

## Celeration of Publication Frequency\*

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This study examines the publication history of the author using celeration charting. Some possible naturalistic contingencies were suggested that may account for the changes in the overall rate of publication and the specific increase in publishing in journals. These were moving to a research university, the use of computers, and collaborating with and getting help from seasoned researchers. Explicit academic promotion contingencies explain switch to publishing more in journals.

DESCRIPTORS: Celeration, Charting, Contingencies, Publication, Frequency, Rate, Journals, Advancement, Academia

Because of tenure issues, there always seems to be interest in the publication rates of faculty at institutions of higher education. In psychology, much of the research on this topic is devoted to the identification of individuals and institutions that have the highest publication rates in major journals (Cox & Catt, 1977, Howard et. al., 1987; Jones et. al., 1982; Smith et. al., 1998; Smith et. al., 2003; Webster et. al., 1993). In addition, several studies have attempted to determine the factors that may affect a researcher's productivity (Bernardin, 1996; Kiewra & Creswell, 2000; Allison & Long 1990). Yet, with the exception of B. F. Skinner's cumulative record of his publication history, no studies were found that systematically charted and examined the publication history of an individual researcher. This type of study could be important because it may elucidate determinants of publication rate that are yet to be explored.

In this paper, the author will examine his own publication record through the use of an Count per Year Standard Celeration Chart. Standard Celeration Charts have been widely used by teachers to improve a student's performance. In this charting technique, counts of desired behavior performed in a set time frame are charted on a logarithmic linear scale, thus helping one visualize the acceleration or deceleration rate of an individual's performance. Standard Celeration Charts may be useful for professionals by helping them visualize their publication rates and by helping them examine the extent to which specific factors may increase their rates. As of now, Celeration Charts have not yet been used for these purposes.

The first objective of this paper is to demonstrate and explore the insights that may be gained by analyzing an individual's (the author's) publication history. The paper's second objective is to demonstrate the usefulness of the Standard Celeration Charts for professionals interested in increasing their publication rates.

### METHOD

*Participant.* The participant is Michael L. Commons, a 63 year old male. His publications are divided into journal and non-journal publications. The number of publications in each category, as well as total publications, are counted for every year from 1971 to 2002. Journal, non-journal, and total publication counts are plotted separately on three Standard Celeration Charts using an Microsoft Excel template (from Scott Born). The year floor is set to 1 because counts are taken annually.

### RESULTS

The celerations in the author's journal, non-journal, and total publications from 1971 to 2002 are described in this paper. These celerations are plotted on three charts. Note that it usually takes about one to two years for manuscripts to be published after they are submitted, thus there is an expected lag between changes in the author's career that may affect his publication rate and changes which actually occurred in his publication rate.

Most studies of publication productivity only consider journal publications. However, non-journal publications are important as well. One psychology researcher comments that books and other forms of publications should not be excluded from studies of productivity because journal publication rates only reflect a part of a professional's work (Nederhof, 1989). Although on average, journal articles have larger impact (as measured by the number of times a paper is cited by other

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researchers), books and chapters often can have greater impact than journal articles. Thus in this paper, both journal and non-journal publications are considered.

It has been shown that changes in a researchers' work conditions influence their publication rate (Allison & Long, 1990). According to changes in his work conditions, the author's publishing career during the span of 31 years can be divided into three periods. As shown in figures 1, 2 and 3, during the first period (1971-1977), the author experienced little incentive to publish. Tenure did not depend on publication rate. In 1971, he was 31 years old, and was a full time graduate student. In 1972 he became a lecturer at University of Manitoba. From 1973 to 1977 he worked as a lecturer and later as an Assistant Professor at Northern Michigan University. From 1971 to 1981, the publication rate was very low; all publications were non-journal publications.

In 1977, the author started working at Harvard University as a post-doctoral fellow. He completed two such fellowships and then became a Research Associate in Psychology. During his experience at Harvard, the author experienced a stronger incentive to publish. Thus 1977-1987 marked the second period in his career.

Two years into his work at Harvard, his rate of his total publications began to accelerate. After 1981 and throughout the next 21 years, this rate remained about the same with some ups and downs. For example, in 1985, there was not a single publication, but in the prior year (1984) there were 8. In the second period there seems to be an initial acceleration in total publications, with a peak in 1973 mainly due to the book *Beyond Formal Operations* in which the author wrote four chapters. Two journal articles in 1982 were helped by having Deanna Kuhn, my post doctoral advisor as a co-author.

