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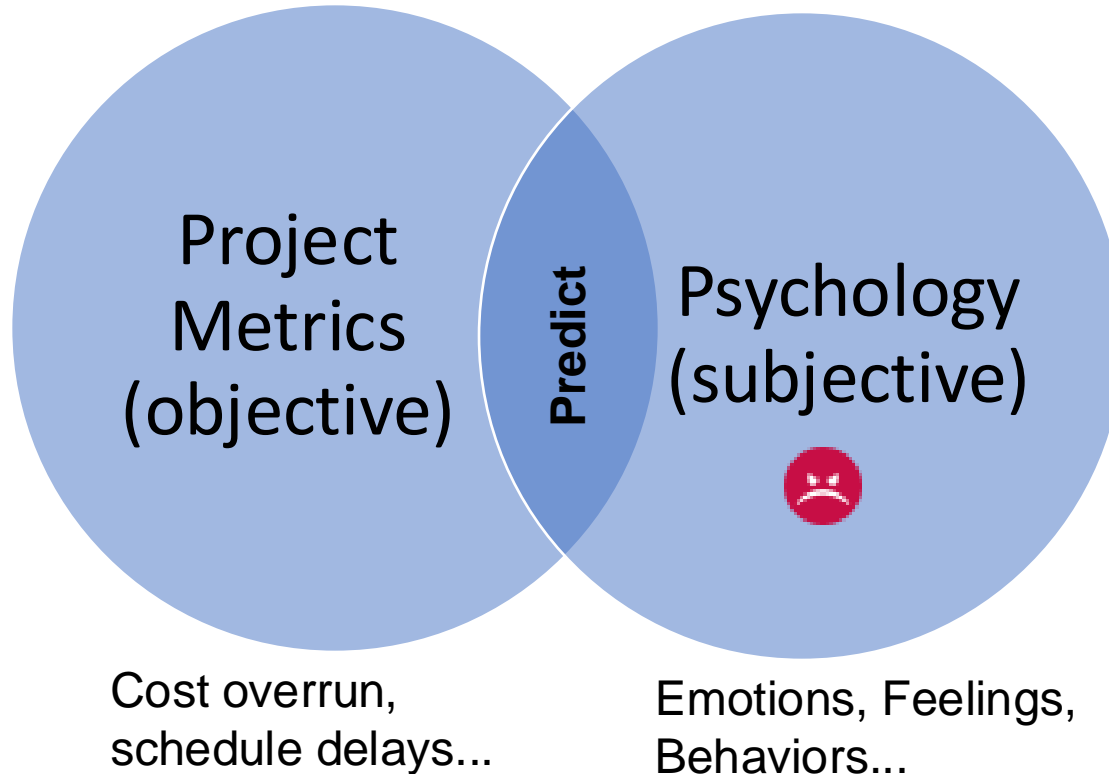
Artificial Intelligence for Project Management

Solving Project Overrun with AI

Quick Question

Raise your hand if you've every worked on a failed project.

Is the answer to addressing project failure, found by combining objective and subjective data points of people and projects?



Our theory: Is this Venn diagram the path to finding a Solution?

RelMap Software; could AI (NLP) predict people and project failures?

Inductive Reasoning involves: Observations, Patterns and Hypothesis

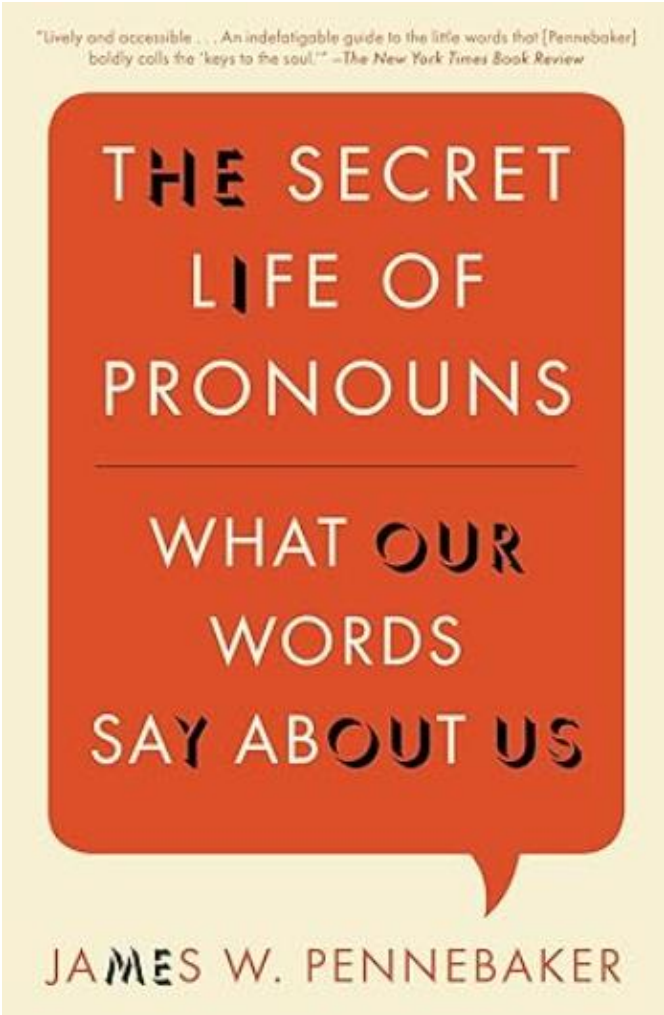
We took 2 approaches (focused on communications)

