

Whither Occupational Class Health Gradients?

Why We Need More Social Class Theory, Mechanisms, Indicators, and Scientific Realism

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The excellent study by Elser et al.¹ on depression, gender, and occupational social class embodies the satisfactions and the frustrations of occupational social epidemiologists looking for class gradients in mental health.

The results show an association with the class, in particular when considering the adjusted hazard ratios. The enduring blue-collar occupational class effect shows that, once more, in occupational and social epidemiology, the death of class—even with occupation indicators—has been greatly exaggerated. Results with blue-collar women, suggesting a higher risk for depression than white-collar men, are consistent with the carefully crafted a priori hypothesis of the authors, drawing from decades of research on proximal psychosocial work environment exposures and depression.² Given the dearth of longitudinal studies on social class and psychiatric outcomes,^{3,4} Elser et al. provide evidence of the continuing relevance of one of the most resilient associations in social psychiatry and occupational and social epidemiology.⁵ Thus, the social class mental disorder association is important to public mental health because it suggests a structural injustice in our political and economic system. The workplace, rather than being a vehicle for mobility and well-being for most workers, is the place where mental health inequities between workers, professionals, managers, and owners are produced.⁶

At the same time, the study¹ represents the struggle encountered by those interested in social class proper, either in its neo-Weberian (employment relations with closure/exclusion mechanisms) or neo-Marxian (relationships of ownership of the means of production with mechanisms of exploitation and domination) traditions.⁶

Elser et al.¹ are particularly interested in social class as ownership of productive assets, the approach also favored by this commentator.⁷ This approach has some features that differentiate it from the traditional social class focus on the ownership of the means of production (i.e., technology and other material components needed for the production of goods and services).⁸ Class as ownership of productive assets focuses on the social mechanisms of exploitation and domination underlying property relations. Attention to social mechanism distinguishes social class from stratification approaches to economic inequality, in particular the occupational stratification indicator that dominates occupational and social epidemiology from Whitehall⁹ to the 25 × 25¹⁰ studies. These social class mechanisms are analogous, for example, to the mechanism of action of an analgesic acting on the receptors located on a neuron cell membrane. They explain how social class relations work. Thus, the first social class mechanism, known as exploitation, is defined as the appropriation of the fruits of efforts performed by the exploited (workers) by those who control the relevant productive resources such as technology (owners).⁸ The second social

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class mechanism under property relations is domination, understood as a set of activities performed to ensure the performance of adequate productive effort on the part of workers. Domination involves surveillance and positive and negative sanctions (promotions, demotions, hiring, firing).⁸ Domination was originally performed by owners but, with the advent of large corporations, owners delegated domination authorities to a new class of managers and supervisors, whose pay tends to be higher than that of workers.⁸ Because managerial and supervisor class positions have features of both workers (with respect to their relation to owners) and owners (with respect to their relation to workers) they have been labeled “contradictory” class locations. Interestingly, the integration of psychological work environment models (e.g., low control of work activities; lack of autonomy; physical, emotional, and cognitive demands; lack of coworker support; job insecurity; effort–reward imbalance) with the contradictory class location position of low-level supervisors leads to different predictions from that of occupational stratification. Although the “contradictory” class location model predicts that supervisors will have worse mental health than workers by virtue of the stress produced by the demands placed on them by both top managers and frontline workers, the “Whitehall” occupation stratification approach⁹ predicts that the mental health of supervisors should be better than that of workers. Four cross-sectional surveys have confirmed the contradictory class location hypothesis^{7,9–11} providing initial evidence that social class models provide alternative explanatory mechanisms, measures, and predictions that are confirmed.

Attention to social mechanism distinguishes social class from stratification approaches to economic inequality, in particular the occupational stratification indicator that dominates occupational and social epidemiology from Whitehall¹² to the 25 × 25¹³ studies. Unfortunately, most sources of data for social and occupational epidemiologists (academic or government surveys, health records, company personnel files) do not include social class indicators, yet often contain occupation indicators. At face value, indicators of social class and occupation seem to overlap for many specific occupations (e.g., banker, laborer) and, in particular, when using broad occupational categories (e.g., white-collar vs. blue-collar professional, managerial, and laboring occupations) like Elser et al.¹ did. This occupational social class approach has a long tradition in social epidemiology, stemming from the British Registrar–General Social Classes of the Black Report, to the Whitehall’s employment grades, to the newer classifications such as the National Statistics Socioeconomic Classification and the International Standard Classification of Occupations.¹⁴ Nevertheless, occupational classifications and social class indicators do not overlap empirically.¹⁵ Occupational groups such as those used by Elser et al.¹ are class heterogeneous. For example, contemporary white-collar occupations may contain members of the working class precariat,¹⁶ whereas among blue-collar occupations, one could find small

business owners. As a consequence this exposure misclassification can lead to weaker occupational “class” effects. Maybe not too surprisingly, in the analysis by Elser et al.,¹ the occupational class effect is quite a bit smaller than the gender effect, in particular when we examine the cumulative incidence of depression.

