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Undergraduate Summer Research Internship

## PURPOSE

- Understand the pattern of category learning and classification across different culture and language groups
- Analyzing studies using understudied populations with a focus on differences in thinking styles (analytic versus holistic processing).
- Aim to identify aspects of category learning that are universal, find inconsistencies and gaps in the existing body of research.

Ultimately, by analyzing existing literature, we can assess the effect of culture in relation to analytic/holistic thinking preferences across cognitive paradigms.

## ANALYSIS/HOLISM

- Part of our analysis aims to uncover how thinking styles vary across culture groups when completing various categorization tasks. Category learning behaviour can be described by two strategies: (1) a holistic preference, or (2) a rule-based/analytic preference.
- Individuals may differ on their default approach to classification, either preferring an analytic or holistic method and this preference may be influenced by culture and language.

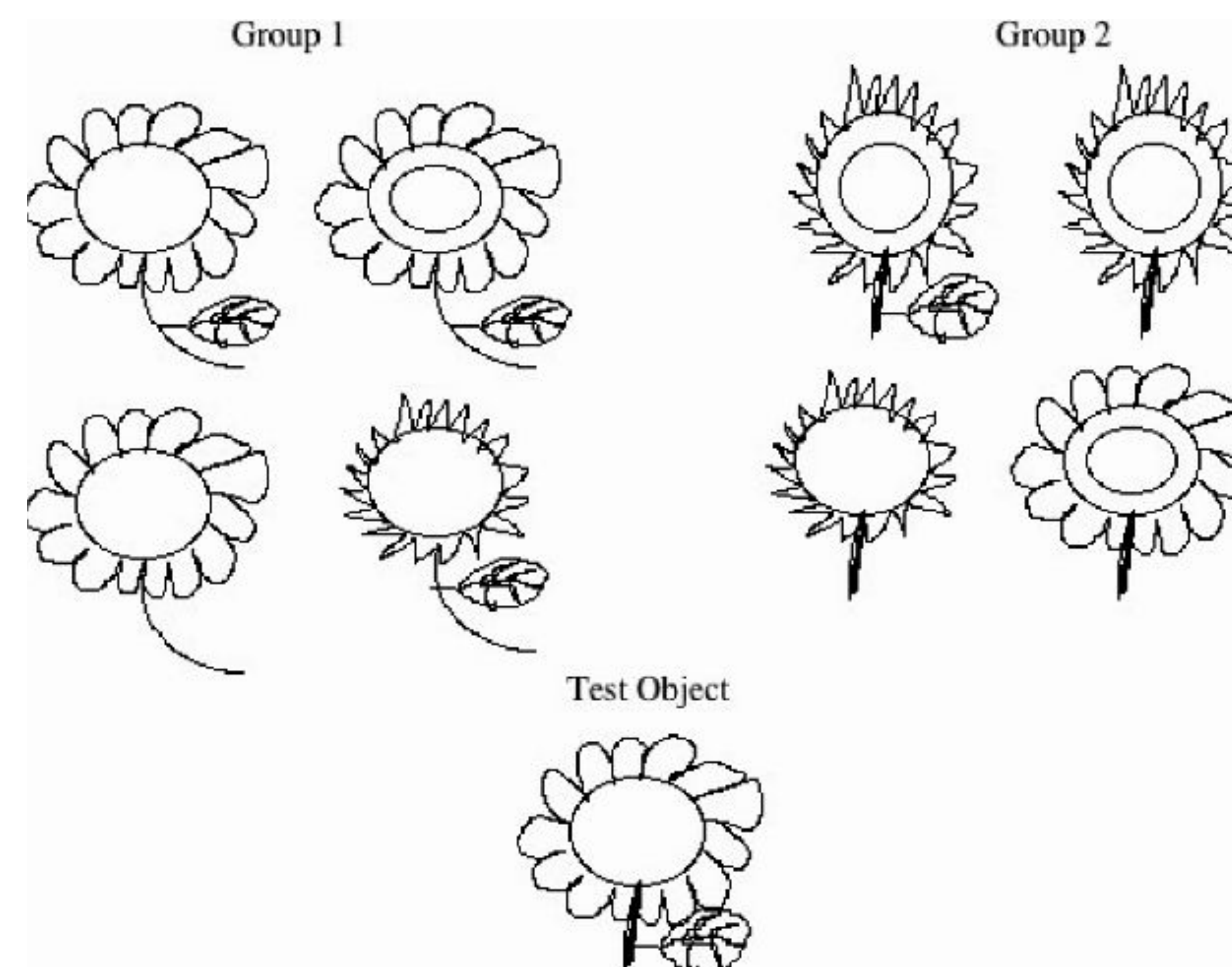
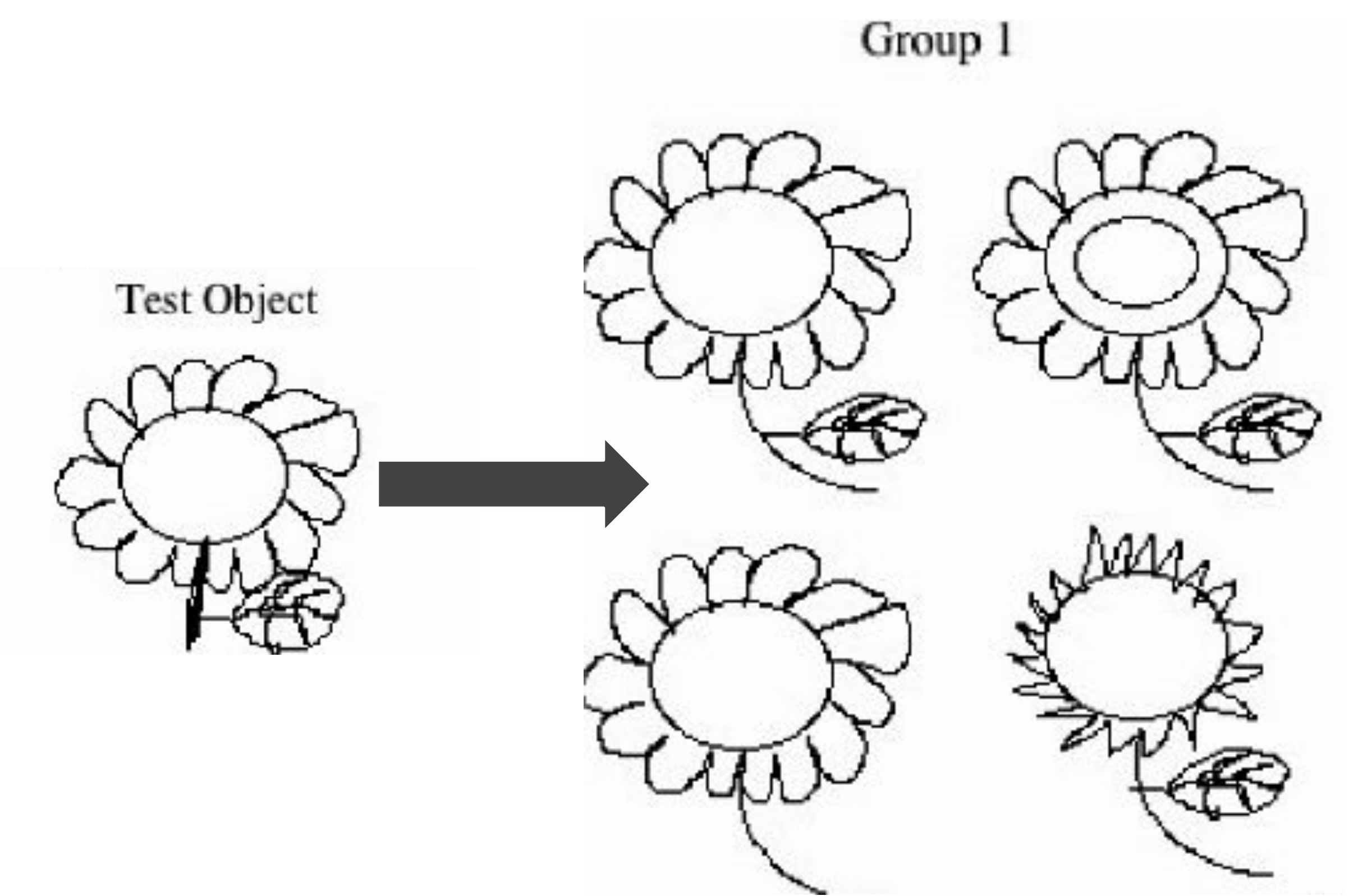
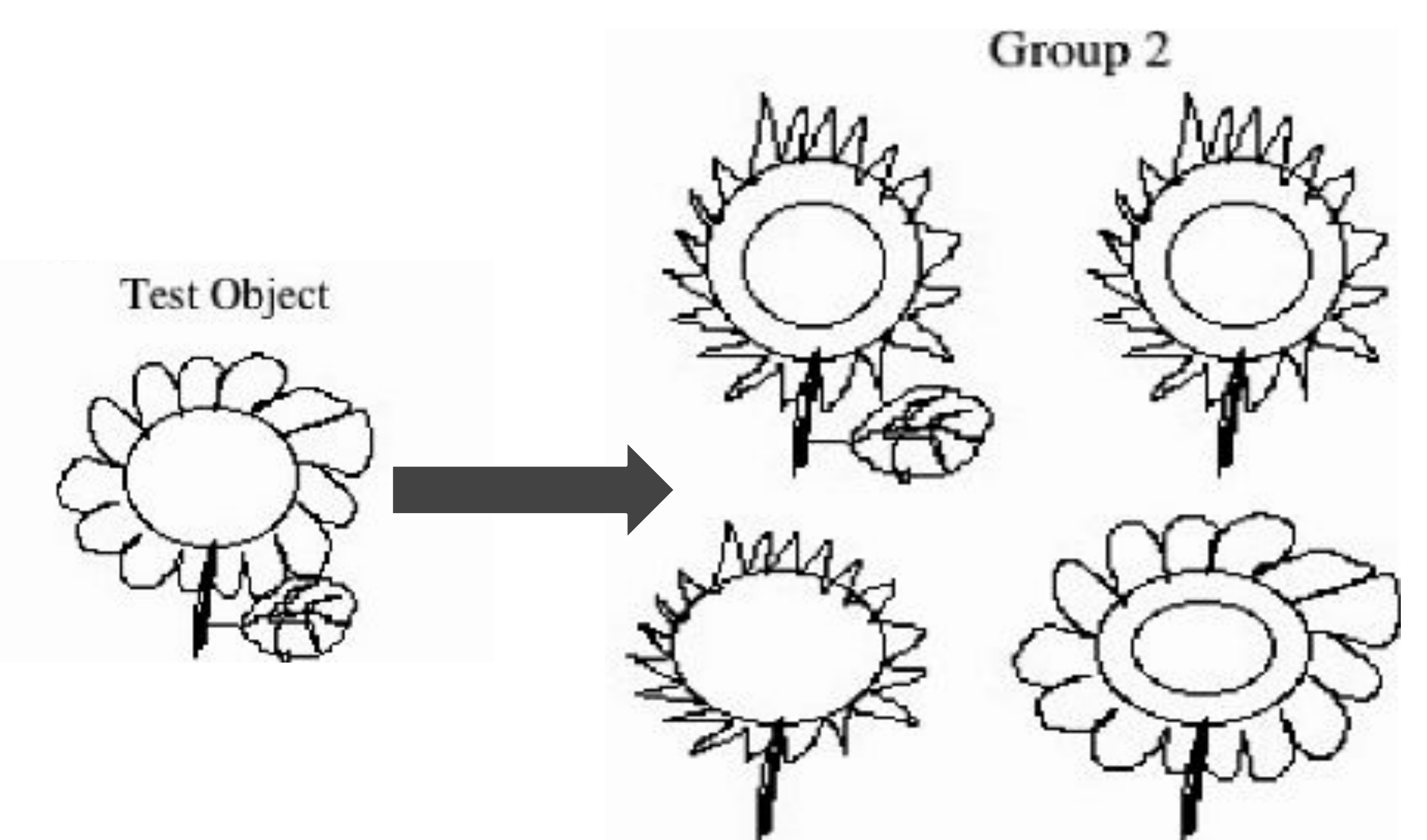