1. Build a large data set of emotions and outcomes (Psycho Linguistics) via Natural Language Processing (NLP)
 - Data was from known criminals: Enron, al-Qaeda, Unabomber
2. Build a dataset of data from known failures or nearly failing projects (survey approach)
 - Quantified lessons learned

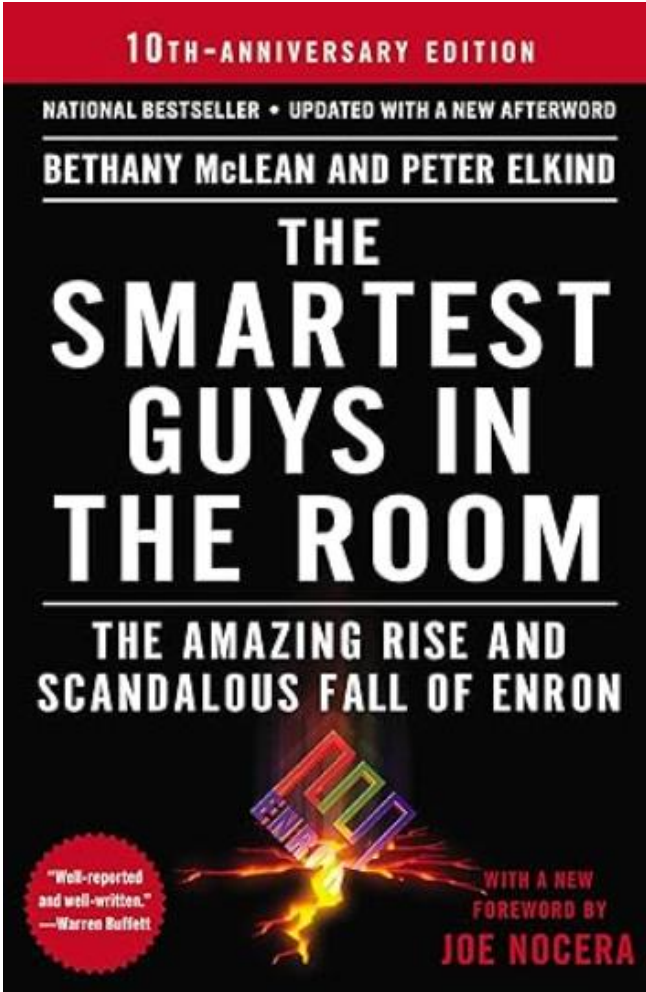
- Psycho Linguistics is the psychology of language, which is the study of the interrelation between linguistic factors and psychological aspects.
- Used in criminal analysis (threat analysis, employee theft)
- The FBI/CIA/NSA use Psycho Linguistics to identify intent to cause harm (bad outcomes)
- Can this technique be used to identify when people fail?



The models were based on the ideas in these books



Linguistic Patterns



Data Points and Outcomes

Truthfulness Analysis



- Jeffrey Skilling was about as truthful as al-Qaeda and the Unabomber. Not the case for Tom Skilling (weather guy)

Cohesion Analysis

- Individuals that are eventually found guilty of securities and wire fraud exist in highly cohesive groups

Summary of this research will be published in our book, which will be promoted on BecomingResilient.com

Passive Aggressiveness Analysis

- Individuals that commit or direct physical harm to others exhibit passiveness aggressive behaviors

Emotion Trend Analysis (can this be extended to Project Management?)

