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**SALUS POPULI SUPREMA LEX ESTO[†]:
BALANCING CIVIL LIBERTIES AND PUBLIC
HEALTH INTERVENTIONS IN MODERN
VACCINATION POLICY**

PHOEBE E. ARDE-ACQUAH*

ABSTRACT

Vaccine policy still stirs up similar contentions and controversial sentiments today as it did in 1905 due to the enduring tension between public health interventions and individual liberties, between the rights of the individual and the claims of the collective. This Note considers the rationale for granting vaccine exemptions in one case, but withholding them in another; why one court gives substantial deference to state power regarding vaccination, and another demonstrates considerable regard for civil liberties in vaccine policy.

It has been suggested that pragmatism and political acuity, rather than a doctrinal adherence to epidemiological theory or ethical principles has guided vaccine policy into achieving its current level of success. This Note considers that in order to maintain and improve on this level of success, the crucial issues of advancements in scientific and medical knowledge, changes in the role of government institutions, and evolving constitutional law jurisprudence must inform vaccine policymaking to effectively safeguard the public's health while simultaneously preserving the sanctity of individual rights.

[†] MARCUS TULLIUS CICERO, DE LEGIBUS bk. III, part III, sub. VIII, at 241 (J.G.F. Powell ed., Oxford Univ. Press 2006) (c. 43 B.C.E.) (Latin for “The health [‘good’ or ‘welfare’] of the people is the supreme law.”).

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INTRODUCTION

“It is revolting to say the least,” the letter began, “to think I must have diseased animal matter injected into the blood of my child before he can receive an education.”¹ Charles Hoppe’s letter to New York City’s Health Commissioner pleaded for an exemption to the smallpox vaccine mandate to be made for Hoppe’s eight-year old son. Having already endured the tragic loss of another son to a diphtheria immunization, Hoppe held strong philosophical objections to vaccination. The Commissioner, on the other hand, strongly supported vaccination, but was also very conscious of the presence of a local anti-vaccination society bent on repealing the New York law mandating vaccination for children of school-going age. She granted Hoppe a special certificate of admission exempting his son from the legally required protection.²

Almost two decades prior to Hoppe’s letter, Henning Jacobson and his son refused to comply with the Cambridge Board of Health’s statutory mandate of the smallpox vaccine³ based on past adverse reactions to earlier vaccinations.⁴ The Massachusetts Supreme Judicial Court imposed the statutory fine of \$5 on Jacobson, and he appealed to the United States Supreme Court. He argued that “a compulsory vaccination law is unreasonable, arbitrary and oppressive, and, therefore, hostile to the inherent right of every freeman to care for his own body and health in such way as to him seems best.”⁵ The Court upheld the state’s authority through its general police powers to broadly regulate in the interest of the public’s health, stating that Massachusetts had not overstepped its authority into the sphere of personal liberties protected by the Constitution, including the right to refuse vaccination.⁶

1. JAMES COLGROVE, *STATE OF IMMUNITY: THE POLITICS OF VACCINATION IN TWENTIETH-CENTURY AMERICA* 1 (2006) (quoting Letter from Charles Hoppe to Shirley Wynne (Jan. 23, 1931) (on file with the NYCDOH, box 141375, folder: Vaccination). The smallpox vaccination was required of all school children for school attendance and Hoppe’s son could not attend public school without it.

2. *Id.* (quoting Letter from Shirley Wynne to Charles Hoppe (Jan. 29, 1931) (on file with NYCDOH, box 141375, folder: Vaccination).

3. The statute at issue reads: “Boards of health, if in their opinion it is necessary for public health or safety, shall require and enforce the vaccination and revaccination of all the inhabitants of their towns, and shall provide them with the means of free vaccination. Whoever refuses or neglects to comply with such requirement shall forfeit five dollars.” MASS. GEN. LAWS ch. 111, § 181 (2010).

4. Wendy K. Mariner, George J. Annas & Leonard H. Glantz, *Jacobson v. Massachusetts: It’s Not Your Great-Great-Grandfather’s Public Health Law*, 95 AM. J. PUB. HEALTH 581, 582 (2005).

5. *Jacobson v. Massachusetts*, 197 U.S. 11, 26 (1905).

6. *See id.* The Court cautioned that state laws were broadly within the discretion of the state as long as they did not “contravene the Constitution of the United States or infringe any right granted or

Eighty-three years after Hoppe and more than a century after *Jacobson*, vaccine policy still stirs up similar contentions and controversial sentiments today. James Colgrove, an outspoken critic of the tenuous balance between public health interventions and individual liberties, rightly states, “One of the most fundamental and enduring tensions in . . . public health is the balance between the rights of the individual and the claims of the collective, and nowhere is this dynamic more salient than in policies and practices surrounding immunization.”⁷

This Note considers the rationale for granting vaccine exemptions in one case, but withholding them in another; why one court gives substantial deference to state power regarding vaccination, and another demonstrates considerable regard for civil liberties in vaccine policy. Colgrove suggests that “pragmatism and political acuity, rather than doctrinaire adherence to epidemiological theory or ethical principles,”⁸ as demonstrated in the Hoppe case, has guided vaccine policy into achieving its current level of success.

In order to maintain this level of success, advancements in scientific and medical knowledge, changes in the role of government institutions, and evolving constitutional law jurisprudence are three crucial issues that must inform vaccine policymaking to effectively safeguard the public’s health while simultaneously preserving the sanctity of individual rights.

I. BACKGROUND: THE DUTY TO SAFEGUARD THE PUBLIC’S HEALTH

A. *Definition and Source of the Duty*

Public health has been broadly defined to include the health and safety of a community, society, or population of people. The World Health Organization defines public health as “all organized measures (whether public or private) to prevent disease, promote health, and prolong life among the population as a whole.”⁹ According to the American Public Health Association (APHA), public health is “the practice of preventing disease and promoting good health within groups of people, from small communities to entire countries.”¹⁰ A landmark report issued by the

secured by that instrument.” *Id.* at 25.

7. COLGROVE, *supra* note 1, at 2.

8. *Id.*

9. Glossary of Globalization, Trade, and Health Terms, *Public Health*, WORLD HEALTH ORGANIZATION, <http://www.who.int/trade/glossary/story076/en/> (last visited Mar. 19, 2015).

10. *What is Public Health? Our Commitment to Safe, Healthy Communities*, AMERICAN PUBLIC HEALTH ASSOCIATION, <http://www.apha.org/~media/files/pdf/fact%20sheets/whatisph.ashx> (last visited

Institute of Medicine (IOM) further defines public health as “what we, as a society, do collectively to assure the conditions in which people can be healthy.”¹¹ The responsibility for preserving the public’s health is inherent in each of these definitions as one for “public or private” entities, as well as for “we, as a society.” The practical reality of modern societies, however, delegates the powers and duty of safeguarding the general well-being of the public to the government.

In the United States, the duty to protect and promote the general welfare and health of the people within constitutional boundaries has historically been the purview of state and local government public health agencies.¹² Lawrence Gostin outlines government’s long tradition of regulating for the community’s welfare by regulating individuals, professionals, institutions, and businesses through the use of its broad powers.¹³ States’ jurisdiction and authority to enact laws to safeguard the public’s health has its source in federalism, the distribution or allocation of governmental power between federal and state governments, inherent in the United States Constitution. The Tenth Amendment specifically gives states general ‘police powers’ to secure and preserve the public’s health and safety, among other local state concerns.¹⁴ The power to secure the general welfare of the people, arguably not one delegated to the federal government, was reserved to the states as sovereign governments. State constitutions, in turn, delegate this authority to local government and local public health departments to carry out this mandate. Courts have affirmed this jurisdiction and explicitly recognized that “the police power of a state

Mar. 19, 2015).

11. COMMITTEE FOR THE STUDY OF THE FUTURE OF PUBLIC HEALTH, INSTITUTE OF MEDICINE, *THE FUTURE OF PUBLIC HEALTH* 1 (1988).

12. WILLIAM J. NOVAK, *THE PEOPLE’S WELFARE: LAW AND REGULATION IN NINETEENTH-CENTURY AMERICA* 191–92 (Thomas A. Green & Hendrik Hartog eds., 1996).

13. *See* PUBLIC HEALTH LAW AND ETHICS: A READER 99–166 (Lawrence O. Gostin ed., rev. and updated 2d ed. 2010) (Dedicating two chapters to discussing government’s duty to protect the public’s health and safety, government’s power to regulate in the name of public health, and the limits and restraints existing on the exercise of these public health powers as three issues central to understanding the role of public health authorities in the constitutional design.).

