

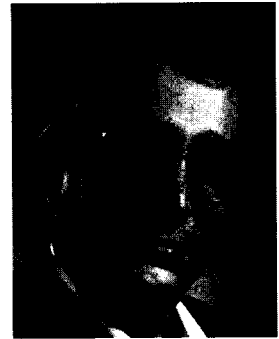
# Donald T. Campbell and Research Design

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I was asked to speak today about the influence that Don Campbell had on the area of research design. I have ten minutes. That is a bit like trying to summarize War and Peace in twenty-five words or less. Or, like describing the influence that Babe Ruth had on baseball or Michael Jordan has on basketball. It is no exaggeration to say that Don had a more profound effect on research design in the second half of the twentieth century than any other single person. Period.

In the late 1950s and early 1960s, he became a leading proponent of the randomized experiment. But he brought a unique perspective to that advocacy, one with deep roots in the newly emerging post-positivist epistemology. Unlike many of his contemporaries, Campbell's view of design was driven not by the structure of designs themselves—all the X's and O's—or by the statistical models that were related to them. Rather, his view had its genesis in the inferences one makes from a design, in the potential plausible alternative explanations to the hypothesized one, in the theory of validity that he articulated. His work was integrative and, even though I am emphasizing his influence on design, there is simply no way to separate that from his influence on epistemology and the theory of validity.

Campbell developed the basic taxonomy that distinguished the "true" or randomized experiments, the quasi-experiments, and the non-experimental designs. Throughout his career, he was unwavering and unequivocal in his advocacy of the randomized experiment as the strongest of these with respect to internal validity. But I believe his true love, what really excited his intellectual passions, was always the quasi-experiment. He often referred to them as "queasy" experiments, to remind us of their inherent messiness and greater susceptibility to threats to internal validity. From the late 1960s on, we saw an explosion of quasi-experimental development that had Campbell at its center. He either created or played the major role in developing a host of designs that have become the standard for introductory research methods: the nonequivalent groups design; the removed treatment design, repeated treatment design, the reversed treatment design, the infamous cross-lagged panel correlation design, the non-



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equivalent dependent variable design, the regression-discontinuity design, the interrupted time series design and, most recently, the regression point displacement design. Each of these was a real-world adaptation, an attempt to stay with the goal of "getting it right," of drawing valid causal inferences even when the circumstances made that difficult. They were messy, imperfect, and unsatisfying alternatives to their randomized counterparts. But today, these designs and the many variations of them are used far more frequently to study our critical social issues than are their randomized cousins. Indeed, while Campbell will always be remembered as an advocate of the randomized experiment, it is his work in quasi-experimentation that sets him apart from others. He made quasi-experimental research into a viable and defensible endeavor, generously encouraged countless students and colleagues into what would become the defining efforts of their careers, and forever changed the landscape of applied social research and program evaluation.

In many of his most notable design papers, Campbell pays homage to the randomized study, but he devotes his most detailed analyses to the quasi-experiments. And what rich and detailed analyses they were! For Campbell, quasi-experiments were more than just designs, they were a way of thinking about the world. One of my favorite examples is one of the oldest, the "Connecticut Crackdown on Speeding" paper (Campbell and Ross, 1968). He took a seemingly simple finding, a reduction in traffic fatalities from before to after a crackdown on speeding, and wove a rich contextual tapestry of inferential judgments, threats to validity and real-world common-sense reasoning. For example, he took the pre-post two-point analysis and expanded it with a baseline series that illustrated the possibility of a regression artifact. He identified comparable data from neighboring states, displaying the aggregate control series and then breaking this out by state to show how precarious the causal inference became. He looked at implementation data, showing how during the same pre-post period, the incidence of speeding violations actually declined. With the addition of every new piece of empirical evidence, he wove a richer and more complex storyline. What appeared at first glance to be a simple causal inference became instead an intricate puzzle that called for an almost artistic melding of data, statistical consideration, experience, and common sense judgment.

All of his quasi-experimental work was like this. It had a breathtaking vertical scope to it. He could move in the course of a single paragraph from a profound epistemological insight to a point about a threat to validity, to a design structure that might address the threat, and to a real-world, concrete, contextually rich story. In a most profound sense, he was teaching us how to think, how to meld the best current work in methodology and epistemology with the richness of our common sense judgment and personal experience.

I would like to end this brief discussion of Campbell's design work on a more personal note. On one of the last of my annual day trips to visit with him at Lehigh University, Campbell took me to lunch at the faculty cafeteria, on top of the hill south of campus that overlooked the university. As usual I was absorbed in what we were discussing, some technical aspect of the regression-discontinuity design. Although I was unaware of it at the time, in retrospect I think I must have been trying especially vigorously to drive home some point, to convince him about some esoteric and arcane aspect of the design that I was excited about. He was being very patient with me, listening to my explanations, raising questions and sometimes tangential references that would prove in the end to be full of insight, and were probably mostly lost in my enthusiasm of the moment. At some point he had had enough. He stopped me abruptly, leaned over and tore a page out of the notebook I was writing in. In secrecy, he scribbled something on the page. I figured he was going to sketch out a bivariate plot, or write down a reference that I should check. But instead, he rolled up the paper. Reaching into my

jacket pocket, he retrieved a book of matches, lit the paper, and with feigned solemnity and a mischievous look, passed it to me. Needless to say, I was a bit shocked. I extinguished what was now becoming a torch, unrolled it and read what he had written. It said:

I pass you the "torch" of proximal similarity.<sup>1</sup>

Donald T. Campbell

I have been thinking a lot lately about what Campbell meant to me and to many others, and I keep coming back to the torch that he passed to me that day. For me, it symbolizes the illuminating quality of his thought and the sense of passion that he instilled in those of us who were his students. And we were all his students. He welcomed everyone who came into contact with him, especially his harshest critics, into his "contentious community of truth seekers." In his work, he has passed all of us a torch that can help light our way, one that we can carry forward and in turn pass along to our students and critics, one that still shines brightly and that we evaluators especially can carry forward with great pride.

#### NOTE

1. In the version of this speech originally presented, I had mis-remembered the torch as saying "regression-discontinuity." While rummaging through my office recently, I came upon the charred original which has only the term "proximal similarity" scrawled on it along with Campbell's signature. I have corrected the record here. In the speech I added the phrase "I pass you the torch of..." because I recall Campbell saying this as he handed me the burning page, and because I didn't think it would make as much sense to the listeners without that spoken phrase.

#### REFERENCES

Campbell, D. & Ross, L. (1968). The Connecticut crackdown on speeding: Time-series data in quasi-experimental analysis. *Law and Society Review*, 3, 33-53.