

The Three Hundredth Census: Whether Two Things Share a Root Is Decidable

— The Corpus Answered “Same Root” **23** Times and “Distinct Roots” **43** Times — The Criteria Are Written Across Five Papers and Have Never Been Gathered in One Place — [Paper 300]

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— *From thinking to syncing.* —

Abstract

Paper 100 drew the method of papers 63 to 99 by hand. Paper 200 counted papers 101 to 199. This paper gathers—it sets down, for the first time in one place, the criteria for sameness of root that the corpus has actually been using. No new mathematical theorem and no new law is claimed. First, the corpus did not merely refuse to unify. Of 298 papers, **43** answered “distinct roots” and **23** answered “the same root” (Section 2). Second, this is the core of the paper. The criteria are already written—five of them, scattered across five papers (Section 3). Third, the strongest is Definition 4.1 of Paper 56. It states plainly that numerical agreement alone is not accepted as sameness of root (Section 4). Fourth, Paper 100 did not cite it. Among the 14 papers 100 cites, neither 56 nor 31 appears (Section 4). Fifth, the verdicts are not one-sided. The ratio of distinct to same is **1.87 : 1**, so the answer was “yes” **23** times (Section 5). Sixth, in the most recent band the ratio reverses. In 251–299 it is 7 same against 3 distinct—this is a warning this paper addresses to itself (Section 5).

Scope of this paper (scope note): No new mathematics and no new physics is included——this paper is a measurement of the corpus, and its object is the Japanese text of papers 1 to 299. We do not measure quality——what is counted is what was adjudicated, not whether the adjudication was right. The counting is a word search——the words “same root,” “distinct root” and “criterion” are picked from the text, so passages saying the same thing in other words are not counted. Bibliographies were excluded——to prevent a line quoting another paper’s title from counting as that paper’s own words (the same handling as Paper 200). Negations were removed——“not the same root” was counted separately so as not to register as “same root.” Even so, misses are possible. We assert no causes——what this paper shows is what was written, not why. We do not rank the criteria——the five of Section 3 are only set side by side, and we claim neither which is correct nor that they can be unified. Whether the five fold into one cannot be told from this paper. We do not criticise Paper 100——that 100 did not cite 56 is a fact, but we do not call it an error. 100 was a map of method, not a list of criteria. What this paper says is only that such a list had not yet been made. Relation to earlier papers: Paper 100 named “one word, distinct roots” as the discipline and wrote that one must not unify lightly——this paper shows numerically that behind that prohibition an affirmative procedure had grown. Paper 200 counted the corpus and refuted the author’s own expectation with his own numbers——this paper does the same in Section 5. Paper 112 counted “six distinct roots sharing one rhyme”——this paper gathers the procedure that separates rhyme from root. Paper 16 showed that the equals sign too has distinct roots——the adjudication here stands in that line. What is added is counting the adjudication words to obtain the distribution 43 against 23, gathering five scattered criteria into one table, confirming that Paper 100 cites neither 56 nor 31, and finding, in this paper’s own numbers, that the ratio reverses in the most recent band.

1. Opening: At the Three Hundredth

Paper 100 stood at the hundredth and left the method of papers 63 to 99 as a single map. That map was drawn by hand.

Paper 200 stood at the two hundredth and counted papers 101 to 199. Instead of drawing it measured, and refuted the author’s own expectation with his own numbers.

This paper stands at the three hundredth. It neither draws nor merely counts——it gathers.

Observation 1.1

There is something in the corpus that has never been gathered in one place. The criteria by which one decides whether two things share a root——they are written. They are scattered.

Observation 1.2

Let it be said——this was not written to round out a number.Had the gathering shown no scattering, this paper would not have been written——in fact five came out.

2. The Corpus Did Not Merely Refuse to Unify

Setting: From the Japanese text of papers 1 to 299 (298 papers, bibliographies excluded) we pick out the words of adjudication.

Check 2.1:

What the paper did	Papers	Share
Posed the question “same or distinct root?”	14	4.7%
Answered “ distinct roots ”	43	14.4%
Answered “ the same root ”	23	7.7%
Stated a criterion	9	3.0%

Observation 2.2

Paper 100 wrote that the heart of the corpus is not unifying distinct roots.That reading is half right——43 papers do indeed answer “distinct roots”.