14. The Tenth Amendment states, “The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.” U.S. CONST. amend. X. *See* *Gibbons v. Ogden*, 22 U.S. 1, 203 (1824) (Chief Justice John Marshall’s dicta defined state police powers as “that immense mass of legislation, which embraces every thing within the territory of a State, not surrendered to the general government: all which can be most advantageously exercised by the States themselves. Inspection laws, quarantine laws, health laws of every description, . . . are component parts of this mass.”). *See also* *Jacobson*, 197 U.S. at 24–25 (1905) (“The authority of the State to enact this statute is to be referred to what is commonly called the police power—a power which the State did not surrender when becoming a member of the Union under the Constitution.”).

must be held to embrace, at least, such reasonable regulations . . . as will protect the public health and the public safety.”¹⁵ More specifically, the police power allocates to a state “the authority . . . to enact . . . ‘health laws of every description’”¹⁶ and to broadly regulate in the interest of the public.

Consequently, the early history of public health saw states and local municipal entities at the frontlines of protecting the public welfare, safety, and health of their communities. This broad mandate covered regulation of infectious or communicable diseases and unsanitary conditions.¹⁷ In 1902, Massachusetts became the first state to exercise its police powers to grant its local city Board of Health the authority to “require and enforce the vaccination and revaccination of all the inhabitants of their towns . . .” if “in their opinion, it [was] necessary for public health or safety.”¹⁸

More recently, the federal government has moved to the frontlines in carrying out the mandate to safeguard the public’s health principally due to the increasing scope of the national economy. Federal regulatory jurisdiction has its source in the Commerce Clause—Congressional power to regulate commodities (including food and drugs) passing through interstate commerce¹⁹—as well as, but less so, from the Necessary and Proper Clause to provide for the “general welfare” of the people.²⁰ These powers, in conjunction with the Supremacy Clause, are typically employed in justification of instances of federal intervention in national-level epidemics and public health emergencies.²¹ The recognition of a need for federal leadership to set national public health policies and standards led to the creation of federal public health programs and administrative agencies such as the Department of Health and Human Services (DHHS), the Occupational Safety and Health Administration (OSHA), the Centers for Medicare and Medicaid Services (CMS), the Food and Drug Administration (FDA), and subsequently the Centers for Disease Control

15. *Jacobson*, 197 U.S. at 25.

16. *Id.*

17. *See* GOSTIN, *supra* note 13.

18. MASS. GEN. LAWS ch. 111, § 181 (2010).

19. *See* U.S. CONST. art. I, § 8, cl. 3. The Public Health Service Act gives the Secretary of Health and Human Services authority to make and enforce regulations to “prevent the introduction, transmission, or spread of communicable diseases from foreign countries into the States or possessions, or from one State or possession into any other State or possession.” 42 U.S.C. § 264(a).

20. *See* U.S. CONST. art. I, § 8, cl. 18.

21. *See* U.S. CONST. art. VI, cl. 2. Article VI of the United States Constitution makes federal law the supreme law of the land and resolves conflicts of law between state and federal law in favor of federal law. *Id.*

and Prevention (CDC) and the Advisory Committee on Immunization Practices (ACIP).²²

This increasing preemptory role of the federal government in public health regulation forms a crucial component of the contentious debate over public health interventions and the sanctity of individual rights. Public health federalism is a recurring issue in this debate and Supreme Court jurisprudence shows a trend towards “resuscitation” of states’ police powers in opposition to federal public health regulation.²³ While the Court may be arguably on the states’ side in the federalism battle,²⁴ states have galvanized their own ‘battle weapons’—primarily, the state legislature—to effectively fight federal public health interventions to which their constituents are opposed.

The definition and source of the duty to protect the public’s health are entwined with the historical and scientific reasons for initial vaccination efforts. In addition to providing insight into the definition and source of the duty, public health history also explains the scientific and chronological reasons behind the duty to vaccinate.

B. Historical and Scientific Reasons for the Public Health Duty to Vaccinate

At the beginning of the twentieth century, infectious disease epidemics such as smallpox, influenza, poliomyelitis, diphtheria, and tuberculosis killed populations by the million. Previous methods of inoculation had low levels of preventive success and occasionally produced full-blown cases of the disease, inadvertently spreading rather than preventing it.²⁵

22. See generally KENNETH R. WING & BENJAMIN GILBERT, *THE LAW AND THE PUBLIC’S HEALTH* 181–213 (7th ed. 2006). The CDC and the ACIP approve and recommend immunizations, which are almost always followed or adopted by states in state statutes and municipal regulations.

23. GOSTIN, *supra* note 13, at 100. The battle over mandatory vaccination laws is one arena in which public health federalism has played out most prominently. My examination, in ‘The Vaccination Debate’ section, (*see infra* Part III) of the Hepatitis B and human papillomavirus (HPV) vaccine mandates shows how state legislatures, quite apart from the courts’ help, can effectively block federal attempts at public health regulation.

24. Gostin does not see the Court’s rulings as exclusively favoring states’ rights. The Court allows federal preemption of state laws in some cases, which hinders state regulation, and asserts states’ reserved powers in other cases, which hinders federal public health regulation, essentially making public health governance almost impossible. *Id.* Court rulings allowing federal laws to preempt state laws include *Geier v. American Honda Motor Co., Inc.*, 529 U.S. 861 (2000) (state tort law), *Lorillard Tobacco Co. v. Reilly*, 533 U.S. 525 (2001) (tobacco regulation), and *Buckman Co. v. Plaintiff’s Legal Committee*, 531 U.S. 341 (2001) (drug and medical devices).

25. COLGROVE, *supra* note 1, at 6.

The scientific foundation for vaccination rests on the concept of ‘herd immunity’ for the protection of an entire population or community from contagion. Vaccine efficiency and effectiveness is dependent on a sufficiently large or significant percentage (typically eighty to ninety-five percent) of the group being immunized. In this way, the whole community will be strong enough to ward off infection from those persons who are either unvaccinated or for whom the vaccine is ineffective.²⁶ The effectiveness of vaccines in prolonging life and controlling epidemics of infectious diseases in the twentieth century led to vaccination quickly replacing inoculation as the method of choice.

Vaccination was introduced into the United States in 1801²⁷ based on scientific research demonstrating its effectiveness, and medical and scientific journals touting its efficacy in areas where it was widely practiced as opposed to where it was not.²⁸ Massachusetts enacted the first vaccination law for smallpox in 1809.²⁹ In 1827, Boston spearheaded mandatory vaccination in becoming the first city to mandate smallpox vaccination as a condition for school attendance. Many states followed suit in enacting mandatory smallpox vaccination laws.³⁰ For two centuries following this formative era, “vaccines . . . protected communities from diseases that in previous eras were responsible for the majority of the world’s illness and death.”³¹

The year 1957 marked the next landmark in vaccination with Jonas Salk’s polio vaccine. This proved to be a huge success for what was then the most terrifying childhood disease and the gravest public health threat post-World War Two. Its discovery became “a media sensation and marked the first time that meeting public demand for a vaccination was a greater challenge than persuading the reluctant.”³²

Following the eradication of smallpox and the near elimination of polio, vaccination was well on its way to becoming part of public health

26. See Paul E. M. Fine, *Herd Immunity: History, Theory, Practice*, 15 EPID. REVS. 265, 267 (1993).

27. This was in the case of smallpox where Edward Jenner’s 1796 breakthrough vaccine replaced inoculation as the original method of treatment. Jenner’s method was safer and sparked the advent of compulsory vaccination laws in light of this increased safety. COLGROVE, *supra* note 1, at 6.

28. *Id.* at 7.

29. LAWRENCE O. GOSTIN, PUBLIC HEALTH LAW: POWER, DUTY, RESTRAINT 386 n.27 (2000) (citing Charles L. Jackson, *State Laws on Compulsory Immunization in the United States*, 84 PUB. HEALTH REP. 787, 792–94 (1969)).

30. Gail Javitt, Deena Berkowitz & Lawrence O. Gostin, *Assessing Mandatory HPV Vaccination: Who Should Call the Shots?*, 36 J.L. MED. & ETHICS 384, 388 (2008).

31. COLGROVE, *supra* note 1, at 2.

32. *Id.* at 15.

efforts and policy. States and federal agencies began to step up efforts to increase vaccination levels for childhood and adulthood diseases that still threatened the United States.³³ By necessity, these efforts raised the specter of legal constraints that should and could be applied to ensure federal and state efforts at achieving high vaccination levels did not overstep the boundaries of constitutionally guaranteed individual liberties.

C. Legal Precedent and Policy Developments of the Duty to Vaccinate

The duty and powers of government to safeguard the public's health are not without legal boundaries. Federal and local public health agencies act within the boundaries of the Constitution and "within the scope of legislative mandates."³⁴ As governments exercised their powers to regulate for public health reasons and disputes arose concerning the lawfulness of specific interventions, courts often had to step in to interpret these boundaries.

