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Commentary

Did Chilean 1973 Coup and Dictatorship Downstream the Decreased Scientometric Impact in Two Experimental Biological Sciences Categories ?

Jaime R. Rau*

Laboratorio de Ecología, Departamento de Ciencias Biológicas y Biodiversidad, Universidad de Los Lagos, Campus Osorno, Casilla, Osorno, CHILE.

Intrinsic motivation is one of the eight favorable personal characteristics for science creativity (Romo 2008). However, intrinsic motivation can be negatively affected by introducing external constraints such as surveillance (Amabile 1998), proper of authoritarian and totalitarian regimes those that still persist today (Lewandosky *et al.*, 2025).

More than fifty years ago, on September 11, 1973, Chile faced a coup that ended its long-standing democratic political system for 17 years till 1990 (Bautista *et al.*, 2019. In the beginning, heated debates arose among academics from public and private universities, criticizing (Izquierdo 1975, Cordero *et al.*, 1984) or relativizing this dictatorship (Eyzaguirre 1974, Litvak 1984). However, in modern times the legacies of that dictatorship have affected higher education through generations of students and educational policies for more than half a century (Bautista *et al.*, 2023, 2024; González *et al.*, 2024). Did this coup also had a negative impact on the country's research productivity and scientometric impact in experimental Biomedical and Biochemistry and Molecular Biology Sciences?

To assess this question, I obtained scientometric data from the Web of Science (WoS) choosing two biomedical categories (the only two for the country at this time): General Internal Medicine (GIM) and Biochemistry and Molecular Biology (BMB), and three equal 17-year comparable periods (before, during and after the dictatorship): 1956-1972 (democracy), 1973-1990 (the length of dictatorship) and 1991-2007 (return to the previous democracy).

Data in Table 1 shows that citations/publications were sharply reduced during Chile's dictatorship period. In fact, for GIM the number of citations by published papers presented a 3.7-fold decrease and was a 3.9-fold decrease for the BMB category.

The increased numbers of papers published during the dictatorship period, especially for GIM category, could be related to the growth of neoliberal principles in Chile during the mid-1970s (Max-Neef 1995), according the expected relationship between money spent to publish and the number of published papers in paid WoS journals. Also, I claim that the low number of citations during the same period could be due to an "international sanction" (Escribà-Folch and Wright 2010) to Chilean researchers by the worldwide democratic scientific community. Moreover, it´s estimated that the universities that enroll 75.6% of the students have lost about 29% of their faculty members since the military intervention, that is approximately 5,000 people (Izquierdo 1975).

Based on the data of Table 1, I forward the hypothesis that the authoritarian and totalitarian regime keen the reputed scientific

Table 1: Productivity and impact of Chilean biomedical sciences before, during and after dictatorship.

General and Internal Medicine (GIM)			
Periods	1956-1972	1974-1990	1991-2007
Total papers	38	8,096	3,477
Citations/paper	3.66	0.98	10.3
Biochemistry and Molecular Biology (BMB)			
Periods	1956-1972	1974-1990	1991-2007
Total papers	2	963	5,611
Citations/paper	66.0	16.7	16.17

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creativity and the intrinsic motivation of Chilean GIM and BMB researchers during the dictatorship period. I predict a more marked effect on Chilean social sciences and humanities scientific productivity and scientometric impact.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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Correspondence:
Jaime R. Rau
Laboratorio de Ecología, Departamento de Ciencias Biológicas and Biodiversidad, Universidad de Los Lagos, Campus Osorno, Casilla933, Osorno, CHILE.
Email: jrau@ulagos.cl
ORCID: 0000-0003-0444-578X

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