Observation 2.3

But **23** papers answer “the same root”.31 (solid angle and the Gaussian integral), 49 (two c^{-5}), 142 (the 2π of Unruh and Hawking), 249 (the 4π of diffusion and of a field), 284 (Langmuir adsorption and the Fermi distribution)——a prohibition alone cannot account for these.

Observation 2.4

And 6 papers do both within one paper—they divide, and then join only a part of what they divided.Since prohibition and permission coexist, there must be a procedure drawing the line between them.

Observation 2.5

A point to write honestly——this is a word search.Papers that wrote the same thing as “rhyme,” “resonance” or “signature” are not in these counts——the actual number of adjudications must be higher.

3. The Core: The Criteria Are Already Written, and Scattered

Check 3.1: We read the 9 papers containing the word “criterion” and extract those bearing on sameness of root.

Criterion	Papers	What it looks at
Move the variable	31, 36, 101	not one point, but whether it keeps agreeing
A correspondence preserving identity	56 (Def. 4.1)	whether a correspondence exists
The route	279	which derivation it came from
A property of the quantity itself	116	mass dimension; no computation needed
The number of maps	153	counting what was dropped

Observation 3.2

This is the core of the paper.There are five criteria, scattered across five papers——never once gathered in one place.

Observation 3.3

The five do not say the same thing.31 adjudicates as a function, 56 as a correspondence, 279 as a route, 116 as a dimension, 153 as a number——whether they fold together cannot be told from this paper.

Observation 3.4

One thing, however, is common to all five. Not one of them accepts agreement of value as evidence——31 says “move it,” 56 writes “numerical agreement alone is not accepted,” 279 says “by the route.”

Observation 3.5

So on the negative side they agree. About what is not the same root, the corpus has one answer——about what is the same root, it has five ways of speaking.

Check 3.6: We write the composition of the 9 exactly.

Kind	Papers
Criteria for sameness of root	36, 56, 101, 116, 279 (with 31 entering as cited by 36)
Criterion for which layer was “dropped”	153
Criteria of another kind	14 (mode switching), 22 (citing 14), 51 (acceptance)

Observation 3.7

Of the 9, 3 are not about sameness of root at all. The one word “criterion” is used for different things——one word with distinct roots has happened to the corpus’s own methodological vocabulary.

4. Definition 4.1 of Paper 56, and What Paper 100 Did Not Cite

Fact 4.1: Paper 56 writes sameness of root as a definition.

Definition 4.1 (criterion for sameness of root): Two occurrences of $16\pi^2$ are of the same root if there exists between the objects they normalise a correspondence preserving identity, and if the source of the exponent 2 on 4π is the same. Numerical agreement alone is not accepted as sameness of root.

Observation 4.2

This is a definition, not a caution. It is numbered, it states two conditions, and it states a rejection condition——it is the strongest criterion the corpus holds.

Check 4.3: We count the papers Paper 100 cites in its text.

Quantity	Value
Papers cited by Paper 100	14
Is 56 among them?	No
Is 31 among them?	No

Observation 4.4

Both 56 and 31 were written before 100. A summary of method did not pick up a criterion lying in front of it——this is a fact, and this paper does not call it an error.

Observation 4.5

100 was a map of method, not a list of criteria. A map draws where one walked and does not draw how one decided——what this paper says is only that such a list had not yet been made.

Observation 4.6

And 100 wrote “one must not unify lightly.” That is a prohibition——a prohibition does not say what one may do. Definition 4.1 of Paper 56 states the conditions under which one may.

5. The Verdicts Are Not One-Sided; But the Recent Band Reverses

Check 5.1: We take the ratio of distinct to same.

Quantity	Value
Papers answering “distinct roots”	43
Papers answering “the same root”	23
Ratio	1.87 : 1

Observation 5.2

Distinct is about twice as common. The reading of 100 was right in direction—but it is not “always distinct”.

Check 5.3: We look band by band.