The efficacy of vaccination prompted laws and policies at the state level to compel this practice. This section presents an overview of vaccination laws and policy from the beginning of the twentieth century until the current vaccine policy of the twenty-first century. While states played a dominant role in the public health vaccination terrain in the early twentieth century, this role began to lessen in the 1950s when the federal government, through agencies, assumed a tentative but more substantial role in vaccination.³⁵

In response to the phenomenon of "free riding"—where certain individuals refused to be vaccinated but sought to benefit from 'herd immunity' through others' vaccinations—various states enacted mandatory vaccination statutes and regulations. For example, in 1827, Boston required vaccination for school attendance, and in 1855, Massachusetts became the first state to require childhood vaccination laws

33. *Id.*

34. GOSTIN, *supra* note 13, at 99, 135–65 (providing an excellent overview of constitutional restraints on state and federal governments' exercise of public health power). Early twentieth-century constitutional limitations included public health necessity, reasonable means, proportionality, and harm avoidance, *see Jacobson*, 197 U.S. at 11; and nondiscriminatory enforcement of public health laws, *see Jew Ho v. Williamson*, 103 F. 10 (C.C.N.D. Cal. 1900). Modern restraints were, first, substantive and required a plausible explanation for government intrusion on personal rights or liberties, *see City of Cleburne v. Cleburne Living Center*, 473 U.S. 432 (1985), and second, procedural, requiring a fair hearing before depriving individuals of liberty or property interests, *see Greene v. Edwards*, 263 S.E.2d 661 (W. Va. 1980).

35. COLGROVE, *supra* note 1, at 14.

for school attendance. Those who refused to be vaccinated were subject to a monetary fine by the City.

In 1902, the Massachusetts City Board of Health passed the statute at issue in *Jacobson v. Massachusetts*. The case of Henning Jacobson, establishing the duty and right of states to set mandatory vaccine policy under their general police powers, became one of the most prominent cases in U.S. vaccine jurisprudence.³⁶ Jacobson asserted a Fourteenth Amendment Due Process claim against the Massachusetts statute's mandatory requirement of vaccination for persons over the age of twenty-one. The Supreme Court upheld the constitutionality of the state's compulsory vaccination laws [for smallpox] as "necessary for the public health or the public safety."³⁷ The Court stated that "the police power of a state must be held to embrace, at least, such reasonable regulations . . . as will protect the public health and the public safety."³⁸

In *Adams v. Milwaukee*, eight years after *Jacobson*, the Supreme Court sustained the validity of a health ordinance of the common council of the City of Milwaukee regulating the sale of impure milk as reasonable and proper and "necessary for the protection of the public health."³⁹ In recognizing that the state's police power extends to protecting its people against the sale of impure food such as milk, Justice McKenna affirmed *Jacobson's* holding that states may delegate the power to order vaccinations to local municipalities for the enforcement of public health regulations.⁴⁰ Subsequently, in 1922, the Court reviewed a similar situation in *Zucht v. King* involving a city ordinance mandating smallpox vaccination for school children and held that the Equal Protection Clause was not violated when school vaccination laws mandated vaccination only among children.⁴¹ The Court rejected the notion that the vaccination laws were discriminatory⁴² and summarily issued a terse three-paragraph

36. See James Colgrove & Ronald Bayer, *Manifold Restraints: Liberty, Public Health, and the Legacy of Jacobson v. Massachusetts*, 95 AM. J. PUB. HEALTH 571, 571 (2005) (referring to *Jacobson v. Massachusetts* as "one of the most important pieces of public health jurisprudence" and "precedent in numerous cases that have challenged vaccination laws.").

37. *Jacobson*, 197 U.S. at 27.

38. *Id.* at 25. The 7–2 opinion was a strong endorsement and recognition of the broad and flexible powers of the state to carry out their mandate of "secur[ing] the general comfort, health and prosperity of the State." *Id.* at 26. The Court further held that such exercise of the state's power was within the full discretion of the state and the federal powers and judicial review only comes in to ensure that this exercise does not "contravene the Constitution of the United States or infringe any right granted or secured by that instrument." *Id.* at 25.

39. *Adams v. Milwaukee*, 228 U.S. 572, 583 (1913).

40. *Id.*; *Jacobson*, 197 U.S. at 39.

41. *Zucht v. King*, 260 U.S. 174, 177 (1922).

42. *Id.*

opinion reaffirming its previous positions in *Jacobson* and *Adams*, that states can grant cities broad discretion to decide when to impose health regulations.⁴³ The Court reiterated and reaffirmed principles from *Adams* that the city ordinance at issue in *Zucht* did not violate the Fourteenth Amendment's Due Process or Equal Protection rights.

This broad interpretation of the duty of the state continued to be upheld even in the face of religious freedoms. In *Prince v. Massachusetts*, the Supreme Court again followed legal precedent in holding that parents' religious freedoms are subjugated and secondary to the state's interest in protecting the health of the public and individual children.⁴⁴ In language strikingly reminiscent of *Jacobson*, the Court held that, "neither rights of religion nor rights of parenthood are beyond limitation" and that, "the right to practice religion freely does not include liberty to expose the community or the child to communicable disease or the latter to ill health or death."⁴⁵

In 1964, the U.S. Surgeon General established the ACIP to set recommendations for vaccination against diphtheria, tetanus, pertussis, typhoid fever, as well as publicized vaccine side effects, adverse reactions, contraindications and precautions for diseases like measles, Hepatitis B, poliomyelitis, and mumps.⁴⁶ In the face of emerging infectious diseases such as HPV, HIV/AIDS, and H1N1 that came with the twenty-first century, the choice of mandates was left for the most part to state legislatures. Vaccine mandates were presumed constitutional under *Jacobson*, even for non-airborne diseases for which other recourse exists to protect an individual.⁴⁷

Currently, all states provide vaccine law exemptions where the vaccine would threaten the child's health. All but two states allow for religious exemptions. Less than half of fifty states allow for exemptions on moral or other grounds. States with mandatory school vaccination policies have

43. *Id.*; see also *Adams*, 228 U.S. at 583.

44. *Prince v. Massachusetts*, 321 U.S. 158 (1944). *Prince* involved argument on the part of a mother that a child labor law restricting her ability to allow her child to sell religious materials on the street was a violation of her First Amendment right to free exercise of religion.

45. *Id.* at 166–67.

46. See *Advisory Committee on Immunization Practices*, CENTERS FOR DISEASE CONTROL AND PREVENTION, <http://www.cdc.gov/vaccines/ACIP/index.html> (last visited Mar. 19, 2015). Congress established the ACIP to advise the Centers for Disease Control and Prevention (CDC) and the CDC recommends vaccination policy to the states based on this advice. Note, *Toward a Twenty-First-Century Jacobson v. Massachusetts*, 121 HARV. L. REV. 1820, 1828–29 (2008).

47. Note, *supra* note 46, at 1831 (While "[t]he application of state police power to non-airborne diseases, like hepatitis B, appears to have troubled judges . . . courts [were not] prepared to reexamine *Jacobson* and ask whether the century-old precedent applies.").

broad opt-out provisions such as with Virginia's mandate in 2008 for Merck's HPV vaccine, Gardasil. The National Childhood Vaccine Injury Compensation Act was also enacted in 1986 to provide compensation for injuries arising from immunizations under the National Vaccine Injury Program.⁴⁸ At present, childhood vaccination or immunization laws for school attendance are governed by state law, but states overwhelmingly adopt the CDC's list of vaccinations recommended by the ACIP.⁴⁹

The subsequent section addressing the vaccination debate demonstrates how a change in legal and jurisprudential leanings by the Supreme Court and other higher courts have resulted in a shift in case law. There has been a marked swing of the pendulum from extreme deference to state police powers to a more cautious approach toward granting states unlimited power to compel vaccination. The jurisprudential theories underlying this shift—social contract theory, utilitarianism and libertarianism—and their application in the context of vaccination and vaccine policy are discussed and explored in the next section.

II. JURISPRUDENTIAL FOUNDATIONS UNDERLYING VACCINATION AS A PUBLIC HEALTH INTERVENTION

David Fidler avers, “[p]rotecting public health has always required law, particularly the use of law to empower and limit governmental actors responsible for responding to disease threats.”⁵⁰ Consistent with Fidler's assertion, the main legal framework that allocates jurisdiction of public health powers required to carry out public health interventions among national and sub-national levels of government has been constitutional law. Practically, though, social contract theory informs and governs public health interventions.

A. *Social Contract Theory*

According to 17th century philosopher Thomas Hobbes, in deciding to live in a commonwealth, human beings consent to abdicate their natural rights and liberties to the absolute authority of a government in exchange for security. They agree to cede some of their rights if others also cede

48. National Childhood Vaccine Injury Act, 42 U.S.C. §§ 300aa-1 to -34 (1986).

49. Note, *supra* note 46, at 1829 (citing KURT LINK, THE VACCINE CONTROVERSY: THE HISTORY, USE, AND SAFETY OF VACCINATIONS 170–71 (2005)).

