

Assessing the Success of Observer Rated Ethological Profiles Using a Traditional Child Temperament Task



Ethan Kahn, Vanessa Cao, B.S., & Patrick Davies, Ph.D.
Department of Psychology, University of Rochester



Rochester Center for Research on Children & Families

Introduction

- In evolutionary theory there are two patterns detailing how animals respond to novelty or threat: the 'Hawk' and 'Dove'.

(Korte, Koolhaas, Wingfield, & McEwan, 2005)

- Limited work has been done to further characterize these profiles in ethnological research

- To address this gap, the present work utilizes a pattern-based approach to identify the salience of these two temperamental profiles in the context of the Gift Delay Task.

(Kochanska & Knaack, 2003; Askan & Kochanska, 2004)

- Additionally, It will be addressed whether observational-coding is successful for Hawk and Dove profiles in this specific task

Coding the Hawk and Dove

Typical Characteristics

- Hawk: Boldness, Expressive, Highly Impulsive
- Dove: Careful, Controlled, Reflective

In the context of the Gift Delay Task

Hawk

- Low control resisting approaching the gift
- High temperamental and molar codes in activity, exuberance, and approach
- Distress paired with irritability

Dove

- High control in resisting approaching the gift
- High temperamental and molar codes in effortful control, distress, and inhibition
- Distress paired with inhibition

It is expected that the majority of children will fall in the middle of a bell-curve distribution across the hawk and dove profiles.

Methods

Gift Delay Task: a child was instructed to remain seated and wait to open the gift bag while the experimenter obtained a gift bow. After 3 minutes have passed, the experimenter returned to the room and invited the child to open the gift.

Behavioral coding of 4 distinct tiers (see below for details):

- 1) Time latencies of effortful control (0-180 second scale)
- 2) 9 conventional temperament constructs (1-9 point scale)
- 3) Q-sort of conventional temperament constructs
- 4) Hawk-Dove profile (independently rated on 1-9 point scale)

Overlap of independently-rated videos was 20%.

Participants

- N = 238 children and their families
- Age = 4.38 years at Wave 1
- 52% girls

Race/Ethnicity

- 68% White, 18% Black, 14% Multiracial or Other
- 16% Latino

Coding Scheme Specifics

Tier 1: Record time latencies (in seconds) of child behaviors for the following categories:

- (a) leave their seats, (b) attempt to peer into the bag, (c) touch the bag, (d) put hand in the bag, and (e) pull out the toy.

Tier 2: 8 temperamental dimensions along 9-point rating scale (from None to Intense) including:

- (a) Irritability, (b) Distress, (c) Exuberance, (d) Positive Mood, (e) Activity, (f) Inhibition, (g) Approach, and (h) Effortful Control

Tier 3: Use molar ratings to rank salience of each temperament via Q-Sort ratings assigning values of 1, 2, 4, & 5 in a 1, 2, 2, 2, 1 configuration

Tier 4: Rate ethological assessments of Hawk and Dove profiles with consideration of previously rated codes