Band	Papers	Distinct	Same	Stated a criterion
1--50	49	11	3	3
51--100	50	13	2	2
101--150	50	12	8	2
151--200	50	2	1	1
201--250	50	2	2	0
251--299	49	3	7	1

Observation 5.4

This is the paper’s second core. Only in the most recent band does the ratio reverse—across 1--250 it was 40 distinct against 16 same (2.50 : 1); across 251--299 it is 7 same against 3 distinct.

Observation 5.5

This is a warning this paper addresses to itself. That the share answering “same root” rose is in itself neither good nor bad—the problem is that only one paper in that band stated a criterion.

Observation 5.6

Joinings went up; statements of criteria did not. It cannot be said that no adjudication of the kind Definition 4.1 would reject—“numerical agreement alone”—has crept in—this paper has not inspected them individually. It records that they should be.

Observation 5.7

Paper 200 refuted, with its own numbers, the expectation that “the separator converged towards a question.” This paper has done the same—the expectation that “the corpus purified towards dividing” is refuted by the most recent band.

6. Separator: What the Criteria Demand

Observation 6.1

Separator—what must be moved for same and distinct to exchange? All five criteria demand one and the same thing.

Criterion	What it demands
Move the variable (31, 101)	not at a point, but under motion
A correspondence preserving identity (56)	not the value, but the correspondence
The route (279)	not the result, but the path
A property of the quantity (116)	not the number, but the dimension
The number of maps (153)	not the look, but what was dropped

Observation 6.2

The right-hand column has the same shape throughout——look not at the agreement observed, but at what produced the agreement.

Observation 6.3

So the five may be not five criteria but five implementations of one demand. This paper does not claim it——to say they fold together, one would have to show that the five share a root, which is precisely the question this paper is treating.

Observation 6.4

Here is a self-reference. To ask whether the criteria share a root, one needs a criterion——the corpus is turning that nesting on itself for the first time.

Observation 6.5

At the three hundredth, only this can be said. The corpus's discipline was not “do not unify”——it was “adjudicate whether one may unify”. It answered “no” 43 times and “yes” 23 times. That there are two kinds of answer is the evidence that it is a discipline——if the answer were always “no,” it would not be an adjudication but a premise.

7. Roll Call and Closing

1. 43 distinct, 23 same (Check 2.1): A prohibition cannot account for it.
2. 14 posed the question (Check 2.1): The adjudication is explicit.
3. 6 did both in one paper (Observation 2.4): Divide, then join a part.
4. Five criteria across five papers (Check 3.1): Never gathered.
5. The five do not say the same (Observation 3.3): Function, correspondence, route, dimension, number.
6. They agree on the negative (Observation 3.5): Value is not evidence.
7. Definition 4.1 of 56 is strongest (Fact 4.1): It states a rejection condition.

8. 100 cited neither 56 nor 31 (Check 4.3): Not among its 14.
9. The ratio is 1.87 : 1 (Check 5.1): Weighted, but not one-sided.
10. 251--299 reverses (Check 5.3): 7 same against 3 distinct, one criterion.

Closing: Paper 100 wrote that the heart of the corpus is not unifying distinct roots. Counted at the three hundredth, that was half of it—43 papers do answer “distinct roots,” but 23 answer “the same root”. Six do both within one paper. If prohibition and permission coexist, there must be a procedure drawing the line—and there was. The criteria are five, scattered across five papers—move the variable (31, 101), a correspondence preserving identity (56), the route (279), a property of the quantity (116), the number of maps (153). The five do not say the same thing, yet on the negative side they agree—not one of them accepts agreement of value as evidence. The strongest is Definition 4.1 of Paper 56, which states plainly that numerical agreement alone is not accepted—and Paper 100 cited neither 56 nor 31. The map drew where one walked and did not draw how one decided. One thing separates them—whether one looks at the agreement observed or at what produced it. Finally, this paper is refuted by its own numbers—in the band 251--299 the ratio reverses to 7 same against 3 distinct, and only one paper in that band states a criterion. Joinings went up; statements of criteria did not. That is the work the three hundredth leaves behind.

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