The third period to be discussed is from 1987 to the present. In 1987, the author became a Research Associate in the Department of Psychiatry at Harvard Medical School. At the Medical School, there was a stronger emphasis on journal publications than on other forms of publication. During this period, there was a second maximum peak of 10 publications in 1991 due to a third *Adult Development* book. When the author learned that only journal publications counted for professional advancement in 1995, there was a subsequent deceleration of non-journal publications at a rate of one or two non-journal publications per year. Journal publications from 1993 to the present seem to have increased in a nonuniform manner, peaking in 2001 with 5 journal articles. As a result of the increase in journal publication rate (especially in

psychiatric journals), the author became an Assistant Clinical Professor in 2002.

## DISCUSSION

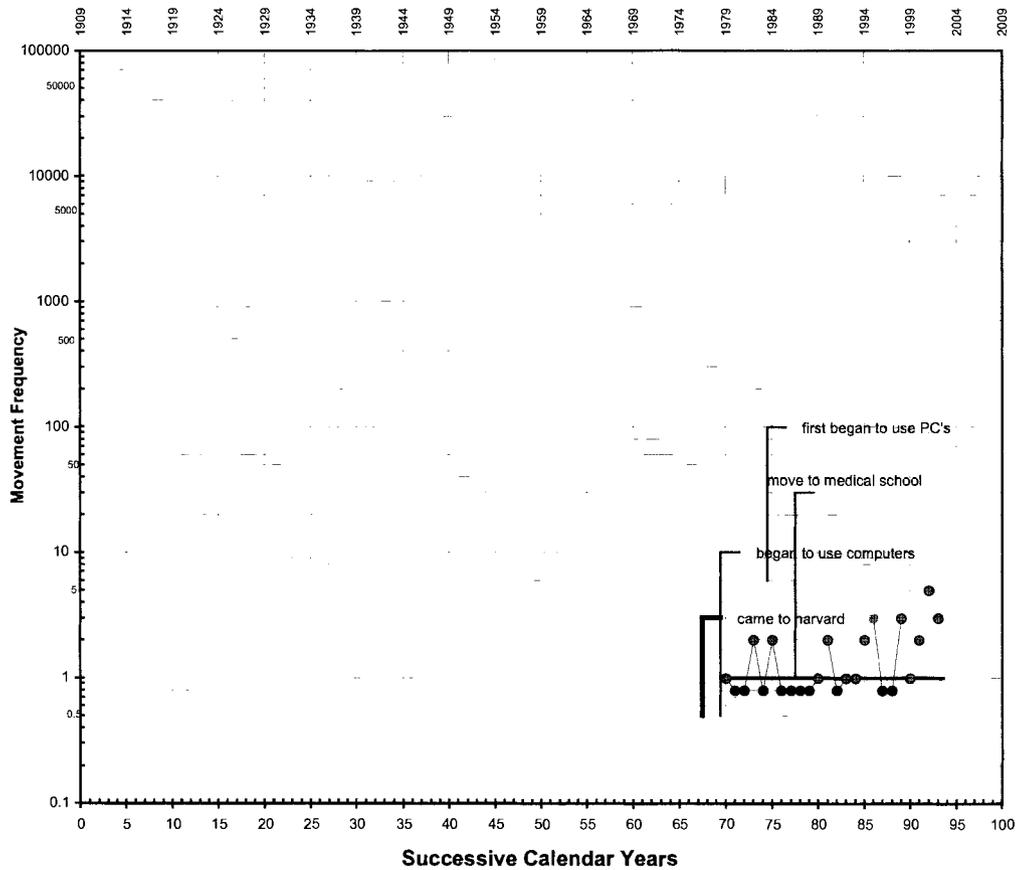
Rejection in 1964 from the *Journal of Applied Behavior Analysis* was discouraging for this new author. But later on, several factors appear to increase the overall publication rate. The use of computers starting from 1981 facilitated the writing process.<sup>1</sup> Computers allowed the author to cut and paste text with ease, featured word wrap, had spell check programs, and helped the author visualize his writing immediately on the screen. Computers also facilitated communication with colleagues via emails, floppy disks, internet, and with group works software allowed collaborating researchers to edit papers simultaneously. Therefore, use of computers may have been an important factor in the rise of the author's publications during the 1980's.

Another factor that may have contributed to the rise is the work atmosphere at Harvard University. A study of the productivity of scientists prior to and after a job change found that the scientists who moved to more prestigious institutions generally increased their publication rate, while the scientists who moved to less prestigious institutions generally decreased their publication rate. Harvard has been ranked among the top institutions in terms of productivity and prestige in the field of psychology (Cox & Catt, 1977; Howard et. al., 1987, Jones et. al., 1982). In their paper, Allison & Long suggest that scientists are more productive at prestigious institutions because prestigious institutions are likely to have better facilities, intellectual stimulation from other outstanding scientists, and more rigorous publication requirements and "informal esteem among colleagues," although other factors are possible.

