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DETERMINE
What "determine" means

Working paper

"We thus learn that the Object determines **(i.e. renders definitely to be such as it will be***) the Sign in a particular manner.* (CP 8.361) 342-379 M-20b **(1908))**

MS 611 (NOV 1908)

This manuscript can be found below and is 136 pages long . Jeff Downard's project is the creation of a group on the task of transcribing MS on logic and pragmatism.

https://www.fromthepage.com/jeffdown1/c-s-peirce-manuscripts/ms-611-15

There are a lot of notebooks. I was particularly interested in pages 67 and 68 of MS 611, which Jeff Downard transcribes. In my opinion, Peirce seeks to formalize its conception of determination.

1-The two MS and their transcription:

1.1 page 67:
https://www.fromthepage.com/display/display_page?page_id=7732

1908 Nov 10
Logic
24

You shall be convinced that I was not making fun of you, by any means. You are the man who is not passions, slave; and how thoroughly true it is that I hold you in my hearts core, you shall discover. As to your obje.

The symbol is determined by its object in that the thought which is determined by the symbol represents the symbol to be determined by its object

P the object μ
Q the sign ν
R the thought λ

P the object μ
R the sign λ
Q the thought ν

The determination of the thought by the symbol determines the determination of the symbol by the object

Q is ν R is λ and if R had not been λ Q would not be ν

P is μ and if R had not been λ P would not be μ

P is μ Q is ν If R had not been λ
R is λ Q would not be ν and P would not be μ

The transcription by Jeff Downard:

1908 Nov 10
Logic
24

You shall be convinced that I was not making fun of you, by
any means. You are the man who is not passions slave; and I how
thoroughly true it is that I hold you in my hearts core, you shall
discover. As to your Object

Q Sy

The symbol is determined by its Object
in that the thought which is determined by the
symbol represents the symbol to be determined
by its Object

P the object λ
Q the sign v
R the thought λ
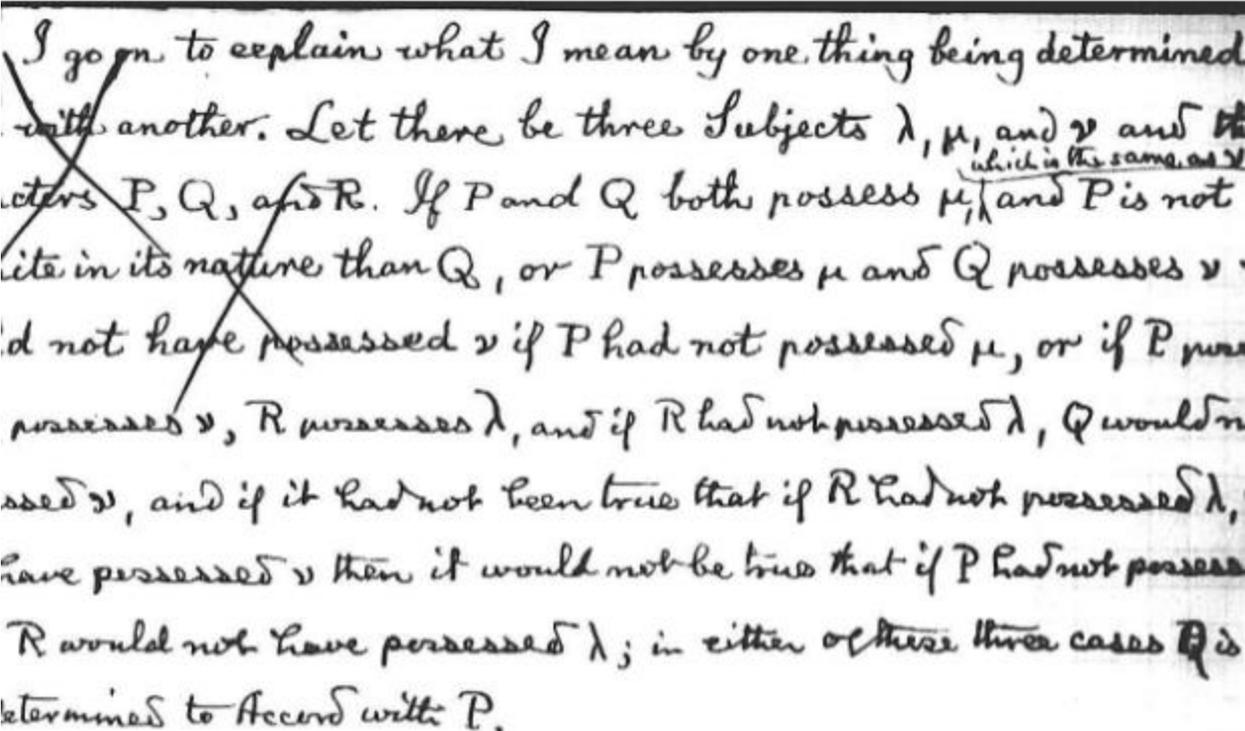
P the object μ
R the symbol λ
Q the thought ν

