

POPULATION-BASED LEGAL ANALYSIS: BRIDGING THE INTERDISCIPLINARY CHASM THROUGH PUBLIC HEALTH IN LAW

Wendy E. Parmet

Introduction

It is probably trite to note that legal scholarship has become increasingly interdisciplinary, a development that has wrought both promises and perils.¹ In this essay, I expand upon that observation by introducing my own contribution to interdisciplinary legal scholarship, which I call population-based legal analysis.² By integrating public health's norms, perspectives, and methodologies into legal analysis, I will argue, population-based legal analysis can transcend the chasm that lies between legal scholarship about nonlegal issues on the one hand, and nonlegal scholarship about law and its effects on society on the other.

I begin by mapping that chasm. After discussing what is required to cross the divide and achieve a thick form of interdisciplinarity, I describe population-based legal analysis. I explain how it merges public health into law, and why public health's merger into law is deeper and richer than that of many other disciplines. I conclude by highlighting some challenges that remain.



Wendy E. Parmet is Associate Dean for Interdisciplinary Education and Research Support at Northeastern University School of Law and Matthews Distinguished University Professor of Law and Professor of Public Policy and Urban Affairs, Northeastern University. She expresses many thanks to Tasnuva Islam and Robert Foster for their excellent research assistance.

1. See, e.g., Jack M. Balkin, *Interdisciplinarity as Colonization*, 53 WASH. & LEE L. REV. 949, 950-52 (1996); Dave Owen & Caroline Noblet, *Interdisciplinary Research and Environmental Law*, 41 ECOLOGY L.Q. 887, 892-900 (2014); Richard A. Posner, *Legal Scholarship Today*, 115 HARV. L. REV. 1314, 1317-20, 1325 (2002); Kathleen M. Sullivan, *Foreword: Interdisciplinarity*, 100 MICH. L. REV. 1217, 1217-20 (2002).
2. I developed this concept most fully in WENDY E. PARMET, POPULATIONS, PUBLIC HEALTH & THE LAW 51-59 (2009) [hereinafter PARMET, POPULATIONS].

There is certainly no need to rehash here the myriad reasons for the ascent of interdisciplinary legal scholarship. In our postlegal-realist world, it is untenable to suggest that the law is wholly autonomous,³ or that legal scholarship about social, economic, or scientific questions should be uninformed by the expertise that relevant nonlegal fields may provide. Imagine what scholarship regarding climate change would look like without any consideration of climate science! Or consider a discussion of the application of patent law to biotechnology that was oblivious of human genetics. Clearly any serious scholarship regarding the application of the law to nonlegal domains requires some consideration of the expertise from those domains. Likewise, there can be little doubt that other disciplines,⁴ both empirical and conceptual, can offer powerful tools for enhancing our understanding of the legal system as well as the law's impact on the social environment.⁵ Thus my own field of public health law has seen the growth of what Scott Burris and colleagues term "legal epidemiology," the empirical study of law's impact on population health.⁶ We may all believe that seat belt laws save lives, or that laws criminalizing the sexual transmission of HIV are ineffective in reducing the spread of the virus, but only empirical research can tell us whether our suppositions have validity.

Nevertheless, although interdisciplinary research is both necessary and extraordinarily valuable, its proliferation has posed serious challenges to our field. One commonly heard complaint is that the move toward interdisciplinarity has produced works that are esoteric, self-indulgent, and increasingly divorced from the concerns of the bench and bar.⁷ A different charge is that what passes for interdisciplinary scholarship is often simply poor nonlegal scholarship.⁸ Others argue that the move to interdisciplinarity

