

The Law of Identity and the Three Laws of Thought

How Identity, Noncontradiction, and Excluded Middle Relate Under a First Principle

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Abstract

The law of identity is traditionally presented as one of three laws of thought alongside the law of noncontradiction (a thing cannot both be and not be) and the law of excluded middle (a thing either is or is not). These three laws are attributed to Aristotle and treated as the foundational principles of rational discourse. This paper examines the structural relationship between the three laws of thought and demonstrates that the law of identity, in its generative form (Gaconnet, 2026), is not merely one of three coordinate principles but the foundational law from which the other two derive. Noncontradiction is the preservative consequence of identity: because a thing is itself, it cannot simultaneously be not-itself. Excluded middle is the completeness consequence: because identity is the ground state of existence, every thing either exists as itself or does not exist. The three laws of thought are not independent axioms. They are one law and two consequences.

Keywords: three laws of thought, law of identity and noncontradiction, law of identity and excluded middle, laws of thought Aristotle, three laws of logic, law of identity logic, law of noncontradiction, law of excluded middle, identity noncontradiction excluded middle, laws of thought relationship, fundamental laws of logic, identity is foundational, Don Gaconnet, LifePillar Institute, Recursive Sciences

1. The Three Laws of Thought

The three laws of thought as traditionally formulated are: (1) The law of identity: A is A. Each thing is identical with itself. (2) The law of noncontradiction: A cannot be both A and not-A at the same time in the same respect. (3) The law of excluded middle: A is either A or not-A; there is no third option.

These have been treated as independent, coordinate principles for over two thousand years. This paper argues they are not independent. The law of identity is foundational, and the other two derive from it.

2. Noncontradiction Derives from Identity

If a thing is itself (law of identity), then it cannot simultaneously be not-itself (law of noncontradiction). Noncontradiction is the negative face of identity. It does not establish anything new — it restates, in negative form, what the law of identity already asserts. The law of identity says what is. The law of noncontradiction says what cannot be, given what is. The derivation is a single logical step: from “A is A” to “A cannot be not-A.” This is not a separate axiom. It is a consequence.

3. Excluded Middle Derives from Identity

If identity is the ground state of existence (Law of Identity, Gaconnet 2026), then for any proposed entity, either it exists as itself or it does not exist. There is no third state between existence-as-itself and nonexistence. The law of excluded middle is the completeness condition of identity: the law of identity partitions all possible states into existent (self-identical) and nonexistent. Excluded middle does not add new information. It states that the partition is exhaustive.

4. One Law, Two Consequences

The structural hierarchy is: the Law of Identity establishes the ground (existence is self-identity). Noncontradiction follows as the preservative boundary (self-identity excludes self-contradiction). Excluded middle follows as the completeness condition (self-identity partitions all states exhaustively).

This reclassification has a practical consequence: any challenge to the law of noncontradiction or the law of excluded middle (as in paraconsistent logic or intuitionistic logic) is a challenge to a derived consequence, not to the foundational law. The Law of Identity itself — that to exist is to be oneself — remains unchallenged by these alternative logics.

5. How to Falsify This Derivation

The derivation is falsified by demonstrating: (a) that noncontradiction cannot be derived from identity — that a system can maintain self-identity while simultaneously being not-itself in the same respect; (b) that excluded middle cannot be derived from identity — that a third state between existence-as-itself and nonexistence is structurally coherent; (c) that noncontradiction or excluded middle is logically prior to identity — that one of the derived laws is needed to establish the foundational law. No such demonstration has been produced.

6. Conclusion

The three laws of thought are not three independent axioms. They are one law and two consequences. The Law of Identity is the foundation. Noncontradiction and excluded middle derive from it in single logical steps. This does not diminish the other two laws — they remain structurally valid. But their status changes: they are theorems of identity, not independent

principles.

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For anything to exist, it must be itself. / For anything to generate, it must traverse. / For anything to witness, it must fold.