Upon coming to Harvard, it quickly became clear to the author that having very good ideas and presenting ideas and studies at national meetings were not the only important things in his career at the postdoctoral level. Publication and collaboration with other scientists was very important as well. During his work at Harvard, not only did the author feel there was an emphasis placed on publishing, he also received much help and guidance. Deanna Kuhn helped him publish two articles in *Child Development* and *Journal of Applied Development*. John Anthony Nevin and Richard J. Herrnstein assisted him in several publi-

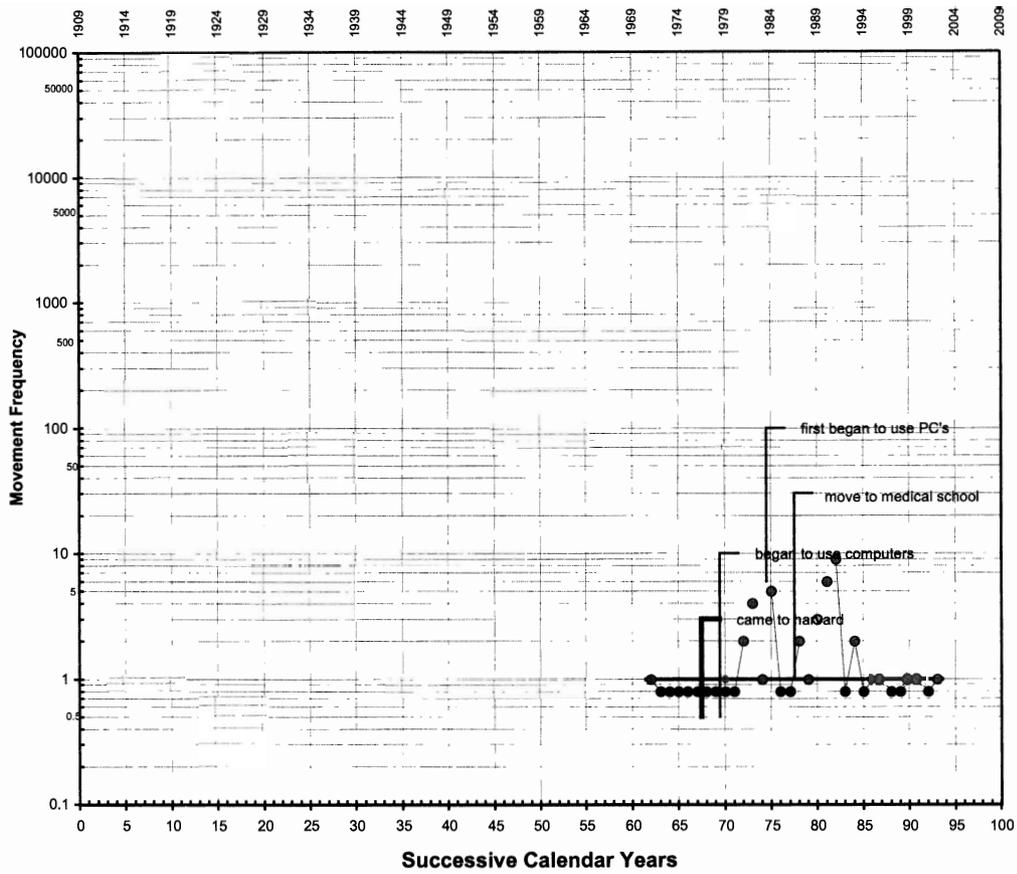
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<sup>1</sup> This was especially the case for someone who was dyslexic and found that writing on a typewriter was extremely laborious due to the difficulty in correcting spelling and reorganizing the writing.