3. Richard A. Posner, *The Decline of Law as an Autonomous Discipline: 1962-1987*, 100 HARV. L. REV. 761, 766-75 (1987); Sullivan, *supra* note 1, at 1219 ("But law, though a discipline, is not and never has been an autonomous discipline."). Judge Posner notes, however, that despite the legal realist critique of law's autonomy, the conception of law as autonomous managed to hold sway through the 1950s and 1960s. Posner, *supra*, at 762-66.
4. For a discussion of what constitutes a discipline, see Balkin, *supra* note 1, at 952-57.
5. Richard A. Posner, *The State of Legal Scholarship Today*, 97 GEO. L.J. 845, 851-52 (2009).
6. Scott Burris et al., *A Transdisciplinary Approach to Public Health Law: The Emerging Practice of Legal Epidemiology*, 37 ANN. REV. PUB. HEALTH 135, 139-41 (2016).
7. Harry T. Edwards, *The Growing Disjunction Between Legal Education and the Legal Profession: A Postscript*, 91 MICH. L. REV. 2191, 2192 (1993); Harry T. Edwards, *The Growing Disjunction Between Legal Education and the Legal Profession*, 91 MICH. L. REV. 34, 34 (1992).
8. Kathryn Zeiler, *The Future of Empirical Legal Scholarship: Where Might We Go From Here?* 66 J. LEGAL EDUC. 78, 78 (2016) (noting that the "average quality of empirical studies published in student-edited law reviews is undoubtedly lower than those published in peer-reviewed journals."). This is not a new charge. See, e.g., Brian Leiter, *Intellectual Voyeurism in Legal Scholarship*, 4 YALE J. L. & HUMAN. 79, 80 (1992) (charging that much of interdisciplinary work is "superficial and ill-informed treatment of serious ideas"); Mark A. Graber, *Law and Sports Officiating: A Misunderstood and Justly Neglected Relationship*, 16 CONST. COMMENT. 293, 304 (1999) ("The probability of error is particularly high when law professors write on non-legal subjects.").

has increased the fragmentation within legal scholarship, as legal scholars with training in different disciplines employ distinct disciplinary methodologies.⁹

Together these critiques create, as Jack Balkin stated back in 1996, “a profound sense of questioning about the purposes of legal scholarship, a profound sense of concern about the fracturing of legal scholarship into mutually incomprehensible camps, and a profound sense of worry about the increasing and, for many, undesirable isolation of legal scholarship from the concerns of the legal profession, the bench, and the bar. From this standpoint, interdisciplinary scholarship might seem to be a threat to the self-identity of the legal professor and the legal academy, and is consequently embattled or under siege.”¹⁰ The questions raised by this existential crisis are whether interdisciplinary legal scholarship can remain legal scholarship, and hence, whether legal scholarship can survive the move to interdisciplinarity.

To answer those questions, it is useful to identify the two different sides of the interdisciplinary divide.¹¹ On one side scholars use the tools (often empirical and quantitative) of nonlegal disciplines to study law’s formation, the workings of the legal system, and its effect on the greater society.¹² Much of this scholarship is produced by the increasing number of law faculty who possess Ph.D.s in other disciplines.¹³ This scholarship often looks, feels, and smells like the scholarship that is produced by our nonlegal colleagues. For example, in public health law, there is a plethora of empirical research concerning the impact of discrete public health laws on public health.¹⁴ Most of this research relies on epidemiology, econometric modeling, or other quantitative methodologies. Lawyers may be valuable or even essential members of the teams that conduct such research, but it’s often hard to see how this scholarship is legal scholarship, at least as that has traditionally been understood,¹⁵ as opposed to empirical research about law.

9. Hanoch Dagan & Roy Kreitner, *The Character of Legal Theory*, 96 CORNELL L. REV. 671, 672 (2011).

10. Balkin, *supra* note 1, at 950.

11. Balkin describes several types of interdisciplinary work, two of which are those discussed below. Another form he identifies “would involve treating legal materials as though they were the sorts of materials studied in other disciplines.” *Id.* at 958. For a further discussion of an additional approach identified by Balkin, see note 19, *infra*.