Q is ν R is λ and if R had not been λ Q would not be ν
P is μ and if R had not been λ P would not be μ

P is μ Q is ν If R had not been λ
R is λ Q would not be ν and P would not be μ

The determination
of the thought by the symbol
determines
the determination of the symbol by the Object

I go on to explain what I mean by one thing being determined ~~with~~ another. Let there be three Subjects λ, μ, and ν and ~~th~~ ~~cters~~ P, Q, ~~and~~ R. If P and Q both possess μ (which is the same as ν) and P is not ~~ite~~ in its nature than Q, or P possesses μ and Q possesses ν ~~d~~ not have possessed ν if P had not possessed μ, or if P ~~pos~~ possesses ν, R possesses λ, and if R had not possessed λ, Q would n ~~ssed~~ ν, and if it had not been true that if R had not possessed λ, ~~have~~ possessed ν then it would not be true that if P had not posses R would not have possessed λ; in either of these three cases Q is ~~determined~~ to Accord with P.
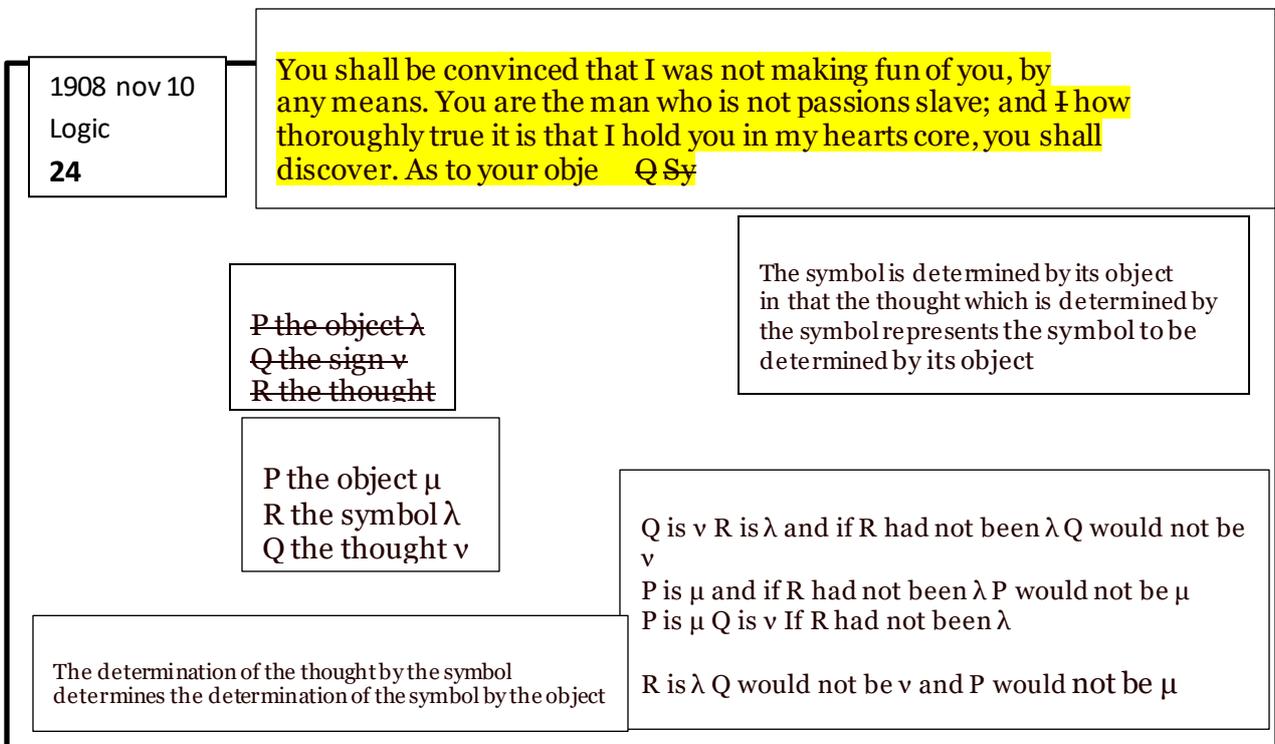
The transcription by Jeff Downard:

1908 Nov 11
Logic
31

~~I go on to explain what I mean by one thing being determined to Accord with another~~. Let there be three Subjects λ, μ, ν and three ~~characters P, Q, and R~~. If P and Q both possess μ, which is the same as ν or nearly so and P is not more ~~definite in its nature than Q~~, or P possesses μ and Q possesses ν ~~but would not have possessed~~ ν if P had not possessed μ, or if P possesses μ, Q possesses ν, R possesses λ, and if R had not possessed λ, Q would not have possessed μ, and if it had not been true that if R had not possessed λ, Q would not have possessed ν then it would not be true that if P had not possessed μ, R would not have possessed λ; in either of these three cases Q is said
to be determined to Accord with P.

