O. R. Lindsley: The Secret Life of William James

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The Secret Life of William James

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Prior to this meeting, I had never considered William James an important instinct theorist. As I have been taught by Edwin G. Boring, I went immediately to the original source, James' Principles of Psychology; and, as I have been taught by B. F. Skinner, I computed some simple frequencies.

Between the first (see Figure 1) and last pages (see Figure 2) of James' Principles are 1,378 other pages—with only 59 (4%) devoted to instincts. Figure 3 shows the number of pages contained in each of his 28 chapters. He relegated instincts to eighth place. Space perception, the self, will, experience, the brain, thought, and discrimination—all of these earned more pages than did instincts.

This shows that James did not consider instincts of prime importance. Clearly, he was more of an early space theorist than an instinct theorist.

The number of pages per topic—although the only direct measure of that topic's importance to the author—is not a good index of the impact the writing will have on others. James' two greatest effects on others—the James-Lange theory (presented in the chapter on emotions), and the chapter on habits—took fourteenth and twenty-first place, respectively, in number of pages.

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The principles of psychology

by

William James

Professor of Psychology in Harvard University

in two volumes

Vol. I

New York

Henry Holt and Company

fig. 1. The first and last pages of James' Principles of Psychology, Vol. 1.

fig. 2. The first and last pages of James' Principles of Psychology, Vol. 2.

necessary truths—effects of experience. 93

grown up in ways of which at present we can give no account. Even in the clearest parts of Psychology our insight is insignificant enough. And the more sincerely one seeks to trace the actual course of psychogenesis, the steps by which as a race we may have come by the peculiar mental attributes which we possess, the more clearly one perceives the slowly gathering twilights close in utter night.
So let us look at some frequency counts of references in history of psychology textbooks to determine James' impact on others as measured by his impact on historians of psychology. Table 1 summarizes relevant references in two books published in 1929 on the history of psychology, Boring's and Pillsbury's, in addition to three later histories, two by Boring (1942, 1957) and one by Roback (1952). In the subject indices of all five books, there were only 12 references to instincts (none involving James) and seven to the James-Lange theory of emotions.

The name indices contained 168 references to James, but only one of these had anything to do with instincts (0.6%). There were 45 pages in all five texts concerning James, with only one sentence describing instincts. This sentence reads: "The most striking of the chapters are those on habit, on the self, on emotion, on will, and on instincts, in which the long series of discussions and enumerations of instincts from Darwin down is given a systematic form [Pillsbury, 1929, p. 240]."

These data clearly show that James' 59 pages of writing on instincts had almost no effect on historians of psychology and, therefore, almost no impact on others.

What about the quality—the completeness—of James' writing on instincts? Let us take the last of the 18 instincts selected by Harlow from James' list of 25—the instinct of jealousy (Harlow, 1967). James' entire analysis of jealousy consists of a single paragraph (shown in Figure 4). It reads: "Jealousy is unquestionably instinctive." A four-word treatment!

Now, what of James the experimentalist? The direct measure of an experimenter is the amount or proportion of data he reports, the percentage of his total figures which present data, and the number of figures per page of text. Table 2 compares the percentage of figures presenting data for James' Principles (6%) with Ferster and Skinner's Schedules (99%). Number of figures per page is .06 for James and 1.2 for Ferster and Skinner.
TABLE 2

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Note.—The percentage of figures including data and the number of figures per page reveal that James was only 1/16–1/20 as experimental as Ferster and Skinner.

Therefore, according to the quality and frequency of data presented, James was only 1/16–1/20 as experimental as Ferster and Skinner.

Now, speaking of numbers! Something much more interesting than all these frequency counts came up as I read through James' Principles. I noticed that Volume 1 (see Figure 1) ended on page 689—and that Volume 2 (see Figure 2) ended on page 689!

What in the world is this?

Since these number 689s could hardly have occurred by chance, what possible reason could James have for selecting them—for writing and rewriting his volumes until each ended part-way down its 689th page?