12. Hanoch Dagan and Roy Kreitner refer to this side of the chasm as “intradisciplinarity,” which they distinguish from “interdisciplinarity,” which appears in their terminology to be a thicker form of the application of the norms and methods of legal scholarship to nonlegal disciplines. Hanoch Dagan & Roy Kreitner, *The Interdisciplinary Party*, 1 CRITICAL ANALYSIS L. 23, 25-31 (2014) [hereinafter Dagan & Kreitner, *Interdisciplinary*].

13. Lynn M. LoPucki, *Dawn of the Discipline-Based Law Faculty*, 65 J. LEGAL EDUC. 506, 506 (2016) (reporting that 21% of tenure-track entry-level hires in American law schools between 2011 and 2015 had Ph.D.s).

14. Burris et al., *supra* note 6, at 135, 136.

15. See text accompanying note 16, *infra*.

On the other side of the chasm lies legal scholarship that applies traditional methods of legal analysis, which remain primarily doctrinal and normative,¹⁶ to the findings or literature created by another field. This type of scholarship, which is quite common in the field of public health law, can be extremely valuable. Indeed, once we recognize that law is not wholly autonomous, we must concede that the consideration of nonlegal knowledge is essential for many scholarly projects. But the interdisciplinarity of such scholarship often remains thin. At times this is because the legal scholar lacks sufficient expertise in the nonlegal materials that are used. But even when the law is applied to nonlegal fields with an expert's understanding, the interdisciplinarity is thin as long as the legal scholar's approach to the material remains solely within the legal tradition. In such cases, the legal scholar is using the knowledge of the nonlegal field much as the litigator uses an expert witness: as the source of facts from which legal conclusions can be drawn.

To cross the chasm between nonlegal scholarship about law on the one side and traditional legal scholarship about nonlegal matters on the other side, to achieve a thick form of interdisciplinarity, or what Scott Burris and colleagues term "transdisciplinarity,"¹⁷ the scholar must take both the traditions of legal scholarship and those of the disciplinary partner seriously. Hanoch Dagan and Roy Kreitner explain that this requires reliance "on both a theory (explicit or implicit) of the way law's power and its normativity align, and an account of the way in which this discursive cohabitation manifests itself institutionally."¹⁸ In other words, to be legal scholarship, interdisciplinary scholarship must engage with law's normativity as well as its coerciveness. It must embody the norms of law, while providing rationales for its justification and limitations.

Further, as Burris and colleagues suggest, to be interdisciplinary in the thick sense of the term, legal scholarship must also assimilate the normativity and methodologies of the other discipline.¹⁹ Thus, at least in its thick form, interdisciplinary legal scholarship is neither the application of the law to the other discipline nor the use of the other discipline to study law. It is the integration of the other discipline with the law.²⁰

With many nonlegal disciplines, I suspect, this integration may be difficult if not impossible to achieve precisely because the other discipline's normativity (to the extent that it exists) lies so far from law's own normativity as to preclude

16. See Balkin *supra* note 1, at 959; Paul Stancil, *The Legal Academy as Dinner Party: (A Short) Manifesto on the Necessity of Interdisciplinary Legal Scholarship*, 2011 U. ILL. L. REV. 1577. In other words, the legal scholar's modality remains within the legal tradition.

17. Burris et al., *supra* note 6, at 141.

18. Dagan & Kreitner, *Interdisciplinary*, *supra* note 12, at 25.

19. See Burris et al., *supra* note 6, at 141.

20. This is close to what Jack Balkin calls the fourth approach to interdisciplinary legal scholarship, which involves "merging and marrying the questions and assumptions of different disciplines." Balkin, *supra* note 1, at 959. He claims that this is the "hardest and most unusual" form of interdisciplinarity, "because without a community of disciplinary adherents, there really can be no discipline." *Id.*

a smooth assimilation. For example, it is common to find legal scholarship that cites to the expertise of chemistry in analyzing issues relating to toxic torts or environmental law. One can also imagine scholarship that attempts to apply at least some of the disciplinary tools of chemistry (the scientific method) to law.²¹ It is hard, however, to conceive of a form of scholarship that blends both these methods and the norms of chemistry, such as they are, with those of law. In contrast, such a merger has been possible with law and economics precisely because the underlying utilitarian and welfarist norms of neoclassical economics align closely with significant strands of Anglo-American law.²²