50. David P. Fidler, *Global Health Jurisprudence: A Time of Reckoning*, 96 GEO. L.J. 393, 396 (2008).

some of their rights.⁵¹ Thus “government requires the consent of its citizens, manifested in a social contract.”⁵² Commentators have noted that “[t]he term *police power* is not to be found within the Hobbesian corpus, yet his notion of sovereignty coincides with the doctrine as it was established.”⁵³ Sir William Blackstone further draws on Hobbes’ doctrine of the original social contract to create the idea as a distinct power of the state.⁵⁴ The underlying principles of vaccination bear out this theory in the sense that that individuals consent to give up their right to be free from disease and disease-causing organisms, in subjecting themselves to vaccination, on the condition that others in society also cede a similar natural right, for the protection of the whole commonwealth from disease. The police power of the state ensures that this mutual ceding of natural rights has the security and welfare of the whole as the social contract goal.

This police power referenced by Blackstone and undergirded by Hobbes’ social contract theory “at the very least . . . is understood to include legislation made in the interest of public morals, health, and safety.”⁵⁵ The *Jacobson* opinion seems to closely track Hobbes’ theory: “[I]n every well-ordered society charged with the duty of conserving the safety of its members the rights of the individual in respect of his liberty may at times, under the pressure of great dangers, be subjected to such restraint . . . as the safety of the general public may demand.”⁵⁶ Commentators like Thomas Pope support Justice Harlan’s interpretation of Hobbes that “the existence of civil society presupposes certain duties on the part of the state, foremost of which are the safety and well-being of its citizens.”⁵⁷ Thus, the right of the individual to refuse vaccination and to be free from disease-causing organisms comes “under pressure of the great [danger]” of contagion, to quote Justice Harlan, and subjects the individual to a restraint on his exercise of this right. Pope asserts that “Hobbes intend[ed] his work to balance the competing interests of liberty and

51. See generally THOMAS HOBBS, LEVIATHAN 109–45 (Michael Oakeshott ed., Basil Blackwell 1946) (1651). Sir William Blackstone’s representation of this tradeoff has been depicted as “The sovereign performs his duty because from it he derives his power. In turn, the subject performs his duty because he wishes to enjoy the riches of civil society.” THOMAS R. POPE, SOCIAL CONTRACT THEORY IN AMERICAN JURISPRUDENCE: TOO MUCH LIBERTY AND TOO MUCH AUTHORITY 51–52 (2013).

52. POPE, *supra* note 51, at 8.

53. *Id.* at 7.

54. *Id.* at 50–52.

55. *Id.* at 51 & 104 n.3 (citing *Mugler v. Kansas*, 123 U.S. 661 (1887); *Crowley v. Christensen*, 137 U.S. 89 (1890); *Jacobson*, 197 U.S. at 11; *West Coast Hotel Co. v. Parrish*, 300 U.S. 391 (1937)).

56. *Jacobson*, 197 U.S. at 29.

57. POPE, *supra* note 51, at 7.

authority” and cites *Jacobson* as a clear example of legitimate government intrusion.⁵⁸

English philosopher John Locke postulates a similar social contract theory in the formation of political communities “as a way of preserving individual natural rights, most notably the individual’s interest in property and in life.”⁵⁹ According to Locke, health is the equal right of all persons no less than liberty and property. He states regarding these rights, “The state of nature has a law of nature to govern it [. . .] and reason, which is that law, teaches all mankind, who will but consult it, that being all equal and independent, no one ought to harm another in his life, *health*, liberty, or possessions.”⁶⁰ Thus, in the original state of nature, man has “a title to perfect freedom, and uncontrolled enjoyment of all the rights and privileges of the law of nature . . . [and] a power . . . to preserve . . . his life, liberty, and estate, against the injuries and attempts of other men.”⁶¹

But man moves from a state of nature into that of a commonwealth, and political or civil society is formed “wherever . . . any number of men . . . quit every one his executive power of the law of nature, and . . . resign[s] it to the public.”⁶² Locke himself stated that this commonwealth is “a society of men constituted only for the procuring, preserving, and advancing [of] their own civil interests[,] [c]ivil interest[s] I call life, liberty, *health*, and indolency of body.”⁶³ Elsewhere, Locke affirms that such resignation of decisions to the public “authorizes the society . . . to make laws for him, as the public good of the society shall require.”⁶⁴ The state is a neutral judge to protect such “civil interests,” to quote Locke, of those who live in it.

Speaking in the context of political society but equally applicable to vaccination as an aspect of health, Locke asks why one who is by nature free would give up his freedom and subject himself to the control of another power. The ‘obvious’ answer, he responds, is that “though in the

58. *Id.* at 8.

59. Kathryn N. Benson, Comment, *A Procedural Approach to the Problem of the Right*, 58 MO. L. REV. 183, 185 n.14 (1993).

60. Darrin W. Snyder Belousek, *Health Care, Natural Law, and the American Commons: Locke and Libertarianism*, 16 J. MKTS. & MORALITY 463, 465 (2013) (emphasis added) (quoting JOHN LOCKE, *The Second Treatise of Government*, in THE SELECTED POLITICAL WRITINGS OF JOHN LOCKE 19 (Paul E. Sigmund ed., W.W. Norton 2005) (1689)).

61. LOCKE, *supra* note 60, at 53.

62. *Id.* at 55.

63. LOCKE, *A Letter Concerning Toleration*, in THE SELECTED POLITICAL WRITINGS OF JOHN LOCKE, *supra* note 60, at 129 (emphasis added). Note again the mention of health, here, as a civil interest.

64. LOCKE, *The Second Treatise of Government*, in THE SELECTED POLITICAL WRITINGS OF JOHN LOCKE, *supra* note 60, at 55.

state of nature he hath such a right, yet the enjoyment of it is very uncertain, and constantly exposed to the invasion of others.”⁶⁵ Applied to health generally and the contemporary vaccine context specifically, Belousek asserts Locke’s understanding of natural law as “not only to forbid harming others but also to oblige preserving the life and health of others.”⁶⁶ Thus each one has a natural duty not only to preserve himself but also, as much as he can, to preserve the rest of mankind. The rationale underlying the decision by an individual to give up his right to be free from disease and subject himself to immunization is that the preserving and advancing of one’s health, and the health of mankind, is uncertain when one remains unvaccinated.

Thus one is constantly susceptible or exposed to disease if this natural right is asserted. The result is a “willing[ness] to quit a condition, which, however free, is full of fears and continual dangers: and it is not without reason, that [one] seeks out, and is willing to join in society with others . . . for the mutual preservation of their lives, liberties, and estates . . .”⁶⁷ In effect, the social contract is a rational and a self-preserving choice.⁶⁸ It is a rational means to an end—the benefit and preservation of all individuals involved.

According to French philosopher Jean-Jacques Rousseau, “Every man by nature has a right to everything he needs.”⁶⁹ However, man opts to become a social being by giving up his natural rights in exchange for civil rights, and thus the social contract is born.⁷⁰ The social contract involves popular sovereignty and direct rule by the people as a whole. In this view, the collective rules, and the popular sovereign body is not a limitation of individual freedom but an expression of it.⁷¹ In other words, the rule by the

65. *Id.* at 72.

66. Belousek, *supra* note 60, at 467. “Everyone, as he is bound to preserve himself, and not to quit his station willfully, so by the like reason, when his own preservation comes not in competition, ought he, as much as he can, to preserve the rest of mankind, and may not, unless it be to do justice to an offender, take away or impair the life, or what tends to the preservation of life, the liberty, *health*, limb, or goods of another.” LOCKE, *The Second Treatise of Government*, in THE SELECTED POLITICAL WRITINGS OF JOHN LOCKE, *supra* note 60, at 19 (emphasis added).

67. LOCKE, *The Second Treatise of Government*, in THE SELECTED POLITICAL WRITINGS OF JOHN LOCKE, *supra* note 60, at 72.

68. Locke demonstrates that this choice is made by everyone only with the intention of preserving himself. The commonwealth and its governance is “to be directed to no other end but the peace, safety, and public good of the people.” *Id.* at 74.