NB: Scratches are difficult to interpret... they could be all about the whole page.

2. My "located" transcript on page 67

1908 nov 10
Logic
24

The symbol is determined by its object in that the thought which is determined by the symbol represents the symbol to be determined by its object

~~P the object λ~~
~~Q the sign ν~~
~~R the thought~~

P the object μ
R the symbol λ
Q the thought ν

The determination of the thought by the symbol determines the determination of the symbol by the object

Q is ν R is λ and if R had not been λ Q would not be ν
P is μ and if R had not been λ P would not be μ
P is μ Q is ν If R had not been λ

R is λ Q would not be ν and P would not be μ

The yellow part should be ignored, and the rest used the remaining space to save paper.

2

3- My analysis (curiously Peirce does not respect the alphabetical order P, Q, R).

I am the author of the red written parts

P(object)	R(symbol)	Q (thougth)
μ	λ	ν

1- "Q is ν, R is λ, and if R had not been λ, Q would not be ν" :

P	R	Q
	λ	ν

I read "**<u>R determine Q</u>**" because it is consistent with 8.381 quoted at the beginning: ***"renders definitely to be such as it will be"***

2 - "P is μ, and if R had not been λ, P would not be μ."

P	R	Q
μ	λ	

I read "P determine R."

3 - "P is μ, Q is ν, R is λ, If R had not been λ, Q would not be ν et P would not be μ." .

P	R	Q
μ	λ	ν

I rewrite: If P is μ, Q is ν then R est λ, because if R would not been λ, Q would not been ν (case 1) et P would not been μ (case 2)

And I am justified in saying that Peirce demonstrates that the relationship of determination as he defines it in 8.381 is transitive.

4- Peirce concludes :

"*The determination of thought by the symbol determines the determination of the symbol by the object.*"

Which I interpret as follows: the phenomenon takes place in the mind in a recursive way, because the relationship between a symbol and an object being conventional, it must be presupposed that all the subjects concerned (i.e. members of a "semiotic" community, therefore also linguistic community) adhere to a convention of which they are part by definition. This relationship is consequently "already there," internalized in the mind of each interpreter and reactivated in the instant of the perception of the Sign R. In a pictorial way: as soon as the mind perceives the "end" R of the relationship R has with P, the other end of R (i.e. P) is also present, which makes it possible to speak of the duality of the symbol R. The latter is both present for itself but also "for another" (i.e. P) to which it is already linked in the same mind. This is what Peirce expresses in the second use of "determines" in the commented sentence.

Incidentally, this is how I explain the triadicity of the Sign: in mind, there is "*tricoexistence*" of P, R and of the determination Q of the mind (a thought that connects them, preformed by the collateral experience of every subject of this community).

5- More advanced formalization trial

I restart the sequence to express it in the classical logic:

5.1 :"Q is ν, R is λ, and if R had not been λ, Q would not be ν."

Rewritten in this way:

If Q is ν, then R is λ, because if R had not been λ, then Q would not be ν

Can be written:

$$(Q \text{ is } \nu) \wedge \neg(R \text{ is } \lambda) \Rightarrow \neg(Q \text{ is } \nu) \Rightarrow \neg(\neg R \text{ is } \lambda) \equiv (R \text{ is } \lambda)$$

5.2 "P is μ and if R had not been λ, P would not be μ."

Rewritten in this way:

If R i s λ, then P is μ because if R had not been λ, P would not be μ

Can be written:

(P is μ) ∧ ¬(R is λ) ⇒ ¬(P is μ) ⇒ ¬(¬ (P is μ)) ≡ (P is μ)

5.3 "P is μ, Q is ν, R is λ, If R had not been λ, Q would not be ν, and P would not be μ."

Rewritten in this way:

If R is λ, then P is μ, Q is ν because if R had not been λ, Q would not be ν and P would not be μ

Concatenating:

" If Q is ν, then R is λ, because if R had not been λ, then Q would not be ν." which therefore leads to (R is λ)

Rewritten in this way:

"If R is λ, then P is μ because if R had not been λ, P would not be μ."

Which therefore leads to (P is μ).

So (Q is ν) ⇒ (R is λ) ⇒ (P is μ)

Q	R	P
ν ⇒	λ ⇒	μ

6- Conclusion

If P possesses the character μ, R the character λ, and Q the character ν, then the proposition

"P determines R, which determines Q" is logically equivalent to

(Q possesses ν) ⇒ (R possesses λ) ⇒ (P possesses μ)

Either in abbreviated notation: $(P \rightarrow R \rightarrow Q) \Leftrightarrow (\nu \Rightarrow \lambda \Rightarrow \mu)$

In this MS, Peirce has thus verified the transitivity of the relation "determines" one of the three necessary conditions for it to be a relation of order. The other two are:

- reflexivity, i.e., "X renders X definitely to be such as it will be" and
- antisymmetry, i.e., if "X renders Y definitely to be such as it will be" and "Y renders X definitely to be such as it will be," then X = Y, which are verified.