Population-based legal analysis, which is based on the integration of law with public health, offers another example, albeit one with very different norms, perspectives, and approaches. In contrast to much of public health legal scholarship,²³ population-based legal analysis does not simply analyze the law that relates to public health problems, such as tobacco or infectious disease control. Nor is it limited to the use of public health science to study the law's impact on health. Rather, population-based legal analysis situates public health's norms, perspectives, and methodologies within law and uses that approach to describe and critique the law,²⁴ as it relates both to matters that proximally affect public health and those that do not.²⁵ Thus just as

21. It is challenging, however, to imagine applying specific laboratory techniques used by chemists to law! Conversely, we have many examples of the application of the tools of economics to law.
22. *E.g.*, WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF TORT LAW* (1987) (arguing that tort law should be understood as a system for achieving the efficient allocation of resources); Richard A. Posner, *Richard T. Ely Lecture: The Law and Economics Movement*, 77 *AMER. ECON. REV.* 1, 2 (1987) (explaining that the law and economics movement applies the open-ended concepts and assumptions of economics to a wide range of issues that need not be limited to markets). A full discussion and critique of the law and economics movement, and its various strands, is beyond the scope of this paper.
23. There has been a rich debate as to whether public health law is its own field. For a powerful defense of public health law's status as a legal field, see Micah L. Berman, *Defining the Field of Public Health Law*, 15 *DEPAUL J. HEALTH CARE L.* 4584, 89 (2013); *see also* LAWRENCE O. GOSTIN & LINDSAY F. WILEY, *PUBLIC HEALTH LAW: POWER, DUTY, RESTRAINT* 4 (3d ed. 2016). Note that both under Berman's analysis and Gostin and Wiley's definition, public health law itself, and not just population-based legal analysis, share the perspectives and normativity of the field of public health. A major distinction between public health law and population-based legal analysis is that the former is confined to a distinct set of issues and questions relating to public health, while the latter is not. *See* text accompanying note 22, *supra*. In addition, population-based legal analysis more explicitly relies on public health methodologies. *See* text accompanying notes 41-42, *infra*.
24. Lawrence O. Gostin and Lindsay Wiley incorporate public health's normativity into their definition of the field of public health law, claiming, "The prime objective of public health law is to pursue the highest possible level of physical and mental health in the population, consistent with the values of social justice." GOSTIN & WILEY, *supra* note 23, at 4. Micah Berman likewise defines public health law in such a way as to incorporate the norms of public health. *See* Berman, *supra* note 23, at 76-80.
25. Given the breadth of the field of public health, especially when the influence of socio-ecological factors is taken into account, this distinction is only one of degree. Without

law and economics locates the norms of neoclassical economics within our own legal tradition, and applies the norms, premises, and techniques of neoclassical economics to a wide range of legal issues, only some of which are overtly economic in nature, population-based legal analysis points to public health's own norms within our legal tradition. Population-based legal analysis then applies those norms as well as public health's perspectives and tools to explicate legal issues that may or may not be obviously related to public health.

What does this mean? Space prevents a full analysis, but three key attributes of population-based legal analysis warrant brief discussion. These relate to its normativity, its perspective, and its methodology.