- An emotional decrease of 2 or more levels for 3 weeks or more can indicate that something bad has occurred or will occur which can include death.

Generative AI (Chat GPT, CoPilot) will automate the role of the Project Coordinator

- Build me a communications plan using these data points
- Build me the foundations of a project plan
- What are lessons learned on ERP projects, identify risks, etc.
- AI Automation
 - Follow up on tasks...

General AI (in 2 years) and AI Agents will make Project Managers smarter

- Critical Path Analysis
- **Why and where is my project failing?**
- What can I do to get my project back on track?

Large Language Models will include project information

Wave 1 – AI Gantt Chart Automation

- **Chatbot**: The project plan has you completing the task (Order Processing Requirements) today, can you provide the % complete?"
- **Steve**: "its 90% done"
- The project plan is updated and an alert “Steve missed his date” is sent to the Program Manager

Wave 2 – Helper chatbots that include psychology

- **Chatbot:** “Steve can you tell me what's remaining on your task assignment (order processing requirements)”
- **Steve:** “I didn't complete the return process steps for order processing”
- **Chatbot:** “Ok, would you like some help with that?”
- **Steve:** “Yes, I'm stuck on the step where we need to decide if we charge the customer a restocking fee”
- **Chatbot:** "Did you seek help from Bobby in the returns department?"
- **Steve:** “Yes”
- **Chatbot:** What did he say?
- **Steve:** "Bobby told me that I have to figure this out on my own and this is something that I should already know and he's surprised that I didn't already know the answer"

Emotion: Humiliation Shame, Anger Loathing



- **Chatbot:** "would you like me to escalate the request for help or follow up with Bobby?"

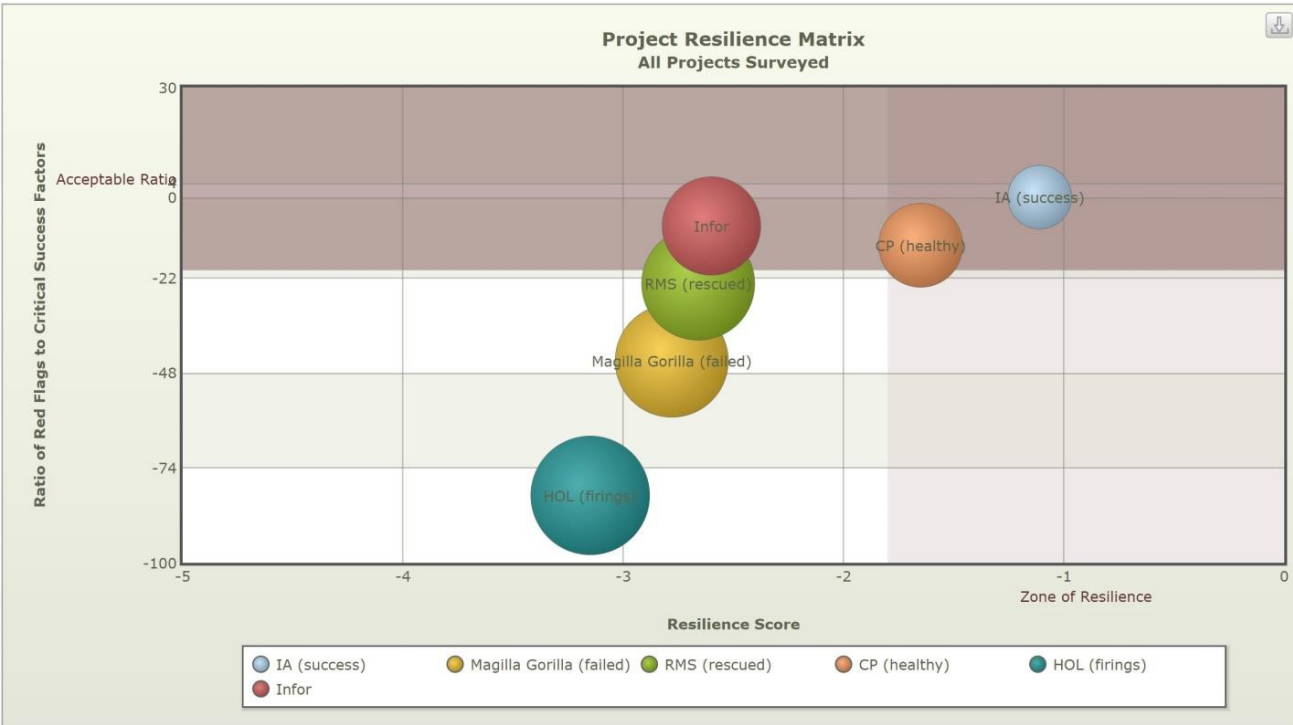
AI Predictions



The race for AI to solve complex Project Management problems has started...