69. JEAN-JACQUES ROUSSEAU, ON THE SOCIAL CONTRACT 27 (Donald A. Cress ed. & trans., Hackett Pub. Co. 1988) (1762).

70. ESTHER D. REED, THE ETHICS OF HUMAN RIGHTS: CONTESTED DOCTRINAL AND MORAL ISSUES 35 (2007).

71. *See generally* ROUSSEAU, *supra* note 69. Rousseau’s interpretation of the social contract differs from those of Hobbes and Locke in that individual liberties are not alienated upon formation of

sovereign is in effect the rule of the people because the sovereign expresses the opinions and desires of the people. Rousseau described this contractual state as one where “[e]ach of us places his person and all his power in common under the supreme direction of the general will; and as one we receive each member as an indivisible part of the whole.”⁷² Reed states that as a result, “[n]atural freedoms and potentially unlimited rights to life, liberty, health, and property have been relinquished in favor of submission to the general will.”⁷³

This interpretation of Rousseau brings to light the critical question surrounding justification of vaccination and vaccine mandates: whether the rule by the sovereign—be it the legislature or the courts—is a limitation of individual freedom as opposed to an expression of the popular freedom voluntarily surrendered to it by the people. The social contract, per Reed’s interpretation, as applied to vaccination, may be held to mean that the “person and all . . . power” of the people, ceded to the “supreme direction” of the whole, requires that decisions to mandate vaccination be an expression of the people’s will. Where the “people’s will” is severely fractured on an issue such as vaccination, there seemingly can be no one “general will.”

Considered or viewed in light of the end goal—the health and well-being of the whole—and of “each member as an indivisible part of the whole,” the social contract’s theory of the well-being of the collective in the function of the final arbiter is defensible as an expression not only of collective freedom but also of individual freedom.

B. Utilitarianism

The philosophy of utilitarianism, according to Jeremy Bentham, holds that “it is the greatest good to the greatest number of people which is the measure of right and wrong.”⁷⁴ The morally right action is the one that results in the most good to the people. Thus Bentham and John Stuart Mill, classic utilitarians, postulated that the end determines whether the action is right.

and entry into civil society, but he believes this contract is grounded in assent and thus consistent with liberty. REED, *supra* note 70.

72. ROUSSEAU, *supra* note 69, at 24.

73. REED, *supra* note 70.

74. JEREMY BENTHAM, A COMMENT ON THE COMMENTARIES AND A FRAGMENT ON GOVERNMENT 393 (J.H. Burns & H.L.A. Hart eds., 1977) (1776).

For Bentham, “if a law or an action doesn’t *do* any good, then it *isn’t* any good.”⁷⁵ If a law mandating vaccination of every individual who is capable of receiving the vaccine does not produce positive results in the interest of a great number of people, then the vaccine mandate is not good. Conversely, if the vaccine mandate produces positive results and prevents the spread of a contagion to the rest of a community, sparing the majority of the community infection by the disease agent, then the mandate is good. This is a Bentham-esque utilitarian argument in favor of vaccination.

John Stuart Mill, a follower of Bentham and fellow advocate of this view, originated the opposite “harm principle” which stated, “The only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others.”⁷⁶ Balancing out the situation where the “right action” is determined in terms of the “good” done to society as a whole, the “right action” is prevention of imminent harm to society. Per Mill, coercion and compulsion of an individual is only justified where the purpose or goal is the prevention of harm to others. A person’s own good is not even sufficient to justify or warrant coercion or compulsion. The goal or sole end must be the prevention of harm to others. Commentators have interpreted Mill’s harm principle as, “If one understands a harm to be an injury to those interests vital for happiness, promoting ‘the permanent interests of man’ requires that the harm of restricting liberty through social rules can be justified only for reasons of preventing harm.”⁷⁷

Interestingly, Mill further asserts “the only part of the conduct of any one, for which he is amenable to society, is that which concerns others. In the part which merely concerns himself, his independence is, of right, absolute. Over himself, over his own body and mind, the individual is sovereign.”⁷⁸ Mill’s assertion is inherently contradictory, for instances where the conduct of a person concerns himself and where they concern society are not mutually exclusive. This is particularly clear in the context of vaccination. If an individual’s decision to be vaccinated or not to be vaccinated “merely” concerns himself and his independence, then according to Mill, he is sovereign. At the same time, due to the mechanics

75. Julia Driver, *The History of Utilitarianism*, THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY, Summer 2009, <http://plato.stanford.edu/archives/sum2009/entries/utilitarianism-history/> (last visited Mar. 19, 2015).

76. JOHN STUART MILL, ON LIBERTY 9 (Hackett Publishing 1978) (1859).

77. Robert W. Hoag, *Happiness and Freedom: Recent Work on John Stuart Mill*, 15 PHIL. & PUB. AFF. 188, 198 (1986) (citations omitted).

78. JOHN STUART MILL, ON LIBERTY 21–22 (Oxford University Press 1994) (1859).

of epidemics and infectious diseases, this independent decision concerns others and the society as a whole.

The mechanics of vaccination depend on the actions of one affecting the lives of many. Thus, the failure of an individual to be vaccinated, and subsequently contracting a disease, puts the rest of society at a risk for spread of the disease. If vaccine policy were to operate along the lines of Mill's theory of utilitarianism, controlling and coercing (i.e., regulating) only those actions of individuals for which they are amenable to society, vaccine policy will be inconsistent, self-contradictory, and ineffective. The blurred lines between individual actions that concern only individuals themselves and those that concern society results in the often seen tension between individual freedoms and the "good" of the community.

C. *Libertarianism*

Libertarianism and associated concepts of autonomy, privacy, and individual choice highlight the sanctity of personal liberties as well as constitutional protection of the same. Often these concepts are at variance with the principles underwriting vaccination and vaccine policy.

A libertarian tone strongly undergirded Jacobson's 1902 argument and appeal to the Supreme Court with an emphasis on bodily integrity, personal autonomy, and self-determination. He stated, "a compulsory vaccination law is unreasonable, arbitrary and oppressive, and, therefore, hostile to the inherent right of every freeman to care for his own body and health in such way as to him seems best; and that the execution of such a law against one who objects to vaccination, no matter for what reason, is nothing short of an assault upon his person."⁷⁹

Justice Harlan alluded to the existence of libertarianism by stating, "There is, of course, a sphere within which the individual may assert the supremacy of his own will and rightfully dispute the authority of any human government . . . to interfere with the exercise of that will."⁸⁰ Applying the concept of libertarianism to the context of vaccination would result in "free riders" who benefit from herd immunity without personally having to undergo immunization, based on their "inherent right" as "free men" to take care of their bodies as they see fit.

Colgrove acknowledged that "an individual's ideal strategy would be to encourage everyone else to be vaccinated, [except] himself or herself

79. *Jacobson*, 197 U.S. at 26.

80. *Id.* at 29.

(or his or her child).”⁸¹ The logical conclusion of this strategic thinking results in an unfortunate “tragedy-of-the-commons” situation where each person acts in their own interests, placing self-interest above the common or collective interest, to the detriment of the community.⁸² Harlan himself did not hesitate to counteract Jacobson’s libertarian argument with a practical note that “the liberty secured by the Constitution . . . does not import an absolute right in each person to be, at all times and in all circumstances, wholly freed from restraint.”⁸³

Colgrove also interprets Hardin’s commentary on the “tragedy of the commons” phenomenon as a “critique of libertarian philosophy . . . [which] suggest[s] an ethical foundation for the acceptability of coercive measures to ensure the common welfare.”⁸⁴ Hardin contradicts this interpretation of himself, stating in his commentary, “The only kind of coercion I recommend is mutual coercion, mutually agreed upon by the majority of the people affected.”⁸⁵ There emerges a paradox here of whether the situation of a “tragedy of the commons” necessitates coercion to ensure the common welfare and whether mutual coercion can ever be obtained in this context.

Notwithstanding its valid claims of bodily integrity and a right to personhood, libertarian arguments against vaccination, taken to their logical conclusion, are often weakened by a potential “tragedy-of-the-commons” state of being or by a resistance to the “free rider” situation by those willing to be vaccinated.

D. How Social Contract Theory Justifies Vaccination and Public Health Interventions

In consideration of the above three philosophies—social contract theory under Hobbes, Locke, and Rousseau; utilitarianism under Mills; and libertarianism—advocates of vaccination and mandatory vaccine policy situate their arguments within the first two while anti-vaccination-ists couch their arguments in libertarian philosophies.

81. COLGROVE, *supra* note 1, at 4 (quoting Paul E.M. Fine & Jacqueline A. Clarkson, *Individual versus Public Priorities in the Determination of Optimal Vaccination Policies*, 124 AM. J. EPIDEMIOL. 1012, 1013 (1986)).

82. See Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243, 1247 (1968). Hardin, in his famous essay, demonstrated how independent and rational actions by individuals acting in their own self-interest lead to the depletion of a shared resource contrary to the group’s long-term best interests.

83. *Jacobson*, 197 U.S. at 26.

84. COLGROVE, *supra* note 1, at 4.

85. Hardin, *supra* note 82, at 1247.

According to social contract theory, vaccination is in the best interest of the whole society or community. While the wealthy and healthy arguably may not seem to need public assistance or the community to be healthy because they can afford good health, the non-discriminatory nature of epidemics and infectious diseases means that a social contract of vaccination is in everybody's interest.

