

## Properties of Tropes and Types of Tropes

### 1. Properties of tropes

#### 1.1. Properties of concreteness

- Temporal location / duration:
- Spatial location?
- Object of perception: tropes as the immediate objects of perception
- Object of causal relation

#### Other properties of concreteness:

- Description-independence
- Part-whole structure
- Measurable extent

#### Conclusion

- Tropes referred to with predicates, however determinable, unspecific, quantificational, are always maximally specific
- Tropes must be grounded in instances of natural (sparse) properties, but not facts, states or states of affairs
- There are no determinable tropes

#### 1.2. Similarity and numerical identity

- (1) a. ?? Socrates wisdom is Plato's wisdom.  
b. Socrates' wisdom is the same as Plato's wisdom.  
c. Socrates wisdom is Xanthippe's husband's wisdom.

- (2) a. ?? The softness of this pillow is the softness of that pillow.  
 b. The softness of this pillow is the same as the softness of that pillow.
- (3) a. ?? The length of this book is the length of that book.  
 b. The length of this book is the same as the length of that book.  
 c. The length of this book is identical to the length of that book.
- (4) a. ?? The color of this car is the color of that car.  
 b. The color of this car is the same as the color of that car.  
 c. The color of this car is identical to the color of that car.  
 d. This color is the color Sue had mentioned.

### Similarity

- Tropes instantiating the same property are similar
- Tropes instantiating the same natural property are exactly similar

### **1.3. Tropes and predication**

Difference between predication and instantiation:

Properties

- have tropes as instances
- are predicated of objects

Two views:

- Holds for adjectival universals / qualities, but not substantive universals / secondary substances
- Holds for all universals

First view reflected in kind terms I natural language:

- (5) a. Socrates' wisdom is admirable.  
 b. Wisdom is admirable
- (6) a. The water in the glass is transparent.  
 b. Water is transparent.
- (7) a. That giraffe is tall.  
 b. Giraffes are tall.

Kind terms:

‘water’: a kind of liquid

‘giraffes’: a kind of animal

‘wisdom’: a kind of trope

Kind term behaviour:

(8) a. Pure water is rare.

b. Giraffes are rare / not extinct.

c. Great wisdom is rare.

N a bare mass noun / plural: stands for the universal

Definite NP with N as head: (generally) stands for an instance of the universal

The Aristotelian view:

Sortal universals / secondary substances: have objects as instances.

‘Adjectival’ universals / qualities: have tropes (accidents) as instances, but are predicated of objects (the bearers of the tropes)

(9) a. ?? The softness of the pillow is extremely soft.

b. ?? The length of the book is quite short.

Consequences for spatio-temporal location and extension

Invalid:

(10) The pillow is on the bed.

The softness of the pillow is on the bed.

Softness goes along with a trope of spatio-temporal location / extension, but is not itself spatio-temporally located / extended.

Ontological dependence among tropes.

Some puzzles:

(11) a. The color of the car is red.

b. the weight of the stone is two pounds.

c. Red is the color of Mary’s car.

d. Two pounds is the weight of the stone

- (12) a. The shape of the stone is circular.  
 b. \* Circular is the shape of the stone.

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### 3. Types of Tropes

#### 3.1. Kinds of trope-referring terms

##### Trope terms with adjective nominalizations

medieval philosophers, Strawson (1959), Woltersdorff (1970):  
*the redness of the apple, the roundness of the object*

##### Trope terms based on sortal predicates

*'Socrates humanity', John's fatherhood*

##### Trope-referring terms with trope sortals

*the quality of the paper, the color of the car,*

More generally: abstract N + referential complement: *trope-referring term*

but *this* + abstract sortal: *type demonstrative*

- (12) a. I have never seen this color.  
 b. ?? I have never seen the color of this car.

#### 3.2. Quantitative tropes

Examples: the degree of Mary's happiness, the extent of John's anger, John's weight, the length of the stick, the number of planets

##### Criteria for tropes reference:

Similarity:

- (13) a. The number of men is the same as the number of women.  
 b. ??? The number of men is the number of women.

Properties of concreteness:

- (14) a. John noticed the high number of women.

b. The number of accidents was the cause of the delay.

(15) a. The number of planets is eight.

Against reference to abstract numbers:

(15) b. ??? The number of planets is the number eight.

c. ??? Which number is the number of planets?

Typical trope predicates: *exceed*, *high*, *negligible*:

(16) a. The number of women is high / negligible.

b. The number of women exceeds the number of men.

(17) a. ?? Eight is high / negligible.

b. ?? Eight exceeds six.

Arithmetical operations on abstract numbers and on tropes

(18) a. ??? the successor of the number of planets

b. The number of planets plus the number of moons of evening stars is nine.

c. The number of planets minus the number of moons of evening stars is nine.

### 3.3. Complex tropes

Relational tropes

(19) a. the love between John and Mary

b. the personal relation between John and Mary

c. the difference between John and Mary

d. the diplomatic relations among the countries

Collections of tropes

(20) a. John's anger and Bill's anger are very different.

b. John compared two things, the beauty of the picture and the beauty of the landscape.

