

UNIVERSITÀ DEGLI STUDI DI MILANO
DIPARTIMENTO DI FILOSOFIA

18 December 2019

EXTENDING REASON:
PEIRCE, CASSIRER,
AND MATHEMATICAL CATEGORY-THEORETIC PERSPECTIVES

Fernando Zalamea
Departamento de Matemáticas
Universidad Nacional de Colombia

CONTENTS

(0) Chart of the presentation

(1) The problem: extending reason

- 1.1. *Through the Looking-Glass* (1): beyond decomposition forms
- 1.2. *Through the Looking-Glass* (2): beyond atomization forms
- 1.3. *Through the Looking-Glass* (3): beyond syntactic forms
- 1.4. Towards “reasonableness” (Peirce 1905) and “razonabilidad” (Vaz Ferreira 1910)

(2) Counterpoints between Peirce and Cassirer

- 2.1. Semantics: relative existential graphs (Peirce) *versus* substance and function (Cassirer)
- 2.2. Pragmatics: pragmaticism (Peirce) *versus* essence and effect (Cassirer)
- 2.3. Phenomenology: cenopythagorean categories (Peirce) *versus* eidos and eidolon (Cassirer)
- 2.4. Continuity: abstract continuum (Peirce) *versus* culture and life (Cassirer)

(3) Category-theoretic perspectives

- 3.1. Category-theory: synthesis, abstraction, duality
- 3.2. Yoneda’s Lemma
- 3.3. Relative universals
- 3.4. Topos theory: some main forces
- 3.5. The Peircean and Cassirerean extensions *Through the Category-Theory Looking Glass*
- 3.6. An extension of reason: the three levels “razón” / “corazón” / “co-razón”