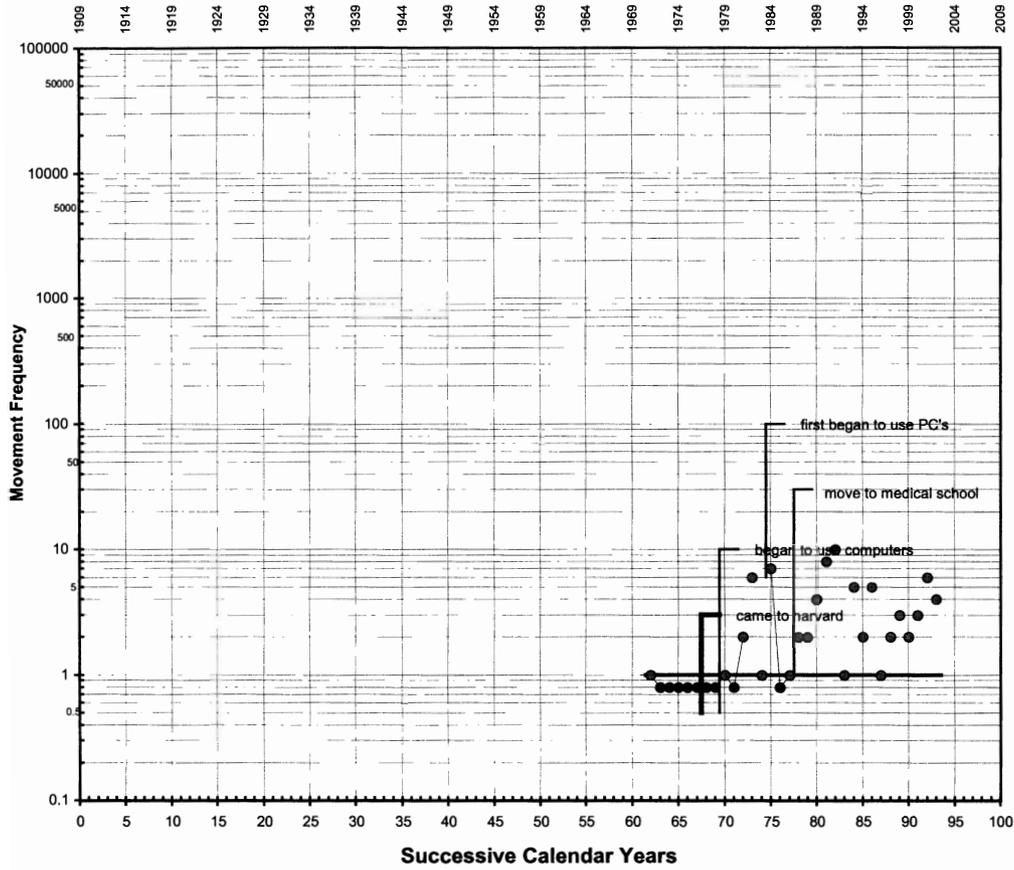
Name of Behavior: Michael Commons

Movement Cycle:



Name of Behavior: michael commons

Movement Cycle: 10



Name of Behavior: michael commons

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cations as well. The people he worked with made substantive contributions. In a case analysis of three prominent educational psychologists, all three psychologists attributed a part of their success to good advisors at institutions with strong programs in psychology and to collaboration with other researchers (Kiewra & Creswell, 2000).

To help increase the number of publications, the author also adopted several "self commitment" procedures, undertakings whereby he was obligated to publish a certain amount of work in a certain amount of time. The author also organized yearly symposia where he was committed to collecting material from colleagues and editing these into books. Submission and acceptance of abstracts to the meetings that led to the books also promoted production of material that could be published. By writing book proposals and taking book contracts, he was motivated and obligated to finish the books by set deadlines. Usually it took three years for the book to be published after the symposia.

The publication rates of different types of publication seem to correspond to different contingencies. For example, after learning that only journal articles counted for promotion at the medical school, there was a deceleration of non-journal publications and an acceleration of journal publications. In the period of 1990-1991, the author's books began to become special issues of journals, which raised the journal publication rate. In a study, already published articles were re-submitted to the same journals, the rejection rate of these articles were equal to overall rejection rate of newly submitted articles, as if these articles had never been published. This led the author to consider the rejections in a less personal way. It became much easier to resubmit papers responding to all suggestions made by reviewers. This lowered the rejection rate from journals but did not eliminate it

Throughout the period at Harvard, the author felt that everyone was publishing at a high rate, and there was a great deal of incentive to get ideas out and accepted. To see whether ones ideas are getting accepted, maybe it would be useful to chart citations and number of students who then go on to train other students. But even that does not really plot whether or not ones idea are key in shaping a field. One of the major problems in charting influence is to know what counts and then to chart it and later figure out what controls the success.

In conclusion, Standard Celeration Charts can be used to chart a researcher's publication rates. The contingencies in the author's career described in this paper seem to influence his publi-

cation rate, although several contingencies occurred around the same time. It is my hope that other researchers will adopt the Standard Celeration Charts for similar use and will find them useful for tracking their publication histories.

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