Tropes instantiating complex properties

(21) John's mean and unjust behavior toward Mary

Higher-order tropes

(22) a. the unexpectedness of the beauty of the landscape

b. the unusualness of the lightness of the stone

Higher-order relational tropes

(23) the difference / similarity between the beauty of the picture and the beauty of the landscape

Quasi-relational tropes

(24) a. the relation between John and Mary

b. the relatedness of John to Mary

A different kind of thing: qua objects (Kit Fine)

(25) a. John's fatherhood

b. John as a father

### 3.4. Variable tropes

Reference to entities with variable trope manifestations

(26) a. Mary's competence has increased / diminished over time.

b. The beauty of the landscape has changed.

c. John's weight has diminished.

d. The number of students has increased.

Reference to variable entities is more general

Not available for states:

(27) a. ?? The state of the landscape's being beautiful has changed.

b. ?? The state of Mary's being happy has increased.

Not available for facts:

(28) a. ?? The fact that the landscape is beautiful has changed.

b. ?? The fact that it is raining has diminished.

But available for events:

(29) a. The annual ball has changed over the years.

b. The New Year celebrations are becoming more spectacular every year.

And for objects:

(30) a. John changed his trainer.

b. The president of the US is elected every four years.

And another example of a variable trope:

(31) The temperature is rising.

Tropes with variable bearers

(32) The number of people that fit into the bus exceeds the number of people that fit into the car.

## Literature on tropes (selection)

Bacon, J.: 'Tropes'. *Online Stanford Encyclopedia of Philosophy*.

----- (1995): *Universals and Property Instances – The Alphabet of Being*.

Blackwell, Oxford.

Campbell, K. (1990): *Abstract Particulars*. Blackwell, Oxford.

Levinson, J. (1980): 'The Particularization of Attributes'. *Australasian Journal of Philosophy* 58, pp. 102-15.

Lowe, J. (1998): *The Possibility of Metaphysics*. Oxford UP, Oxford.

----- (2006): *The Four-Category Ontology. A Metaphysics Foundation for Natural Science*. Oxford UP.

Manley, D. (2002): 'Properties and Resemblance Classes'. *Nous* 36. 1., 75-96.

Maurin, Anna-Sophia (2002): *If Tropes*. Kluwer Dordrecht.

Merz, D. W. (1996): *Moderate Realism and Its Logic*. Yale UP, New Haven.

Moltmann, F. (2004): 'Properties and Kinds of Tropes: New Linguistic Facts and Old Philosophical Insights'. *Mind* 113, 1-43.

----- (2005): 'Two Kinds of Universals and Two Kind of Groups'. *Linguistics and Philosophy* 27: 739-776.

----- (2007): 'Events, Tropes and Truthmaking'. *Philosophical Studies* 134, 2007, pp. 363-403.

----- (2009): 'Degree Structure as Trope Structure A Trope-Based Analysis of Comparative and Positive Adjectives'. *Linguistics and Philosophy* 32, 51-94, 2009.

----- (to appear a): 'Reference to Numbers in Natural Language'. To appear in *Philosophical Studies*

(online first 2012).

----- (to appear b): 'Identificational Sentences'. To appear in *Natural Language Semantics*.

----- (to appear c): 'Trope, Bare Demonstratives, and Apparent Statements of Identity'.

To appear in *Nous* (online first 2012)

----- (to appear d): 'Intensional Relative Clauses and the Notion of a Variable Object'. *Proceedings of the 18<sup>th</sup> Amsterdam Colloquium* (2011). FOLLI Lecture Notes in Computer Science (LNCS), Springer, 2012.

----- (to appear e): *Abstract Objects and the Semantics of Natural Language*. Oxford

UP, Oxford.

Mulligan, K. / P. Simons / B. Smith (1984): 'Truthmakers'. *Philosophy and Phenomenological Research* 44, 287-321.

Simons, P. (1994): 'Particulars in Particular Clothing. Three Trope Theories of Substance'. In *Philosophy and Phenomenological Research* 54.3, pp. 553-574. Reprinted in S. Laurence / C. MacDonald (eds.): *Contemporary Readings in the Foundations of Metaphysics*. Blackwell, Oxford 1998.

Strawson, P. (1953-4): 'Particular and General'. *Proceedings of the Aristotelian Society*. Reprinted in A. Schoedinger (ed.): *The Problem of Universals*. Humanities Press, New Jersey, 1992.

----- (1959): *Individuals. An Essay in Descriptive Metaphysics*. Methuen, London.

Schnieder, B. (2004): 'A Note on Particularized Properties and Bearer-Uniqueness'. *Ratio* 17, 218-228.

Williams, D. C. (1953): 'On the elements of being'. *Review of Metaphysics* 7, 3-18.

Woltersdorff, N. (1970): *On Universals*. Chicago UP, Chicago.