“Operationalizing”: or, the Function of Measurement in Modern Literary Theory*

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I. Introduction

An uncommonly ungainly gerund, “operationalizing” is nevertheless the hero of the pages that follow, because it refers to a process which is absolutely central to the new field of computational criticism, or, as it has come to be called, of the digital humanities. Though the word is often used merely as a complicated synonym for “realizing” or “implementing”—the Merriam-Webster online, for instance, mentions “operationalizing a program,” and adds a quote on “operationalizing the artistic vision of the organization”—the origin of the term was different, and much more precise; and for once origin is right, this is one of those rare cases when a word has an actual birth date: 1927, when P. W. Bridgman devoted the opening of his *Logic of Modern Physics* to “the operational point of view.” Here are the key passages:

We may illustrate [the meaning of the term] by considering the concept of length: what do we mean by the length of an object . . . To find the length of an object we have to perform certain physical operations. The concept of length is therefore fixed when the operations by which length is fixed are fixed: that is, the concept of length involves as much and nothing more than the set of operations by which length is determined. In general, we mean by any concept nothing more than a set of operations; the concept is synonymous with the corresponding set of operations . . . the proper definition of a concept is not in terms of its properties but in terms of actual operations. (5-6)

The concept of length, the concept is synonymous, the concept is nothing

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more than, the proper definition of a concept. Forget programs and visions; the operational approach refers specifically to concepts, and in a very specific way: it describes the process whereby concepts are transformed into a series of operations—which, in their turn, allow to measure all sorts of objects. Operationalizing means building a bridge from concepts to measurement, and then to the world. In our case: from the concepts of literary theory, through some form of quantification, to literary texts.

II. Operationalizing Character-space

Taking a concept, and transforming it into a series of operations. Concretely, how does one do that? My first example concerns one of the most important contributions to literary theory of the past twenty or thirty years: the concept of “character-space,” coined by Alex Woloch in *The One vs. The Many*. Here is the initial cluster of definitions:

- the amount of narrative space allocated to a particular character . . .
- the space of the character within the narrative structure . . .
- the space that he or she occupies within the narrative totality . . .
- the narrative’s continual apportioning of attention to different characters who jostle for limited space within the narrative totality. . . (13-14)

So, what are the “operations we have to perform,” to find out the amount of narrative space allowed to Molly Bloom, or Iago, or any other character? Graham Sack has answered by taking the path of so-called “instrumental variables”: features that we use as proxies for the variables we are interested in, when the latter are—for whatever reason—impossible to measure. Working on nineteenth-century novels, Sack measured how often they mentioned the names of the various characters; though name frequency is not the same as character-space, they are clearly correlated—and Sack’s proxy worked in fact quite well for Austen, Dickens, and many other writers.1

I took a different approach, which assumed that character-space could actually be measured directly. Texts are made of words, lines, pages, and one can definitely measure those. But there are complications. Take this sentence from the first chapter of *Pride and Prejudice*: