

**DISCRETE MATHEMATICS**  
**Knowledge has Organizing Power**

**Theme 4**  
**LOGIC**  
**Knowledge has Organizing Power**

**LESSON 14**  
**PREDICATES AND QUANTIFIERS**  
**Handling the Field of All Possibilities**

**Wholeness of the Lesson**

Predicate logic analyzes the content of a proposition, not just its structure. Using predicate logic, we consider properties (given in predicates) that can be applied to all possible objects in the domain of the predicate.

*Science and Technology of Consciousness:* Knowledge is structured in consciousness. After expanding our consciousness with practice of the Transcendental Meditation technique, we are at home with all knowledge.

**Main Points**

1. A predicate defines a propositional function that assigns a proposition to each object in its domain. The truth value of the resulting proposition can be determined by examining its content.

*Science and Technology of Consciousness:* It is easy to handle any specific problem after we have expanded our awareness through practice of the Transcendental Technique.

2. Quantifiers  $\forall$  (for all) and  $\exists$  (there exists) also define propositions from a given propositional function. Quantifiers allow us to handle all possible objects in the domain of the propositional function simultaneously.

*Science and Technology of Consciousness:* Action is most effective when we can handle all possibilities simultaneously. By establishing our awareness in the home of all knowledge through regular practice of the Transcendental Meditation technique, we handle all possibilities.

# UNITY CHART

Connecting the Parts of Knowledge  
with the Wholeness of Knowledge  
Validating Knowledge

1. Propositional logic evaluates the truth of a statement based on its structure.
2. Predicate logic evaluates the truth of a statement based on its content.
3. **Transcendental Consciousness** is a field free from differences and contradictions.
4. **Impulses within the transcendental field:** start the process of discrimination and differentiation between true and false.
5. **Wholeness moving within itself:** In Unity Consciousness, we see all mathematical possibilities in terms of their source in our own unbounded Self.