Figure 1. Example of choice-based classification task used by Choi et al. (2007). Group 1 typifies holistic choice, Group 2 analytic.



*Ex: All flowers look similar to one another*  
**Holism** attends to the whole field, makes little use of categories, employs dialectical reasoning, and emphasizes relationships between objects



*Ex: All flowers share straight stem*  
**Analysis** relies on assigning categories, rules, and formal logic.



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## METHODOLOGY



## Participants

Healthy adults aged 18-55 years were included in the study. Disordered populations, including those with cognitive impairments and learning disabilities, and children will be excluded.

## Study Inclusion Criteria

Peer-reviewed articles and empirical research exploring the effect of culture on category learning, classification and attention were included, as well as Eye-tracking studies.

## Data Extraction:

The data extracted included the author(s), year of publication, country of study origin, aims/objectives, study paradigm(s), population(s), task type(s), stimuli used, sample size, and outcomes.

## CONCLUSION

Reviewers have extracted a total of 18 articles. The data is yet to be synthesized and analyzed.

## Data Extracted

- **Task Types**
  - Thematic vs. Taxonomic
  - Absolute vs. Relative line
  - Rule based vs. Information Integration
- **Effect of Culture**
  - Eastern → Holistic Cognitive Style
  - Western → Analytical Cognitive Style
- **Moderating variables**
  - The level of control an individual has over their environment
  - The degree to which individuals have the power to create and terminate relationships in their environment
  - Affective state
  - SES





# Does Culture Affect the Ability to Learn and Use Categories?



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