In addition, compulsory vaccination upholds social contract theory and protects society from disease owing to the concept of herd immunity, as discussed above. In lieu of one hundred percent of a population being vaccinated, only 80–95% must be vaccinated to protect the entire population. This protects those who are not able to receive vaccinations due to a weakened immune system (e.g., the elderly, immune-deficient people, and people with contraindications to vaccines) from those who can but refuse or choose not to. Each vaccinated member of the community assumes the risk of infection by undergoing vaccination in order to protect himself and the community from infection.

This is the social contract theory according to Hobbes, Locke, and Rousseau: the giving up of one's natural right—to be free of disease and infection, or to refuse or choose not to be vaccinated—in the interest of the greater good. The sacrifice of one's right to be free of disease thus minimizes the whole community's susceptibility to contagion, granting the community security from disease and infection.

Individuals cannot be independently healthy in the presence of infectious diseases or epidemics. Due to the “negative” and unapparent benefit of vaccines because its success is indicated by an absence of disease, its usefulness is often hard to appreciate. Colgrove asserts that “the invocation of a certain number of illnesses or deaths that did not occur has much less rhetorical force when placed against numbers of vaccine adverse events.”⁸⁶

Justice Harlan's opinion in *Jacobson v. Massachusetts* was grounded in social contract theory and utilitarianism to vindicate the police power of the state.⁸⁷ He writes, “[I]t [is] a fundamental principle that persons and property are subjected to all kinds of restraints and burdens, in order to

86. COLGROVE, *supra* note 1, at 8.

87. *See Jacobson*, 197 U.S. at 26–27 (Justice Harlan writes, “Society based on the rule that each one is a law unto himself would soon be confronted with disorder and anarchy. Real liberty for all could not exist under the operation of a principle which recognizes the right of each individual person to use his own . . . person or his property, regardless of the injury that may be done to others.”).

secure the general comfort, health, and prosperity of the State.”⁸⁸ Justice Harlan supports this with a quote from a previous case:

The possession and enjoyment of all rights are subject to such reasonable conditions as may be deemed by the governing authority of the country essential to the safety, health, peace, good order and morals of the community. Even liberty itself, the greatest of all rights, is not unrestricted license to act according to one’s own will. It is only freedom from restraint under conditions essential to the equal enjoyment of the same right by others. It is then liberty regulated by law.⁸⁹

In consideration of the above arguments, it is apparent that the social contract theory as a basis for vaccination and mandatory vaccination policy is strongly upheld by the healthy benefit derived from living in a society where not only you are healthy but other individuals are equally healthy and disease-free and consequently unable to spread infection.

III. THE VACCINATION DEBATE

The vaccination debate in the United States is well known for its acrimonious tenor. Both sides of the debate paint a less than tasteful portrait of the other and each rarely sees or is ready to acknowledge the valid points of the other. The fact that vaccination touches an individual’s body and is akin to battery and invasion of bodily integrity ups the ante for those resistant to it, who cry foul at their apparent deprivation of the right to self-determination and autonomy regarding their own bodies. The corresponding reality that the right to autonomy over one’s body may negatively affect not only that one person but the community, and hundreds or thousands of people for that matter, is the bone of contention for pro-vaccinists.

A. *The Anti-Vaccination Movement*

It is generally acknowledged that the United States has “a strong cultural ethos antagonistic to paternalism.”⁹⁰ The unique characteristic and nature of vaccines—administered through the introduction of a harmful substance into an otherwise healthy body—from other forms of medical

88. *Id.* (internal quotation omitted).

89. *Id.* at 26–27 (quoting *Crowley v. Christensen*, 137 U.S. 86, 89 (1890)).

90. COLGROVE, *supra* note 1, at 4.

treatment, has resulted in anti-vaccinists' disbelief in its safety and efficacy, religious objections, philosophical objections, state coercion concerns, and libertarian objections to government control.

Anti-vaccinists argue that vaccines, like any other medical treatment, carry the risk of side effects or adverse reactions, and when performed on otherwise healthy people, subjects them to disease. In vaccination, though, several risks factor into making the decision whether to be vaccinated or not, among them “the risk of contracting the disease a vaccine is designed to prevent; the risk of suffering an adverse event caused by the vaccination; and the risk an individual may impose on others by remaining without protection.”⁹¹

Risk is an inevitable part of ancient and modern medicine. In addition, current vaccines are safer than in the past and those vaccinated are far less likely to fall ill from the vaccine. Indeed, today, “the vast majority of side effects are transient and superficial, including pain and swelling at the injection site or moderately elevated fever,”⁹² making this argument a weak one.

The cases of the Hepatitis B and the human papillomavirus (HPV) vaccine mandates provide a rich study in coercion, public health federalism, and vaccine efficacy.⁹³ The anti-vaccine movement strongly opposed both mandates, losing out in the former vaccine but winning in the latter case.⁹⁴

In the former case, Hepatitis B was spread through unprotected sex or intravenous drug use. In the early 1980s, the cases of Hepatitis B increased a hundredfold (from 200,000 to 300,000 instances) each year.⁹⁵ As a sexually transmitted disease, Hepatitis B was contagious but not airborne like previous infectious disease epidemics. Prevention could be achieved by precautionary and safe behavior as opposed to vaccination alone, and as such, the vaccine was not “medically necessary” but “practically necessary” for those who did not alter their behavior.⁹⁶ As a result, states did not rush to mandate the vaccine, and the ACIP “recommended vaccination only for high-risk individuals—‘drug users or [those who] have multiple sex partners (more than one partner/6 months).’”⁹⁷ But these

91. *Id.* at 5.

92. *Id.*

93. See Note, *supra* note 46, at 1828–32.

94. *Id.*

95. See WILLIAM MURASKIN, *THE WAR AGAINST HEPATITIS B* 5–6 (1995).

96. Note, *supra* note 46, at 1828.

97. *Id.* at 1829 (quoting Ctrs. for Disease Control & Prevention, *Hepatitis B Virus: A Comprehensive Strategy for Eliminating Transmission in the United States Through Universal*

high-risk individuals were those most unlikely to accept vaccination or change their sexual behavior.

When this procedure failed to work, the CDC changed tactics and mandated Hepatitis B vaccination for all school-aged children, leading to an outcry in the form of a flood of litigation in various states across the United States.⁹⁸ The plaintiffs in *Le Page*, *McCarthy*, and *Boone* argued the archaicness and inapplicability of *Jacobson* and *Zucht* in the face of the current Hepatitis B vaccine concerns, but the Court asserted that “[i]t is the responsibility of this Court, however, until the Supreme Court says otherwise, to give effect to immunization cases like *Jacobson* and *Zucht*.”⁹⁹ The judgments of these two seminal cases were affirmed, and the anti-vaccinists realized that in order to prevail in subsequent cases, they would have to “take [their] fight to the legislatures”¹⁰⁰ and not the judiciary, to bring about some change.

In the subsequent HPV case, anti-vaccinists did exactly that. The FDA approved Gardasil, manufactured by Merck, in 2006 as the first vaccine developed to prevent the transmission of HPV. HPV is a sexually transmitted disease and as such, mandatory vaccination programs were targeted at school-age girls in their pre-teen years. It was estimated that by 2007, at least twenty-four states and D.C. introduced legislation to specifically mandate the HPV vaccine for school.¹⁰¹ California and Maryland were the only states that withdrew their proposed bills.

The difference between HPV and Hepatitis B was that HPV was preventable without the use of a vaccine. Abstinence and the regular use of condoms were among the best practices to effectively prevent transmission. But studies showed that barring abstinence, at almost one hundred percent effectiveness for certain strains of HPV, Gardasil was the best shot at preventing transmission of HPV.¹⁰² The caveat to its touted

Childhood Vaccination: Recommendations of the Immunization Practices Advisory Committee (ACIP), MORBIDITY & MORTALITY WKLY. REP.: RECOMMENDATIONS & REPS., Nov. 22, 1991, at 1, 13, available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/00033405.htm> (last visited Feb. 21, 2015)).

98. See *In re Le Page*, 18 P.3d 1177 (Wyo. 2001); *McCarthy v. Boozman*, 212 F. Supp. 2d 945 (W.D. Ark. 2002); *Boone v. Boozman*, 217 F. Supp. 2d 938 (E.D. Ark. 2002).

99. *Boone*, 217 F. Supp. 2d at 956.

100. Note, *supra* note 46, at 1832.

101. Benjamin Lemke, Note, *Why Mandatory Vaccination of Males Against HPV is Unconstitutional: Offering a New Approach to an Old Problem*, 19 PUB. INT. L.J. 261, 261–62 (2010).