- AI will automate Project Coordinator tasks and provide the data to make Project Managers smarter
- There are at least **10 Psychology Chatbots** to interact with people: ADA, Chai, Elomia, Mindspa, Nuna, Serenity, Stresscoach, Woebot, Wysa, Youper
- **The next wave of chatbots will mix Gantt Chart automation with psychology** and be capable of predicting people and project failures
- **Until we get there, we have a tool for you...**

#2 survey approach to predict project failure



Category	Score	Comments	# Red Flags
Complexity	3	Around \$6M spent so far; For sure more than 10 here; Project is already at 20 months; Several throw away interfaces;	1
Coverage	2	Only since PM's arrival 1 year in;	0
Scalability	4	none exist;	0
Reliability	2	Testing, and document reviews;	0
Best Practices	2	No PMO. Steering Committee yes; Not by design;	0
Support	3	It's the Steering Committee; New CIO fulfilling this role; Steering Committee; Wait and see attitude;	0
Resources	2	Lost one Key Technical SME; Not really partnering with client; some areas need more help;	0
Culture	2	Wait and see attitude;	0
Communications	4	Not yet;	0
Execution	3	Go live date yet to be determined; Not a comprehensive budget; off budget; off schedule; several times;	2
Total Average Score	2.64		Total Number of Red Flags 3
Resilience Score	3		Total Number of Critical Success Factors 38

Question	Answer	Score	Comments	Red Flag	Critical
Algorithmic complexity - how many complex algorithms need to be built?	None	0	Not sure	No	Yes
External system dependencies - How many external system dependencies or interfaces need to be built?	More than 10	5	Several throw away interfaces	No	No
Multiple configurations - How many application configurations (e.g., sites, projects, installs) need to be made?	6 to 10	4	Infor M3, Vertex Cloud, Cenpos, UPS Ship Exec, WebSTAR (new), Birst, Core Commissions, UPS FedEx	No	No
User interface / display complexity - How many screens need to be built	None	0	Assuming that all are out of the box screens	No	No
Process complexity - processes with large numbers of steps and or branches - How many business processes need to be built?	More than 10	5	For sure more than 10 here	No	No
Complex regulatory requirements - How many regulatory changes / solutions needed to be implemented?	1	1	UK	No	No
How many calendar months are needed to complete the solution?	More than 1 year	5	Project is already at 20 months	No	No
Reach - How many users are impacted by the solution?	101 to 250	2	Around 250 but not sure	No	No
What is the estimated budget	More than \$1M	5	Around \$6M spent so far	Yes	No
Total Average Score		3		Total Red Flags 1	
Resilience Score		3		Total Critical Success Factors 1	

We created a 65 question survey that measured and quantified 10 project areas
 Point: quantify and graph your lessons learn surveys (remove subjectivity)

#2: Quantify Your Post Mortem Analysis

RMS (rescued) Resilience Score

Category	Score	Comments	# Red Flags
<u>Complexity</u>	3	about 200 migrations (Historical load of data + ongoing);	3
<u>Coverage</u>	3	No comprehensive Requirements Management process;	1
<u>Scalability</u>	4	Not a major issue as moderate growth was sized in.;	0
<u>Reliability</u>	3	Did not exist during requirements gathering;	0
<u>Best Practices</u>	3		3
<u>Support</u>	2		1
<u>Resources</u>	2	high turnover. lots of knowledge left.;	1
<u>Culture</u>	3	Vendor and Staff Aug required;	0
<u>Communications</u>	2		0
<u>Execution</u>	3		0

