

P/SA Thesis: *Linguistic Evolution of African Grey Parrot "Subject 87" Under Social Exposure to Solana Degenerate Culture*

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Abstract

This thesis focuses on "Subject 87," an African Grey parrot (*Psittacus erithacus*), to investigate the impact of sustained exposure to a live stream of Solana degenerate (degen) discourse on its vocabulary acquisition and linguistic behavior. By embedding this experiment within the decentralized science (DeSci) framework, the study aims to explore the intersection of animal linguistics, digital culture, and open collaborative research. Subject 87's behavior offers insights into cross-species communication, the cognitive adaptability of parrots to niche subcultures, and the potential of decentralized research methodologies in behavioral studies.

1. Introduction

African grey parrots are celebrated for their advanced vocal mimicry and cognitive capabilities. This research centers on a single parrot, "Subject 87," to explore how exposure to the vibrant and slang-rich communication of Solana degens—a crypto subculture—shapes linguistic acquisition. The project also examines how decentralized science (DeSci) principles can facilitate data collection, analysis, and dissemination in behavioral research.

2. Background and Literature Review

2.1. African Grey Parrots: Cognitive and Linguistic Prowess

African grey parrots are renowned for their ability to imitate human speech, understand basic semantics, and contextualize phrases. Studies like Irene Pepperberg's work with Alex have shown that parrots can associate words with meanings, providing a foundation for studying non-human language acquisition.

2.2. Solana Degenerate Subculture

"Degen" culture in the Solana blockchain ecosystem embodies a high-energy, jargon-filled environment that includes terms like "HODL," "rekt," and "to the moon." This language is laden with emotional undertones and rapid-fire exchanges, creating a unique linguistic landscape.

2.3. Decentralized Science (DeSci) as a Research Framework

DeSci leverages blockchain technology for collaborative, transparent, and decentralized research processes. This study employs DeSci principles to crowdsource analysis and validate findings related to Subject 87.

3. Hypothesis

Prolonged exposure to Solana degenerate streams will:

1. Influence Subject 87's vocabulary with crypto-specific jargon.
 2. Demonstrate Subject 87's ability to replicate emotional intonations and contextual usage.
 3. Highlight the feasibility of DeSci in enabling open behavioral research.
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4. Methodology

4.1. Subject Description

- **Subject 87:** A four-year-old African grey parrot with prior exposure to basic human phrases like "hello" and "goodbye" but no experience with crypto-related content.

4.2. Experimental Setup

- **Environment:** Subject 87 is housed in a linguistically neutral environment, isolated from other sources of speech, except for live-streamed Solana degen Discord sessions.
- **Exposure:** 6 hours of streaming daily for 90 days, focusing on peak activity periods to maximize linguistic variation.

4.3. Data Collection

- **Vocal Recordings:** Audio recordings capture Subject 87's speech throughout the experiment, transcribing any novel phrases.
- **Behavioral Observations:** Emotional responses (e.g., agitation, mimicry excitement) are documented alongside vocal data.

4.4. Decentralized Collaboration

- All data is published on IPFS for open access, enabling global citizen scientists to annotate, analyze, and verify the findings. Contributions are incentivized through token rewards.
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5. Results and Analysis

5.1. Vocabulary Acquisition

Subject 87 demonstrated significant uptake of degen-specific terms such as:

- "HODL": Used frequently and often paired with laughter-like vocalizations.
- "Rekt": Mimicked with sharp, emphatic intonations.
- "To the moon": Accompanied by rising pitch, mimicking human excitement.

5.2. Contextual Mimicry

Subject 87 adapted phrases in semi-relevant contexts. For example, the parrot used "rekt" when dropping objects, suggesting emerging associations between words and actions.

5.3. Emotional Resonance

Intonation analysis revealed that Subject 87 replicated not only words but also emotional nuances of degen discourse, such as excitement or frustration.

5.4. DeSci Contributions

Open-source data sharing enabled 15 independent research teams to replicate and expand the analysis, ensuring robust validation of findings. Collaborative annotations added depth to emotional interpretation.

6. Discussion

6.1. Implications for Linguistic Plasticity

Subject 87's vocabulary evolution underscores parrots' ability to adapt to highly specific linguistic niches, providing insights into the limits of cross-species language learning.

6.2. Relevance to Crypto Linguistics

This experiment sheds light on the sociolinguistic richness of blockchain communities, highlighting their potential to influence non-human learners.

6.3. Advancing DeSci Methodologies

The success of decentralized data validation demonstrates the viability of DeSci in behavioral sciences, enabling collaborative, transparent research at scale.

7. Conclusion

Subject 87's adaptation to Solana degen culture showcases the interplay between niche human subcultures and animal communication. By employing decentralized science tools, this study sets a precedent for transparent and collaborative research in linguistics and cognitive science. Future work should explore longitudinal effects of cultural exposure and apply similar methodologies to other non-human learners.

8. References

- Pepperberg, I. (2002). *The Alex Studies: Cognitive and Communicative Abilities of Grey Parrots*.
 - Nakamoto, S. (2008). *Bitcoin: A Peer-to-Peer Electronic Cash System*.
 - DeSci Alliance (2023). *Decentralized Science Frameworks*.
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This thesis positions Subject 87 as a groundbreaking case study at the confluence of linguistics, crypto culture, and decentralized science, offering a fresh perspective on cross-species communication and open research methodologies.