102. *Id.* at 271–72. See also U.S. FOOD & DRUG ADMIN., P06-77, FDA LICENSES NEW VACCINE FOR PREVENTION OF CERVICAL CANCER AND OTHER DISEASES IN FEMALES CAUSED BY HUMAN PAPILLOMAVIRUS: RAPID APPROVAL MARKS MAJOR ADVANCEMENT IN PUBLIC HEALTH (June 8, 2006) (available at <http://www.fda.gov/newsevents/newsroom/pressannouncements/2006/ucm108666.htm>) (last visited Mar. 19, 2015).

effectiveness that prompted policy debate was the still relatively unknown long-term effects and safety of the Gardasil vaccine.

In Texas, Governor Rick Perry issued an executive order mandating the vaccine, but this was ultimately overturned by vote by the Texas legislature. This stopped several vaccine mandate bills in their tracks in several states across the country. The anti-vaccinists had proven their assumption right—if they wanted to change vaccine policy, they had to do so through the legislature and not through the courts. Changes in the landscape of public health and in how public health activities were being regulated by federal government agencies confirmed this.

B. Changes in the Landscape of Public Health and Vaccine Regulation

Many commentators argue for revised vaccine policies based on advances in medicine, shifting burdens of disease from infectious to chronic diseases, and an evolution in the roles of federal and state governments vis-a-vis public health interventions. According to one insightful review, “*Jacobson* . . . addressed issues about medicine, disease, and society that are no longer relevant today.”¹⁰³ The determination of the relevancy of *Jacobson*, however, depends on how the landscape of public health and regulation of this field has evolved with medicine and society. Mariner et al. advocate that

the legitimacy of compulsory vaccination programs depends on both scientific factors and constitutional limits [like] the prevalence, incidence, and severity of the contagious disease; the mode of transmission; the safety and effectiveness of any vaccine in preventing transmission; . . . the nature of any available treatment[; and] . . . protection against unjustified bodily intrusions, such as forcible vaccination of individuals at risk for adverse reactions, physical restraints and unreasonable penalties for refusal.¹⁰⁴

The evolution is stark in terms of medical advances. In 1900, only one vaccine was commonly used in the United States; by 2006, “there [were] more than two dozen vaccines in use, fourteen of which [were] universally recommended for children.”¹⁰⁵ At the beginning of the twentieth century, infectious disease epidemics killed populations by the millions; by the late twentieth century, smallpox was eradicated. Subsequent vaccines greatly

103. Note, *supra* note 46, at 1821.

104. Mariner et al., *supra* note 4, at 586.

105. COLGROVE, *supra* note 1, at 2.

reduced the death rate from many airborne and childhood diseases like poliomyelitis, tuberculosis, and measles, the vast majority of which no longer exist in the United States.

In the past, “levels of coverage [of vaccination] among youth have topped 90 percent for most vaccines, and as a result, almost all of the conditions they protect against have declined to the vanishing point in the United States.”¹⁰⁶ Most airborne diseases susceptible to epidemics have been reduced largely due to vaccination in the twentieth century. In addition, modern medicine and scientific advances now offer more precautionary options besides vaccination for non-airborne, highly contagious diseases (e.g., disease screening and safe sex). “Scientific advances have produced an array of health care facilities, drugs, vaccines, and technologies to prevent and treat health problems.”¹⁰⁷

Lemke notes that “[a]s time passes, the diseases being vaccinated against look less and less like smallpox.”¹⁰⁸ The nature of diseases and epidemics has certainly changed from the advent of vaccines to present day America. It has been noted that *Jacobson* was decided at a time when infectious diseases were the leading cause of death.¹⁰⁹ In contrast, the main causes of death today are chronic diseases, and the major sources of infectious disease outbreaks are overseas travel, acts of bioterrorism, or laboratory accidents.¹¹⁰

In 2006 the mandatory vaccine list included vaccines for diphtheria, tetanus, and acellular pertussis (DTaP); Hepatitis B; Hepatitis A; polio; measles, mumps, and rubella (MMR); varicella or chicken pox; influenza; rotavirus; haemophilus Influenza B (HiB); and pneumococcus.¹¹¹ Many of these diseases bear very little resemblance to smallpox in terms of contagiousness or non-behavioral transmission modes.

The nature of diseases for which modern day vaccines exist or are being developed in the pipeline, like HPV, Hepatitis B, and HIV, are “qualitatively different from their predecessors in that they are not medically essential to preventing the spread of disease.”¹¹² They are behaviorally transmitted and not airborne (with some like SARS being the

106. *Id.*

107. Mariner et al., *supra* note 4, at 582.

108. Lemke, *supra* note 101, at 266.

109. Mariner et al., *supra* note 4, at 582.

110. *Id.*

111. CTRS. FOR DISEASE CONTROL AND PREVENTION, CHILDCARE AND SCHOOL IMMUNIZATION REQUIREMENTS 2005–2006 (Aug. 2006), available at http://www.immunize.org/laws/2005-06_izrequirements.pdf (last visited Feb. 21, 2015).

112. Note, *supra* note 46, at 1820.

exception as still airborne). Some have suggested that vaccine law must distinguish between vaccines that are “medically necessary” (for which a vaccine is the only line of defense against an epidemic) and those that are “practically necessary” (for which alternative lines of defense exist but are not being used in practice).¹¹³

The case of the HPV vaccine mandate narrated above provides insight into how these changes are affecting public health regulation of vaccination. HPV, the most common sexually transmitted disease, is implicated in over 99% of cervical cancer cases in the United States.¹¹⁴ In 2006, Merck’s Gardasil was FDA-approved as a vaccine for uninfected women.¹¹⁵ In 2008, Virginia was the only state to pass a mandatory student vaccination statute, complete with numerous opt-out provisions. In 2007, Texas governor Rick Perry issued an executive order mandating the vaccine for school enrollment.¹¹⁶ The strong public outcry led the Texas legislature to overturn the executive order by statute.¹¹⁷

This sea change has also been evident in terms of regulatory oversight. Mariner notes that “*Jacobson* was decided . . . when . . . public health programs were organized primarily at the state and community levels [and] [t]he federal government had comparatively little involvement in health matters.”¹¹⁸ The FDA did not exist until 1906, the USPHS did not exist until 1944, and the CDC was formed in 1946 as the Communicable Diseases Center.

Responsibility for public health—regulating the safety of the workplace, air, water, food, and drugs—has changed hands from those of local city and state officials to that of the national federal government. Federal agencies such as the CDC and the ACIP are now responsible for setting the agenda for public health interventions and issuing recommendations regarding vaccination policy to state legislatures.

113. *Id.* at 1821.

114. See Lawrence O. Gostin & Catherine D. DeAngelis, Editorial, *Mandatory HPV Vaccination: Public Health vs Private Wealth*, 297 JAMA 1921, 1921 (2007).

115. U.S. FOOD & DRUG ADMIN., *supra* note 102.

116. Tex. Exec. Order No. RP65 (Feb. 2, 2007), available at <http://www.lrl.state.tx.us/scanned/govdocs/Rick%20Perry/2007/RP65.pdf> (last visited Mar. 19, 2015).

117. Act of May 8, 2007, ch. 43, 2007 Tex. Gen. Laws 41, 42 (amending Section 38.001 of the Texas Education Code to undo requirement of immunization against human papillomavirus for a person’s admission to any elementary or secondary school), available at <http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.38.htm#38.001> (last visited Mar. 19, 2015).

118. Mariner et al., *supra* note 4, at 582.

C. Case Law Indications of Limits to State Power in Public Health

Though the role of the federal government in public health has expanded, as described above, states' corresponding police powers have not decreased by virtue of this expansion. Rather, states' powers have been limited over the years by Supreme Court jurisprudence recognizing and emphasizing the constitutional importance of individual liberties in the face of state police powers.¹¹⁹

A portentous example of this change began with *Wong Wai v. Williamson*.¹²⁰ The *Wong Wai* vaccination case was tried in federal courts but did not make it to the Supreme Court. The City of San Francisco Board of Health had enacted a resolution prohibiting Chinese residents from traveling outside the city without proof of immunization against the bubonic plague.¹²¹ The plaintiffs alleged a violation of the Fourteenth Amendment's Equal Protection Clause by the law in singling out Chinese residents.¹²²

The Circuit Court found in favor of the plaintiffs, holding that "municipal government should be clothed with sufficient authority to deal with [unexpected emergencies affecting the public health] in a prompt and effective manner."¹²³ Lest it go to an extreme with this holding, the court concurrently recognized limits to this power and a necessity for judicial review in certain instances. The court stated, "when the municipal authority has neglected to provide suitable rules . . . and the officers are left to adopt such methods as they may deem proper for the occasion, their acts are open to judicial review"¹²⁴ into a potential abuse of individual constitutional rights.