Results

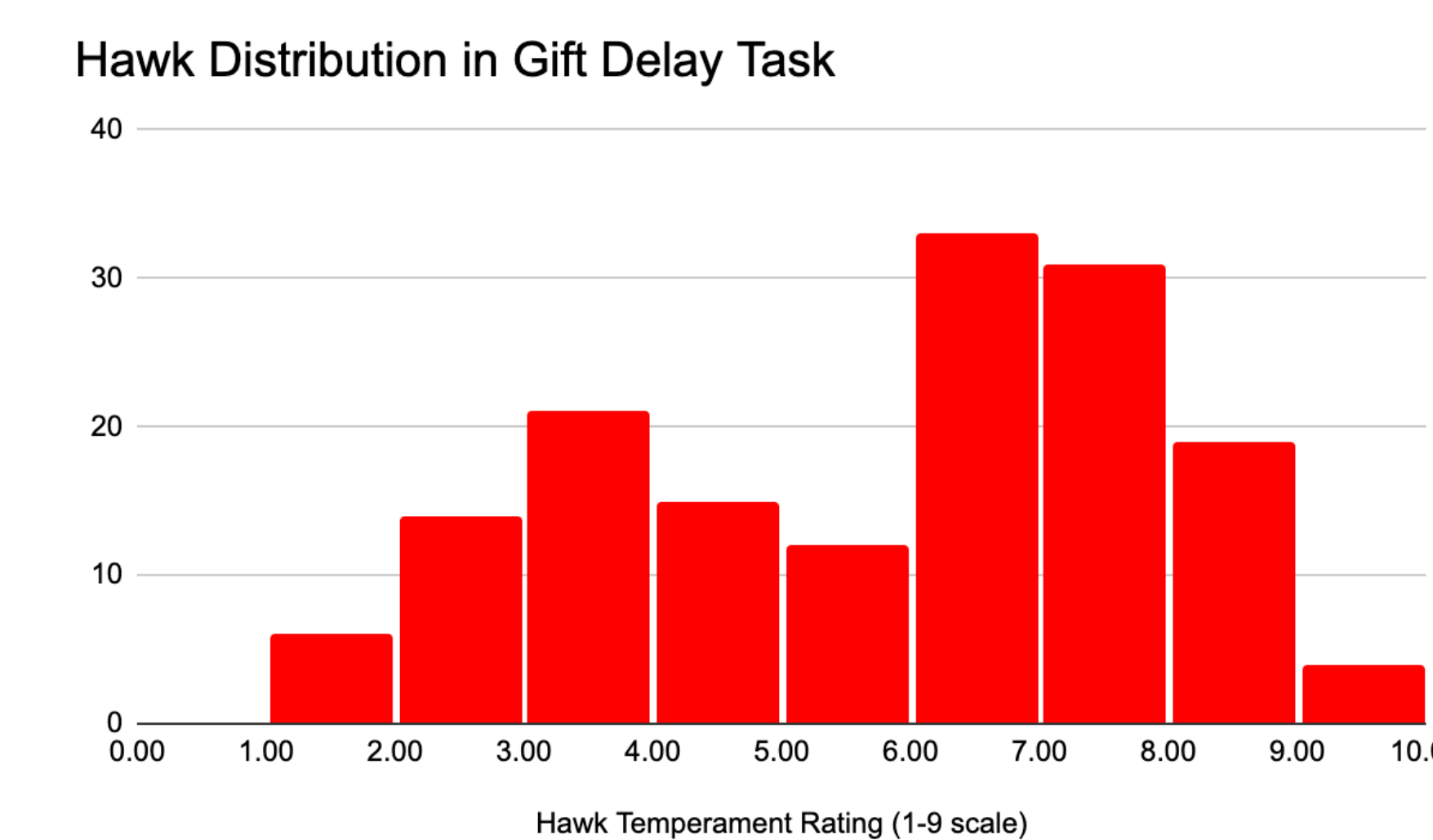


Figure 1. Graphical depiction of the distribution of rated the rated hawk profile