In 1988 the Institute of Medicine defined public health as “what we, as a society, do collectively to assure the conditions for people to be healthy.”²⁶ Although this statement was meant to be descriptive, like other definitions of public health,²⁷ it is implicitly normative, as it presumes that the health of populations is not simply a condition that can be measured, but a good that society should actively seek. Population-based legal analysis shares this norm but locates it not only in the discipline of public health but also within the law. Or, to put it another way, population-based legal analysis recognizes the protection of population health as a goal or value that is embedded within the legal system.²⁸

This population health norm lies deep within the common law, as exemplified by the maxims of *salus populi suprema lex* and, less obviously, *sic utere*, as well as in tort law's emphasis on injury prevention.²⁹ The norm is also deeply rooted in the constitutional concept of the police power and formative conceptions of federalism and due process. Even more fundamentally, the protection of population health may be viewed as one of the motivating justifications for a legal system.³⁰ In effect, we have laws in part to ensure our collective health

question, population-based legal analysis draws heavily upon and has been applied most readily in conjunction with public health law. Indeed, Berman argues that the insights of population-based legal analysis is one of defining characteristics of the field of public health law. Berman, *supra* note 23, at 80.

26. INST. OF MED., COMM. FOR THE STUDY OF THE FUTURE OF PUB. HEALTH, *THE FUTURE OF PUBLIC HEALTH* 19 (1988).
27. See PARMET, POPULATIONS, *supra* note 2, at 7-13 (discussing different definitions of public health).
28. Wendy E. Parmet, *Health: Policy or Law? A Population-Based Analysis of the Supreme Court's ACA Cases*, J. HEALTH POL'Y, POLITICS & L. (forthcoming 2016) [hereinafter Parmet, *Health: Policy or Law?*].
29. Without question many tort scholars argue that tort law should and does emphasize norms of corrective justice over injury prevention. See, e.g., George P. Fletcher, *Fairness and Utility in Tort Theory*, 85 HARV. L. REV. 537 (1972). My claim here is not that injury prevention is the primary goal of tort law, but simply that concerns for injury prevention are also apparent in tort cases and tort scholarship. See, e.g., Elizabeth A. Weeks, *Beyond Compensation: Using Torts to Promote Public Health*, 10 J. HEALTH CARE L. & POL'Y 27, 29-32, 39-58. (2007).
30. GOSTIN & WILEY, *supra* note 23, at 122-25; PARMET, POPULATIONS, *supra* note 2, at 35-42.

and well-being, goods that we value and that we cannot achieve alone in a state of nature.³¹ Thus public health's normativity aligns with law's normativity. As a result, the merger of public health and law is inevitably tighter and more susceptible to a thick form of interdisciplinarity than is the application of many other nonlegal fields to law.

Importantly, contra *salus populi suprema lex*, my claim that population health is a legal norm does not imply that population health ought to take precedence over other legal norms, never mind binding legal rules. Nor does population-based legal analysis assert that the norm is one that is always followed. Indeed, I have argued elsewhere that the public health norm has faced significant erosion in recent decades.³² What is critical, however, is the assertion that the legal system and public health have a shared normativity, which guides the determination of the proper scope of law's coerciveness.

A second, related attribute of population-based legal analysis is its adoption of public health's own population perspective. Critically, this adoption is compelled by the population health norm. In other words, if law's normativity holds that coercion is justified and bounded in part by the goal of protecting the health of populations, law must adopt a perspective that enables it to see populations qua populations. That's where the population perspective comes in.

In brief, the population perspective prioritizes populations as opposed to individuals, noting that individuals are situated within (multiple, overlapping, and contingent) populations.³³ In so doing, the population perspective is heavily influenced by public health's subfield of epidemiology, including especially social epidemiology, which studies the influence of social factors on the prevalence of disease within populations. Hence the population perspective recognizes that the choices individuals make, and the risks they face, are significantly determined by broader, so-called population-level factors, including the social, physical, and legal environment, often coined the social determinants of health.³⁴

To understand this perspective, consider the lead crisis in Flint, Michigan.³⁵ An individual perspective, such as that held by a typical clinician, and often

31. This claim relies on the proposition that public health is at least in part a public good. See GOSTIN & WILEY, *supra* note 23, at 8-9; Patricia Illingworth & Wendy E. Parmet, *Solidarity and Health: A Public Goods Justification*, 43 DIAMETROS 65, 66 (2015), <http://www.diametros.iphils.uj.edu.pl/index.php/diametros/article/download/715/769>.