Total Average Score 2.66

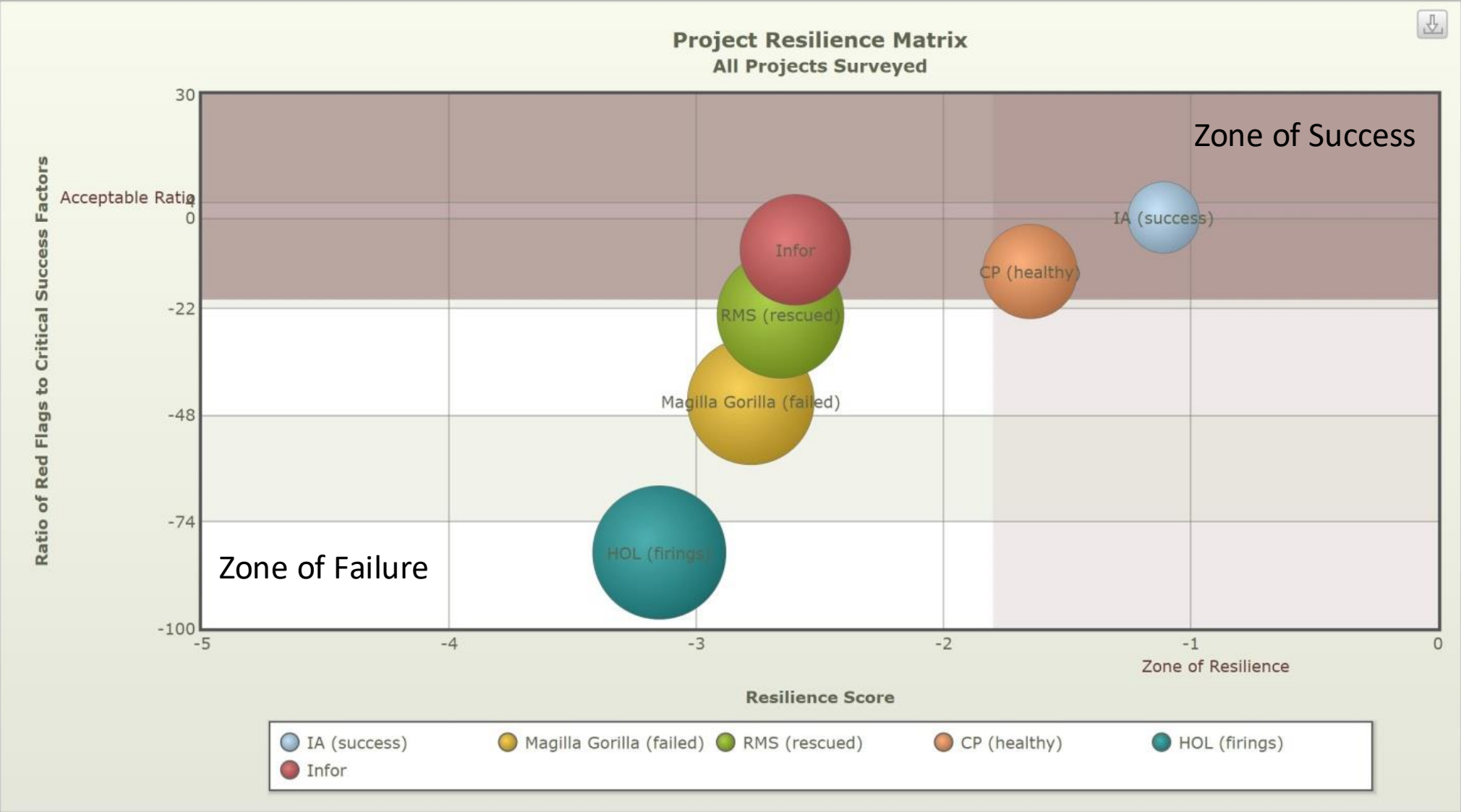
Total Number of Red Flags 9

Resilience Score 3

Total Number of Critical Success Factors 38

Percentage of Red Flags to Critical Success Factors 23.68

#2: Quantify Your Post Mortem Analysis



Project Based Large Language Models

Generative AI

General AI

Artifact
Creation

Task
Automation

Project Failure
AI Agents

What can you do today?

- Build a large language model of your projects (a corporate instance)
- Start building AI task automation (focus on tasks that a coordinator does)
- Explore risk assessments or critical path analysis
- Look at PM AI tools: Asana, Click Up, Monday.com, Basecamp, Trello, Motion, OneCal, Notion, Slack, Loom

- Quantify your lessons learned and put them into your LLM so the artifacts on the next project include these lessons learned.

- Interesting AI Companies
 - Start Up, **Abnormal Security**, scans corporate emails to identify when an account has been compromised (using analysis of changing tones)

Thank You!



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