

Christine Ladd-Franklin: Logician or Psychologist?

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Women in Analytic Philosophy Past and Present
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Christine Ladd-Franklin: Logician

- Born in 1847, in Windsor, Connecticut.
- Graduated as valedictorian at Wesleyan Academy in 1865.
- Fall–Spring 1866: enrolled at Vassar College.
- Worked as a teacher until she could afford to return to Vassar.
- At Vassar, studied astronomy under Maria Mitchell.
- Turned to mathematics when a career in astronomy/physics wasn't possible.
- Numerous publications in mathematics journals (e.g., *Analyst*, where she was the first woman published) between 1875 and 1886.
- Taught mathematics at secondary school for nine years.
- Accepted to Johns Hopkins University in 1878, with the support of James J. Sylvester.
- Married fellow student Fabian Franklin in 1882.

Christine Ladd-Franklin: Logician

- Studied mathematics and wrote a dissertation, *On the Algebra of Logic*, under the supervision of C.S. Peirce, published in 1883.
- Later papers on logic (1889, 1890, 1904, 1912, 1913, 1920, 1927, 1928).
- Applied to teach at Johns Hopkins in 1893 (denied).
- Was given permission in 1904 to teach one class a year, for five years.
- Awarded her PhD in 1926.

The Antilogism

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There is no reason why this should not be accepted as the definitive solution of the problem of the reduction of syllogisms. It is rather remarkable that the crowning activity in a field worked over since the days of Aristotle should be the achievement of an American woman (Royce, 1926, p. 60).

Christine Ladd-Franklin: Psychologist

- 1891–1892: Worked in Müller's lab in Göttingen and with König in Helmholtz's lab in Berlin.
- 1892: Resolved the fundamental inconsistency between Hering's theory and Helmholtz's theory with her Developmental Theory of Perception.
- 1894: Returned to König's lab.
- Among the first women to join the American Psychological Association (1893).
- Presented ten papers at APsychA between 1894–1925.
- Worked in Europe again 1901–1902, 1908.
- Lectured on psychology at Johns Hopkins 1904–1909.
- Lectured on psychology at Columbia 1914–1927.
- Also taught at Clark University, Harvard and University of Chicago.
- First woman member of Optica (1919).
- *Color and Color Theories*, 1929 (volume of collected papers).
- Died in 1930.

Bridging the Gap: Philosophy

- Paper on the ethics of tipping (1891).
- “Epistemology for the Logician” (1908).
- Papers on non-existence and existence (1912, 1931).
- The antilogism and its reception.
- Common logic vs. symbolic logic.
- Sub-editor of the Dictionary of Psychology and Philosophy.
- Emphasis on proper notation and vocabulary.
- Red thread from her earliest work on mathematics up through her latest work in psychology of perception.

More of the story to be told!

- Vast amount of material in her archives yet to be explored.
- (3000 photos taken across 30+ boxes, less than half the material!).
- Universal languages such as Esperanto.
- Notes on philosophical topics, including fundamental concepts of logic, relationship between logic and psychology, draft book(s).
- Extensive correspondence or engagement with: Boole, DeMorgan, Couturat, Jevons, Jones, Mitchell, Peirce, Russell, Schrödinger, Schröder, Paul Weiss, Whitehead (“You told me (when I had the happiness of seeing you) that you were very familiar with my paper on symbolic logic in the *Studies in Logic* by Members of the Johns Hopkins University—you told me in fact (much to my pleasure) that you kept the book always on your study-table.”), etc.

Ladd-Franklin and Russell

- Russell's anecdote: "I once received a letter from an eminent logician, Mrs. Christine Ladd-Franklin, saying that she was a solipsist, and was surprised that there were no others. Coming from a logician and a solipsist, her surprise surprised me." (1948).
- "Bertrand Russell and Symbolic Logic" (1918): "That an inept symbolism is made use of in mathematics. . . would be of no consequence, but Russell and Peano treat this 'addition' [of \in] as constituting an important improvement over the logic which preceded them—that of Peirce and his school—instead of which it is simply erroneous."
- Galley proofs of *Principia* with marginal notes.
- Numerous other dismissive remarks (e.g., "Not only is this peculiarity of the copula ignored, as a matter of course, in the common logic, where more than two terms is an 'unknown,' but you will hardly find it, I believe, explicitly set forth in the (poor) symbolic (mathematical) logic of Peano-Russell," Box 41.)

mathematics. Thus, six are necessary for the theory of implication,

eight or nine for all pure mathematics

* 2. Primitive Propositions.

1 Anything implied by a true proposition is true. Pp. This proposition

* The letters "Pp" stand for "primitive proposition" as with Peano.

is used in every proof without exception; hence it will not be referred

* Bad grammar as well as bad
logic. You can only say that
p implies q if you derive q from a
verbal axiom. But $(p \vee q) \leftarrow (q \leftarrow r)$, but

he
ignores, as a
matter of course,
in the common
logic, where ^{more}
than two terms
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ematical) logic
of Peano-Russell

Russell, B

His philosophy is
all wrong - see
[Cecilia H. I.
have you - notably
Peitchant] add.

Prof. H. P. S. and I
(Mar 1917 p 29
& (in foot-note)

"Mrs. Adrian Stephens
extraordinarily clear
& brilliant discussion"
G. M. P.

* Best thing yet!

Some concluding remarks

- May have been marginalized in terms of academic position, but
- by no means marginalized in terms of engagement with and influence on philosophy.
- So why is she still so little known?
 - ▶ Beyond the usual “sexism” answer:
 - ▶ Segregation of biography: Ladd-Franklin the logician vs. Ladd-Franklin the psychologist.
 - ▶ The contradictory effect of Royce’s praise.
 - ▶ She was American — (??)
 - ▶ The sheer amount of unworked on material.

And on that note...

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