32. See Parmet, *Health: Policy or Law?*, *supra* note 28.

33. It is worth emphasizing that the population perspective does not presume that there is a single population, "the public," but rather that there are multiple, ever-changing populations that face different circumstances and upon which the law may have different impacts. See PARMET, POPULATIONS *supra* note 2, at 5-22.

34. World Health Organization, *Social Determinants of Health*, http://www.who.int/social_determinants/en/.

35. See FLINT WATER ADVISORY TASK FORCE, FINAL REPORT (2016), https://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805-7.pdf; Sara

by courts, might ask why any individual child in Flint has elevated lead levels. This might reveal that the child was exposed to lead in her home, or that the child was genetically more susceptible to lead than other children. This individualistic perspective might lead a clinician³⁶ or court³⁷ to conclude that the child's elevated lead level was caused by some choice of the child or the parent, perhaps to live in a home with lead paint, or to use unfiltered tap water. Alternatively, the individualistic perspective may attribute responsibility to another individual or set of individuals whose unlawful action may be found to have caused the child's exposure.

The population perspective, in contrast, compares rates of disease across populations.³⁸ If one contrasts the incidence of lead poisoning in children in Flint with that of children in other communities, it becomes apparent that something was going on at a population level, leading to a higher-than-typical rate of lead poisoning for children in Flint. We can then begin to see that the high levels of exposure found in any one individual was determined less by the individual's genes or behaviors than by her membership in a population that was exposed to lead-tainted water. This may have resulted from the actions of discrete individuals, but also from a wider array of social determinants, a point that only becomes evident when we compare rates across multiple populations. Hence notions of causation, responsibility, and risk look very different from a population perspective than from an individualistic lens.

The application of the public health norm when combined with a population perspective leads public health practitioners and advocates to seek interventions, including laws, that operate across one or more populations. As epidemiologist Geoffrey Rose explains, "This is the attempt to control the determinants of incidence, to lower the mean level of risk factors, to shift the

Ganim & Linh Tran, *How Tap Water became Toxic in Flint, Michigan*, CNN (Jan. 13, 2016), <http://www.cnn.com/2016/01/11/health/toxic-tap-water-flint-michigan/>.

36. Interestingly, in Flint it was a clinician who decided to go beyond individual cases and look at blood levels more broadly who helped to expose the problem. See Sanjay Gupta, Ben Tinker & Tim Hume, *'Our Mouths were Ajar': Doctor's Fight to Expose Flint's Water Crisis*, CNN (Jan. 22, 2016), <http://www.cnn.com/2016/01/21/health/flint-water-mona-hanna-attish/>.
37. This is not to say that plaintiffs cannot succeed in holding defendants responsible for actions that operate on a population level. In the case of Flint, several lawsuits, including class action lawsuits, have been filed. See Ray Sanchez, *Flint Water Crisis Lawsuits: 5 Things to Know*, CNN, (Mar. 11, 2016), www.cnn.com/2016/03/11/us/flint-crisis-lawsuits-five-things/. Nevertheless, these lawsuits face a range of hurdles, including jurisdictional and immunity defenses that upon closer inspection may reflect the individualistic perspective that permeates much of contemporary jurisprudence. For a fuller discussion of how the failure to appreciate populations affects issues of jurisdiction, immunity, and tort liability, see PARMET, POPULATIONS, *supra* note 2, at 65-68, 219-43; Wendy E. Parmet, *Valuing the Unidentified: The Potential of Public Health Law*, 53 JURIMETRICS 255, 274-76 (2013).
38. Geoffrey Rose, *Sick Individuals and Sick Populations*, 30 INT'L J. EPIDEMIOLOGY 427, 428-29 (2001).

whole distribution of exposure in a favourable direction.”³⁹ Such interventions are often said to be “upstream,” as they seek at a broad population level to reduce or prevent health risks rather than respond to illnesses that occur in discrete, identified individuals. Thus the population perspective emphasizes prevention rather than treatment or compensation. And in law, it shifts the emphasis from individual choice to social context.