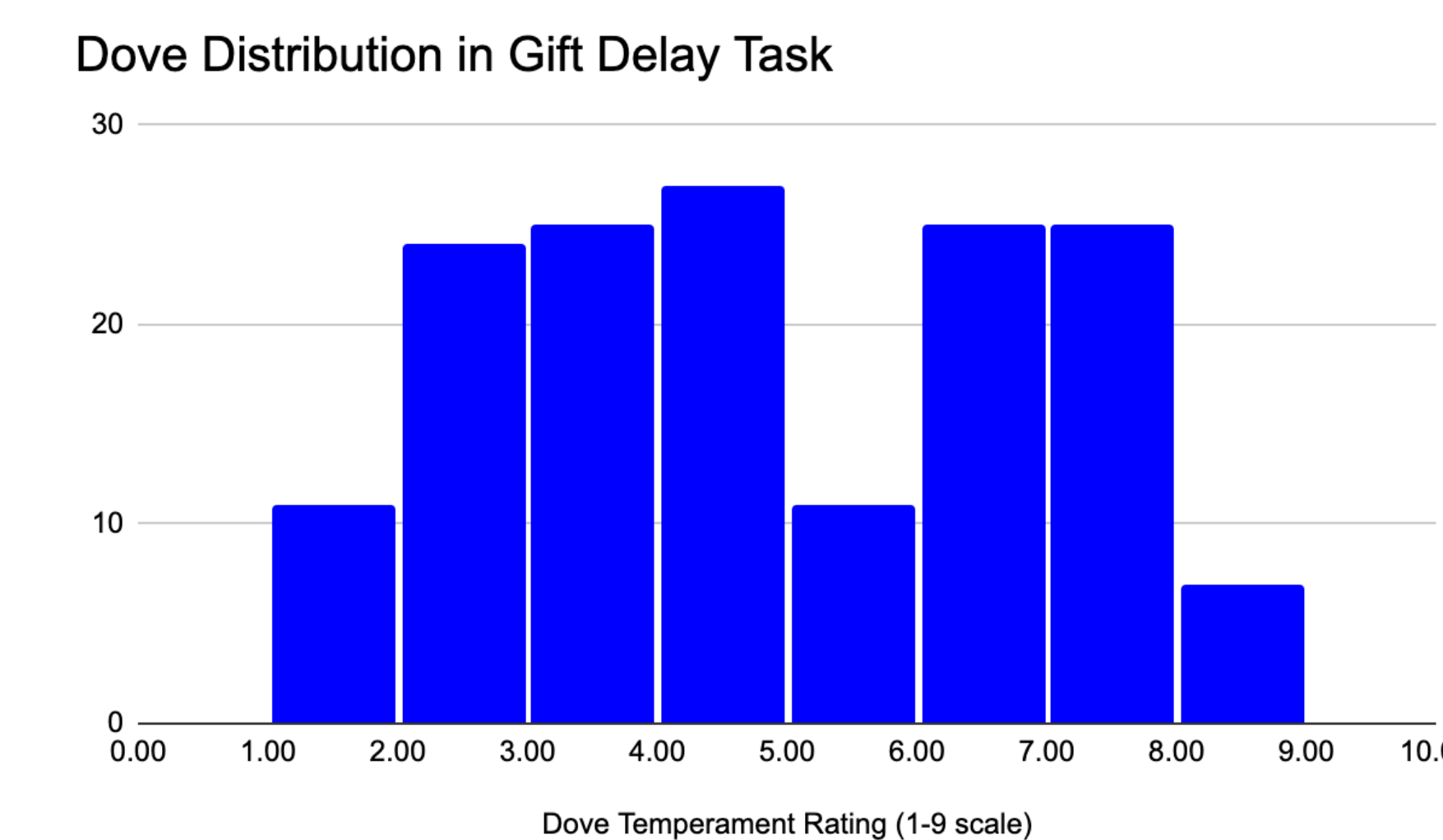


Figure 2. Graphical depiction of the distribution of rated the rated hawk profile

Code	Reliability Rating
Leave Seat	.988
Peer Bag	.971
Touch Bag/Tissue	.950
Hand in Bag	.945
Pull out Toy	N/A
Irritability	.741
Distress	.733
Exuberance	.892
Positive Mood	.840
Activity	.916
Inhibition	.672
Approach	.865
Effortful Control	.947
Hawk	.941
Dove	.939

Table 1. Summary of interrater reliabilities calculated between two independent raters. N = 48 out of a total sample of N = 238. All reliabilities fall within the acceptable range to be used in consequent analyses (Syed & Nelson, 2015).

Conclusions

- The Gift Delay Task was successful in capturing variations in the hawk dove profiles, as evidenced by the distributions obtained from this task
- It is possible that the Gift Delay Task may result in eliciting more extreme Hawk-like behaviors given the high reward salience of the hidden gift within the task itself
- Future work should continue to assess traditional temperament constructs as well as the novel evolutionary Hawk and Dove profiles across a variety of tasks in order to better understand how children's responses to the environment might vary

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