In the Whitehall study of civil servants in a single homogeneous organization, employment grade probably was closely tied to social class, understood as managerial power, and control over the labor process.⁹ But this is not necessarily the case in most epidemiologic studies that have used occupation as an indicator of social class in the following decades, trying to replicate the social gradient in health. The reason lies in the referent of occupation. Occupation refers to the technical aspects of work and has no a priori relation with hierarchy or mechanisms that might create inequalities. For example, an automobile driver is someone who has the skills to drive a particular type of vehicle, but this tells us nothing about her social class which could be, among others, owner of a cab company, manager of a cab company, worker in a cab cooperative, worker for a municipal cab company, worker for a private cab company, self-employed owner of her cab, self-employed cab driver who rents her cab, or worker for an investment bank. And most occupations are compatible with various class positions. Therefore, the associations between occupational ranks and psychosocial risk factors found in the Whitehall and subsequent studies do not have explanatory mechanisms.

Occupational class epidemiologic studies provide only associations, a problem affecting other forms of social inequality such as race or gender. Thus, the powerful gender and gender/occupation interactions found by Elser et al.¹ are suggestive of mechanisms (gender discrimination, patriarchy, discrimination against Lesbian, Gay, Bisexual, Transsexual, Queer persons) that the dichotomous gender indicator cannot capture.

On the other hand, social class relations (manager vs. worker) are upheld by mechanisms of domination that generate exposures (lack of control over work, physical and emotional demands) conducive to poor mental health.⁷ The social class model provides a deeper explanation via multilevel mechanisms from sociologic to psychosocial to behavioral to biologic level. The occupational class approach does not provide explanatory mechanisms for the associations between occupations and risk factors or health outcomes. There is a missing link between occupation (the technical description of what a person does at work) and the psychosocial stressors, behavioral responses, and biologic processes that lead to poor health. Endless replications of gradients in health¹⁷ cannot provide explanations because those require mechanism.

The search for biologic mechanisms is essential to most fields including, for example, cardiovascular, genetic, psychiatric, pharmacologic, and infectious disease epidemiology. Yet in social epidemiology the search of mechanisms seems to stop at the proximal/downstream level, that is at the

psychosocial, psychological, and biologic ontologic levels,¹⁸ maybe with the exception of the ambiguous “social capital,” a sociologic mesolevel construct akin to social cohesion in social epidemiology.¹⁹ Why is this so?

I propose that there are two major reasons for the lack of mechanisms in the social epidemiology of inequalities: epistemologic (scientific knowledge) and axiologic (values), which often go hand in hand.^{20,21} I will concentrate here only on the epistemologic reasons. The philosophy of science behind most economic inequality studies in social epidemiology is empiricism. This epistemology favors observation over constructs, scientific ideas that cannot be observed directly with our naked eye such as mass. Biology necessitates constructs because our senses are too limited to observe cells but so does sociology since we cannot observe societies. So it goes with social mechanisms such as discrimination, domination, exploitation, or cohesion that need to be observed with indicators such as segregation patterns, denial of loans, workers' share of profits, threats to union representatives, or numbers of community associations, respectively. Yet the rejection of constructs, theories, and mechanisms condemns empiricists to descriptive associations such those found in occupation gradients in health. It is important, too, to distinguish between mechanisms (an ontologic concept regarding the nature of the world) with mediation (an epistemologic concept referring to a way to test for the presence of mechanisms).²² Furthermore, lack of actionable mechanisms precludes empiricists to generate technologies (e.g., public health policies or interventions) to act on the world. An association between occupational classes and health does not point to any public health action, but the effect of managerial domination can be the source of modifying the social mechanisms responsible for a high rate of mental disorders among workers, supervisors, or even managers, for example, reducing supervision layers, legislating policies to limit the sanctioning powers of supervisors, ensuring access to mental health services for supervisors, and favoring the promotion of comanagement or worker cooperatives. In other words, we cannot eliminate the so-called blue-collar exposure but we can, and should from a public health ethics perspective, intervene on social class mechanisms so as to reduce work intensity, increase compensation, and promote worker rights and autonomy.

Elser et al.¹ have done an excellent study with the usual restrictions placed on social and occupational epidemiologists interested in the effect of social class on health, namely having to use an occupation indicator.²³ In particular, they found an important result on the higher risk of depression among white working class women in a large US aluminum manufacturer. The field of social inequalities in health could provide better explanations for the mental suffering of billions of workers if more theory- and mechanism-based²⁴ social class indicators^{7,11,12} were available. Physiology, after all, progressed with Claude Bernard's *Milieu Intérieur*, not with Hume's regular conjunction.

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CARLES MUNTANER is a professor at the University of Toronto. His research is associated with the development of social epidemiology areas including: social class theories and measures; employment conditions and precariousness; scientific realist epistemology; the criticism of counterfactual approaches, social capital, and race indicators; multilevel models; political and welfare state models. He is the recipient of the Wade Hampton Frost Award of the Epidemiology section of the American Public Health Association.

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