Space precludes a full discussion of how the population perspective aligns with and differs from the more individualistic perspective that is predominant in contemporary American jurisprudence.⁴⁰ Suffice it to say that although traces of the population perspective can be found in our legal corpus (the leading public health law case *Jacobson v. Massachusetts* comes most readily to mind),⁴¹ its incorporation into legal analysis sheds important light on myriad doctrines, including causation in tort law, justiciability,⁴² and criminal responsibility. Nevertheless, because the norms that inform population-based analysis are already embedded in our legal system, and the questions asked are similar to those traditionally asked by legal scholars (the legitimate scope of law’s coerciveness), the scholarship that results from the injection of the population perspective into legal analysis remains easily identifiable as *legal* scholarship.

The third defining attribute of population-based legal analysis, and one closely connected to public health’s population perspective, is the incorporation of public health’s methodologies into legal reasoning. In its thinnest sense, this means as the legal realists would have it, that the empirical findings of public health science, especially epidemiology, should matter in a genuine way to our understanding and critiques of law. After all, if the preservation of population health is one of law’s goals, the empirical question of how law affects health should matter.⁴³ Often today it does not, as both scholars and, more disturbingly, courts throw around claims that particular laws will help or harm public health with little heed to the scientific basis, indeed even the plausibility, of their claims.⁴⁴ Yet population-based legal

39. *Id.* at 431. This is not to say that public health practice has relied exclusively on population-level interventions. To the contrary, the field has often employed far more individualistic approaches, including some that have (problematically from a population perspective) blamed individuals for their own health conditions. See Wendy E. Parmet, *Dangerous Perspectives the Perils of Individualizing Public Health Problems*, 30 J. LEGAL MED. 83 (2009).

40. For a fuller discussion, see PARMET, POPULATIONS, *supra* note 2, at 5-22.

41. 197 U.S. 11 (1905).

42. See PARMET, POPULATIONS, *supra* note 2, at *passim*.

43. This is not to say that it should be dispositive in any particular case. Population-based legal analysis does not claim that population health is law’s only goal, or that otherwise binding legal rules should be not trump population health outcomes.

44. This tendency to issue unfounded assumptions about a law’s impact on public health seems especially apparent in some recent First Amendment cases. See, e.g., *Thompson v. W. States Med. Ctr.*, 535 U.S. 357 (2002) (rejecting the government’s contention that a ban on advertising by compounding pharmacies was necessary to prevent large-scale compounding); K. Outterson, *Regulating Compounding Pharmacies After NECC*, 367 NEW ENGL. J.

analysis demands more than the good faith use of public health science. In its most robust sense, the incorporation of public health methodologies in law opens the way for the adoption of a probabilistic and inductive mode of analysis that recognizes that “both risks and benefits are generally matters of degree [and] the law must accept that few things in life are either absolute or definite.”⁴⁵ Thus there is reduced reliance on deductive reasoning and a greater appreciation that if law is to achieve its population health goals it must recognize the complex, contingent continuum of risks, care about empirical facts, and abandon its reliance on a formalism that is oblivious to the population impacts of its decisions. In short, population-based legal analysis offers a form of interdisciplinarity that integrates law with public health, merging public health’s normative, ontological, and methodological aspects into traditional doctrinal analysis. In this sense it is not simply the application of law to public health; nor is it the use of public health science to study law. It is the union of law and public health around issues that relate to public health and, even more broadly, to any and all legal issues that affect the health or well-being of populations. In other words, to all of law’s domain.