What could the number 689 mean? Is there any secret meaning? Any black art? Any numerology at work?

First, the number 689 is one of the few truly devilish numbers. It is one of the 18 inverts between 1 and 1,000. Inverts are numbers that read the same from above as from below. It really does not matter which end is up, their tops or their bottoms. So this is 689—turn it upside down and it is still 689. The other 17 inverts are: 1, 8, 11, 69, 88, 96, 101, 111, 181, 609, 619, 808, 818, 888, 906, 916, and 986.

The probability of hitting one of these by chance alone is 18 out of 1,000 times. The probability of hitting two in a row by chance alone is 18 out of 1,000 × 18 out of 1,000, or three out of 10,000 times. This leads us to conclude that James carefully selected this rare numerical invert.

Furthermore, the probability of hitting exactly the same one of the 18 inverts twice in a row by chance alone is one in 1,000 × one in 1,000, or one out of a million times. This leads us to be almost sure that James used some...
sort of selection criterion. Finally, a slightly different approach to our statistical-historical analysis suggests that if the two volumes were to be about equal in length—say between 600 and 700 pages each—then the probability of getting an equal number of pages in each would be one in 100 × one in 100, or one in 10,000 times by chance alone. Again, an extremely rare occurrence—and more coals on the fire, whose smoke tells us James was a crafty old invert selector.

What possible selection criteria could he have used? What of the numerology? Could James have been in secret—a numerologist?—a practitioner of the “black arts”?: a cabalistic scientist?

Let us search for the telltale hidden signature—the sure sign of a numerologist at work. Let us start with the number that first caught our attention: 689. Added together, the digits 6, 8, and 9 yield a total of 23. The twenty-third letter of the alphabet is W—for WILLIAM?

Now what else can we discover about the number 23? Its first digit, 2, is the first female or even number. Its other digit, 3, is the first male or odd number. Added together, they yield 5—the symbol for marriage and completion. And there are five—count them—five letters in JAMES!

William James. Our complete signature! James, our numerologist, happily at work; safe in the knowledge that his secret skill and power will be known only to friends—to others of his kind—to other numerologists.

But come! Let us delve even further. We must have proof before we conclude! Let us look for the hidden address—the geographic key—or the locature, as it is called in numerological science (Carberry, 1689). Let us assume that James’ locature code was N-1. Then, for the locature of his manuscript, we have H-A-R-V-A-R-D—seven letters. N-1 = 7-1 = 6! U-N-I-V-E-R-S-I-T-Y—10 letters. N-1 = 9! And, finally, C-A-M-B-R-I-D-G-E—composed of nine letters. In like manner, N-1 = 9-1 = 8! Now, everyone knows that Cambridge always comes between Harvard and its University. So placing the 8 between the derived 6 and 9 yields 689! Therefore, the cabalistic number 689 is not only our signature but doubly proven by yielding our locature as well! I am almost breathless with numerical discovery as I write this!

The function of the 18 magic or invertible numbers is to call upon the devil’s power to provide the supplicant with an extra advantage here on earth. These numbers, reading the same from below as above, provide 18 natural and unguarded bridges for sulphuric power to rise from the depths and engage in earthly action.

The immediate and marked success of these two cabalized volumes of James’ clearly suggests unnatural skill and power were at work. The numerical double proof (both signature and locature—a rare find in numerical science!) of the actual power route through the invert number 689 into the vulnerable last page of each volume conclusively proves our case!

Using simple frequency counts and a functional analysis, we have shown nothing—merely that James was not an instinct theorist because he had no effect as such.

Using James’ own method, the critique philosophique, we have made two important historical discoveries: first, that James was in secret a numerologist (this we doubly proved!); and second, that he was the discoverer and initial user of the statistical formula, N — 1!

Thank you for letting me share these discoveries with you. By the way, this is a transcript of the sixty-ninth lecture I have presented this year!

References