety-Net



Debiasing Strategies

...Ideas?

Routinely Consider Alternatives

Ask WHY

Cognitive Stop Points



Orders ▾

Manage Orders Order Sets

Options ▾

Place new orders or order sets

Verbal with readback

New Orders

CBC

STAT, First occurrence today at 1326
Blood, Blood, Venous

Basic metabolic panel

STAT, First occurrence today at 1326
Blood, Blood, Venous

Troponin I







STAT, First occurrence today at 1326
Blood, Blood, Venous

D-dimer, quantitative

STAT, First occurrence today at 1326
Blood, Blood, Venous

ECG 12 lead

Once, First occurrence today at 1326
Reason for Exam: chest pain

-  New Interactions
-  Providers
-  Edit Multiple
-  Phase of Care
-  Dx Association
-  Create Panel
- Open Similar Orders Pop-up Automatic...

Systemic Issues

Controlling External Problems

- Fatigue
- Interruptions
- Minimizing Time Pressures
- Emotional Strain



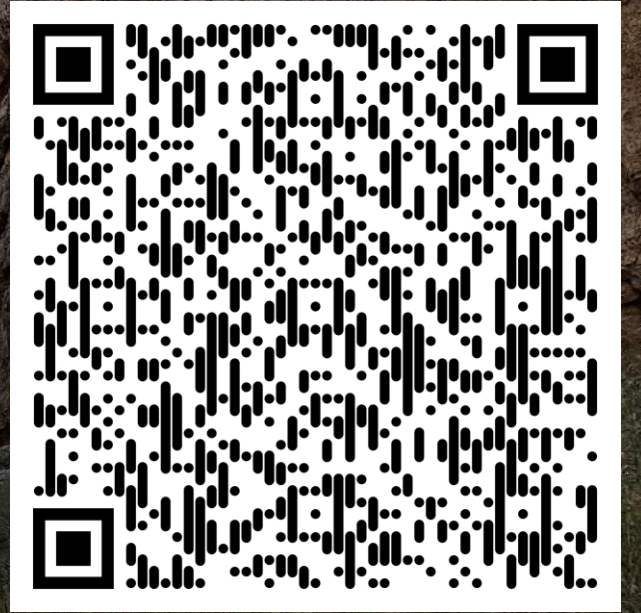
Accountability & Feedback

Morbidity & Mortality





References



Questions?