Philosophy 230

Wesleyan University
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Handout 2b

Polyadic Paraphrase

I. Relative scopes and differences in truth conditions

    A. Everyone loves someone.

    B. Someone is loved by everyone.

II. Logical Forms

    A. Every statement has one of seven kinds of logical forms:

        1. $(\forall x)(\ldots x \ldots)$
        2. $(\exists x)(\ldots x \ldots)$
        3. $-(\ldots)$
        4. $(\ldots).(\cdots)$
        5. $(\ldots) \vee (\cdots)$
        6. $(\ldots) \supset (\cdots)$
        7. $(\ldots) \equiv (\cdots)$

    B. If a statement has one of the first two of these forms, then we say that it has a *quantificational* form at the highest level.

    C. In particular, we say that it is a universal quantification, or an existential quantification at the highest level.

    D. If a statement has the next 5 forms, then we say that it has a *truth-functional* form at its highest level.

    E. In particular, we say that the statement is a negation, or conjunction, or disjunction, or conditional, or biconditional, at the highest level.

III. Polyadic paraphrase:

    A. If John likes someone, then everyone does.

    B. Every student dislikes some class.

    C. If every class disliked by someone is liked by someone, then no class is disliked by everyone.

IV. Definition of monadic schemata

    A. (*Monadic*) *open schemata*:

        1. (*Monadic*) *atomic open schema*: e.g.,

$$Fx, \ Gy, \text{ etc.}$$

        2. A (*monadic*) *complex open schema*: e.g.,

$$Fx.Gx \supset Hx$$

3. Note that **only one** free variable is allowed.

B. *Simple monadic schema*: e.g.,

$$(\exists x)(Fx \equiv Gx),$$

$$(\forall y)(Hy.(Gy \vee Fy))$$

C. *Pure monadic schema*: e.g.,

$$(\exists x)(Fx \equiv Gx) \supset (\forall y)(Hy.(Gy \vee Hy))$$

D. *Monadic schema*: e.g.,

$$(\forall x)(Fx \supset Gx \vee Hx) \supset Fx$$