119. *See id.* (arguing that the conceptions of state power and personal liberty established in *Jacobson* were effectively expanded, superseded, and ignored by subsequent 20th century cases). Sunstein agrees in postulating that *Jacobson* was a "narrow and shallow decision—narrow because it is not intended to apply to a broad range of legislation, and shallow because it does not explicitly rely on a general theory of constitutional interpretation to justify its result," hence its short-lived status in constitutional jurisprudence. *Id.* at 583 (referencing CR SUNSTEIN, ONE CASE AT A TIME: JUDICIAL MINIMALISM ON THE SUPREME COURT (1999)).

120. *Wong Wai v. Williamson*, 103 F. 1 (N.D. Cal. 1900).

121. *Id.* at 3. The resolution first required all Chinese residents to be vaccinated against the bubonic plague, and additionally made it illegal for them to travel without the required documentation.

122. *Id.* at 8. Though approximately 350,000 people lived in San Francisco at the time, the City's resolution applied only to its Chinese inhabitants, which made the law disproportionately affect this population and raised questions of discrimination. *Id.* at 6.

123. *Id.*

124. *Id.* The Circuit Court ascertained that the actions of the City's Board of Health could not be justified because they were "boldly directed against the Asiatic or Mongolian race as a class, without regard to the previous condition, habits, exposure to disease, or residence of the individual." *Id.* at 7.

At the turn of the 20th century, as seen in *Jacobson*, the Supreme Court subsumed and subordinated individual rights to the greater good.¹²⁵ The famous holding that “the police power of a State must be held to embrace, at least, such reasonable regulations established directly by legislative enactment as will protect the public health and the public safety”¹²⁶ still resounds centuries afterward. The Court left the means and manner of protecting the public health and safety to the discretion of the state, subject only to the limitation that the means did not contradict the Constitution nor infringe any right guaranteed by it.¹²⁷

But the Court did not end without a note of caution curbing the seemingly broad discretion given to states, as though hearkening back to *Wong Wai*: “The police power of a State . . . may be exerted in such circumstances or by regulations so arbitrary and oppressive in particular cases as to justify the interference of the courts to prevent wrong and oppression.”¹²⁸

More recently, though, modern Supreme Court constitutional jurisprudence has seemingly tended toward recognition and protection of individual and civil rights and limitation of states’ sovereign power. Where the rights at stake are more “fundamental,” the Court has applied a “strict scrutiny” test.¹²⁹ Horowitz defines a fundamental right as “one that the Court deems so important that the government cannot infringe upon it without meeting the heightened scrutiny standard.”¹³⁰ These are, according to the Court in *Moore v. City of E. Cleveland*, “those rare cases in which the personal interests at issue have been deemed ‘implicit in the concept of ordered liberty.’”¹³¹

The Court has recognized that certain aspects of constitutionally-protected liberty, such as the freedom from arbitrary detention and bodily intrusion are “more important than others, such as freedom to use property or money.”¹³² The same personal interests are at stake in vaccination

125. See *Jacobson*, 197 U.S. at 26–27. Justice Harlan writes, “[T]he liberty secured by the Constitution . . . does not import an absolute right in each person to be, at all times and in all circumstances, wholly freed from restraint. There are manifold restraints to which every person is necessarily subject for the common good.” *Id.* at 26.

126. *Id.* at 25.

127. *Id.*

128. *Id.* at 38.

129. Ben Horowitz, *A Shot in the Arm: What a Modern Approach to Jacobson v. Massachusetts Means for Mandatory Vaccinations During a Public Health Emergency*, 60 AM. U. L. REV. 1715, 1722 (2011).

130. *Id.* at 1724.

131. *Moore v. City of E. Cleveland, Ohio*, 431 U.S. 494, 537 (1977) (Stewart, J., dissenting) (citing *Roe v. Wade*, 410 U.S. 113, 152 (1973)).

132. Mariner et al., *supra* note 4, at 585 (citing *United States v. Carolene Products Co.*, 304 U.S.

mandates. Vaccination limits some aspects of personal liberties “implicit in the concept of ordered liberty” to which Justice Stewart referred. Strict scrutiny requires both a “compelling” purpose that justifies this public health intrusion and that the intrusion be “narrowly tailored” not to interfere with individual liberties.¹³³ The compelling reason for such an intrusion and limitation is the ultimate safety and protection of the public from disease. Where there are less “fundamental” rights at stake, the Court has required that the intrusion on civil liberties be “rationally related” to a “legitimate state interest.”¹³⁴ States must meet a higher level of justification in order to be allowed to limit personal liberty in vaccine mandates.¹³⁵ But even where there have been rights that may be classified as less than “fundamental,” the Supreme Court has required a higher level of justification from the state for limiting personal liberty.¹³⁶

CONCLUSION

More than one hundred years after *Jacobson*, modern public health and constitutional law are not what they used to be. In view of the changing landscape and evolution of medical advances, it is evident that the contours of the social contract with regard to public health laws, especially vaccine mandate laws, need to be redrawn and revised. There is little controversy on this point among commentators and the debate centers more on the constitutionality of mandates.¹³⁷ Issues to be considered in redrawing the contours of the social contract in relation to vaccines include medical advances and technology, the re-emergence of infectious diseases like measles and tuberculosis due to antibiotic resistance, federal jurisdiction over national security, and the nature of the epidemic.

As seen from the discussion above, the role of government agencies (both state and federal) in public health, especially with regard to vaccines, has been significantly reduced to a suggestive one. Federal vaccine

144, 152–53 n.4 (1938) (freedom from deprivation of property); *Zinermon v. Burch*, 474 U.S. 327 (1990) (freedom from arbitrary detention and physical restraint); and *Lawrence v. Texas*, 539 U.S. 558, 578 (2003) (right to liberty within a personal relationship).

133. *Id.*

134. *Id.*

135. *Jacobson*, 197 U.S. at 25. Here, the Court upheld the law because it had “a real and substantial relation to the protection of the public health and the public safety.” *Id.* at 31.

136. *See Planned Parenthood v. Casey*, 505 U.S. 833 (1992); *Stenberg v. Carhart*, 530 U.S. 914 (2000).

137. *See Note, supra* note 46, at 1821 (arguing for a revision of vaccine mandates based on “practical necessity” and “medical necessity”); Lemke, *supra* note 101, at 261 (arguing that the mandate of the HPV vaccine would approach the line of “what [is] reasonably required for the safety of the public” in the words of Justice Harlan in *Jacobson*).

agencies may only suggest policies that state legislatures may choose to apply. Secondly, the existence of vaccines of “practical necessity” (where people can protect themselves from contagion via behavioral changes) and those of “medical necessity” (where there is an epidemic or public health emergency and communities cannot protect themselves without vaccination) suggest that mandates cannot apply indiscriminately to all vaccines.

For emerging infectious diseases such as the H1N1 virus, voluntary isolation and vaccination may be necessary, though in the most recent epidemic, there was no need to compel vaccination. For infectious diseases such as HPV and Hepatitis B, a behavioral line of defense may be most effective.

Furthermore, recent controversies over vaccine mandates such as the Hepatitis B and HPV vaccine have been fought not in the courts (courts have clearly stayed away from the issue) but in individual state legislatures. Even Congress to a large extent has stayed away from vaccine mandates, leaving the decision to state legislatures to handle. Harkening back to Locke and Hobbes, since the decision to be governed is a social contract, it presumes a voluntary and active abdication of power *by the people* to the whole in the interest of the whole. This suggests quite clearly that redrawing vaccination laws and mandates is a job not for the executive or judiciary but for the legislature, *the people*.

The history of the United States Supreme Court jurisprudence demonstrates the continually evolving contours of the social contract in the context of a real public health concern, vaccination. The Court has moved away from a position where states have complete power and broad discretion, guided by the boundaries of the Constitution, to mandate and implement policies with the goal of protecting the people’s health, to one where states’ powers are not absolute but are what the people grant to it, echoing Hobbes and Locke’s theories of the social contract.

The balancing of civil liberties against the public’s interest in good health and a society safe from disease or contagion is a delicate one. In a society where individual members have ceded their individual rights to the collective for the good of the collective, there is a strong argument for zero reserved rights to the individual where individual choice would jeopardize the health, safety, and overall well-being of the community.

However, in practice and considering the realities of the modern political community, as Mayor Wynne seemed to recognize in the Charles

Hoppe case,¹³⁸ individual rights are nevertheless still sacrosanct and jealously guarded not only by individuals themselves but also by the collective governance (i.e., the legislature and the judiciary). The people still retain the power to self-govern via the legislature through the ballot box, as previously seen where executive decisions were overturned with legislative ones. The cases of the Hepatitis B and HPV vaccine mandates are testimony to this. Moving forward, redrawing the boundaries of power between individuals and the collective state as it pertains to vaccine mandates and vaccine policy would have to be a carefully crafted joint effort between “the people” and “the collective” to ensure that the health of the people is the supreme law.

138. See JAMES COLGROVE, *supra* note 1.