That population-based legal analysis offers a bridge across the chasm of interdisciplinarity does not mean, however, that the approach lack challenges. Space prevents a full discussion, but let me mention two that are especially daunting.

The first relates to what I have called a population health norm. As was noted above, population-based legal analysis does not presume that health is the only or highest objective of the legal system, only that it is a legal norm with deep legal roots. Still, for the norm to have any content, we need to know what we mean by population health, and that itself may elude us. Without diving deeply here into that question, let me simply note that the claim that public health is a legal norm demands that we do not limit our understanding of human health to very narrow biomedical conceptions. If health is understood solely as the absence of biological pathologies, the reach of the public health norm might not extend broadly across legal issues.⁴⁶ Yet, if we adopt a very broad definition of health, such as the that offered by the World Health Organization, which defines health as the “state of complete physical, mental,

MED. 1969 (2012) (suggesting that the New England Compounding Pharmacy fiasco which led to the deaths of 64 people might not have happened if the Court had not struck down FDA regulations in *Thompson*).

45. PARMET, POPULATIONS, *supra* note 2, at 59.

46. Sridhar Venkatpuram raises a somewhat similar point in discussing the normative implications of different definitions of health. SRIDHAR VENKATPURAM, HEALTH JUSTICE: AN ARGUMENT FROM THE CAPABILITIES APPROACH 41-72 (2011). On the other hand, even a narrow definition of health can support a broad population health norm if we accept that biological health is in large measure socially determined. See PARMET, POPULATIONS, *supra* note 2, at 8.

and social well-being and not merely the absence of disease or infirmity,”⁴⁷ we risk conflating health with well-being and population health with the common good. In that case, the unique contributions of the discipline of public health to population-based legal analysis may fade. As John Coggon astutely argued in his book *What Makes Health Public?*, public health’s normativity can easily elide into a theory of the state.⁴⁸ Sometimes I think that’s the point of the analysis, but that raises challenges for the claim that population-based legal analysis is the integration of law and public health, as opposed to but a version of liberal theory by another name.⁴⁹

Yet if, on the one hand, population-based legal analysis risks losing its own interdisciplinary identity by collapsing into political theory, it also risks, on the other hand, remaining too specialized to gain traction beyond the public health law community. Although I have shown how population-based legal analysis can be and is broader in its scope than public health law, the approach remains closely identified with public health law which, despite its recent renaissance,⁵⁰ is still a small and relatively marginalized field of legal scholarship.

This is too bad. Although it goes too far to suggest that public health law is the most important field of law, public health law interrogates some of the most critical questions regarding the relationships among law, human society, and our own mortality. It also helps us to recognize our profound and inevitable interdependency. Our health depends more on factors that affect the populations we comprise than on the choices we make. Likewise, although public health science is not the only nonlegal discipline suitable for integration with the law, its merger with law offers new perspectives on core legal issues, unearthing ancient yet still relevant chords in our jurisprudence. But even for those uninterested in public health, the merger offers insight into how we can bridge the interdisciplinary divide.

47. Constitution of the World Health Organization, July 22, 1946, 62 Stat. 2679, 14 U.N.T.S. 185, http://www.who.int/governance/eb/who_constitution_en.pdf.

48. JOHN COGGO, *WHAT MAKES HEALTH PUBLIC? A CRITICAL EVALUATION OF MORAL, LEGAL, AND POLITICAL CLAIMS IN PUBLIC HEALTH* 146-48 (2012).

49. *Id.* As Coggon suggests, if the normativity of public health collapses into a more general theory of the state, public health itself provides no unique normative content. In that sense, the population perspective can be viewed as simply one response to the question “why have law,” instead of the merger of law and public health.

50. Berman, *supra* note 23, at 46-47.