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LIBERTY, RELIGION AND FLUORIDATION

George A. Strong*†

Although not a contagious disease,¹ dental caries—or tooth decay—presently constitutes one of the most challenging health problems in the United States. Ninety-nine percent of the population of the United States has some experience with dental caries by the time they reach adulthood.² Half of the population over 55 years of age have no natural teeth at all.³ A survey conducted by the Massachusetts Department of Public Health shows that the average child in Massachusetts at the age of 14 has lost 1 tooth from caries and has had 4 teeth filled with 7 others in need of filling.⁴ A survey of public school children between the ages of 5 and 12 in Oakland, California, shows more than 65 percent had suffered decay of their permanent teeth.⁵ A 1965 survey indicated that two-thirds of the Head Start children across the country were already in need of dental repairs.⁶ Most of these children were less than 5 years old.

Compounding this problem of dental health is a great shortage of dentists, dental hygienists and assistants. It has been estimated that approximately one-third of the population sees a dentist annually while 18 percent has never seen a dentist.⁷ A billion dental man-hours would have been required in 1962 just to handle the then current dental problems.⁸ The dental manpower currently available cannot physically provide for more than half the existing dental needs.⁹

Various methods of dealing with the problem of dental caries have been advocated over the years. Fluoridation of drinking

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¹ Shaw, *The Safety of Fluoridation*, 28 POSTGRADUATE MEDICINE 641, 647 (1960).

² Dunning, *Current Status of Fluoridation*, 273 NEW ENGLAND J. MEDICINE 30, 84 (1965), Reprint at 3.

³ Nathan and Scott, *Fluoridation in California: An Unresolved Public Policy Issue*, 7 U. OF CAL. PUB. AFFAIRS REP. 2 (1966).

⁴ Dunning, *supra* note 2.

⁵ Nathan and Scott, *supra* note 3, at 2.

⁶ *Id.*

⁷ Roemer, *Water Fluoridation: Public Health Responsibility and the Democratic Process*, 55 AM. J. PUB. HEALTH 1338 (1965).

⁸ Nathan and Scott, *supra* note 3, at 3.

⁹ Dunning, *supra* note 2, at 8.

water is by far the most noted method suggested. This article attempts to assess the legality of fluoridation legislation in light of its objectives and the criticisms that have been levelled against it. Constitutional interpretation must be by analogy, for the most part, in view of the absence of a Supreme Court decision dealing specifically with fluoridation.

The first section of this article deals with the nature of fluoridation, its uses to date and its effectiveness. The second part examines the contention that fluoridation is deprivation of liberty within the meaning of the fourteenth amendment. The final section focuses on the argument that fluoridation impinges on religious freedoms guaranteed by the first amendment.

I

Medically and scientifically sound,¹⁰ safe, efficient and economical, fluoridation has been described as one of the most significant health measures of modern times.¹¹

Fluoride, as a caries preventative, was discovered during extended research on the cause of certain brown stains on teeth. These brown stains or mottled enamel were discovered on teeth in areas where the natural water contained a high concentration of fluoride. Children in these areas had a high incidence of mottled enamel and a correspondingly low incidence of tooth decay. Continued research indicated that fluoride in the drinking water was the cause of both the mottled enamel and the reduction in tooth decay. Subsequent studies revealed that by controlling the level of fluoride in drinking water the prevalence of dental caries in children could be greatly reduced and mottling of the enamel could also be avoided.¹² This result, it was found, could be best achieved by a fluoride level of between 1.0 and 1.2 parts per million.¹³ This is generally referred to as the optimum level.

Fluoridation reproduces in an entirely safe manner¹⁴ a situation found in natural water supplies. Whether fluoride is naturally present in the water or is added is immaterial.¹⁵ Once ingested

¹⁰ *Fluoridation of Public Water Supplies*, 55 J. AM. WATER WORKS 677 (1963).

¹¹ 71 J. AM. DENTAL ASS'N 1201 (1965). This issue of the Journal is devoted to articles on fluoridation. For an early discussion of fluoridation in California see Dietz, *Fluoridation and Domestic Water Supplies in California*, 4 HASTINGS L.J. 1 (1952).

¹² 74 J. AM. DENTAL ASS'N 220, 231 (1967).

¹³ PUBLIC HEALTH SERVICES, U.S. DEP'T OF HEALTH, EDUCATION, AND WELFARE, *FLUORIDE DRINKING WATERS: THE RELATION OF DENTAL CARIES TO FLUORIDE DRINKING WATERS* 83 (1962); Dunning, *supra* note 2, at 1; Shaw, *supra* note 1, at 642.

¹⁴ Dunning, *supra* note 2, at 11; Shaw, *supra* note 1, at 649; Smith, *Safety of Water Fluoridation*, 65 J. AM. DENTAL ASS'N 598, 602 (1962).

¹⁵ Smith, *supra* note 14.

fluoride has been absorbed by the blood it is dispersed rapidly to all of the body's organs. Approximately one half is stored in the skeletal tissues.¹⁶ Some fluoride is deposited in the teeth while they are calcifying. The mechanism involved is the replacement of hydroxyapatite by the less soluble fluorapatite in the crystalline structure of tooth enamel.¹⁷ The most important effect of fluoridation is upon the formation of tooth structure before teeth erupt into the mouth.¹⁸

Adjusting the fluoride content of a water supply to an optimum level for the purpose of controlling dental caries was first commenced in 1945 in Grand Rapids, Michigan, and Newburg, New York. Evanston, Illinois, followed in 1947. Reports from these test cities and other communities indicate that fluoridation is indeed successful in reducing the incidence of tooth decay. After 15 years of fluoridation in Grand Rapids, total dental caries were lowered by 50 to 63 percent in children in the 12 to 14 age bracket, and by 48 to 50 percent in children in the 15 to 16 age bracket.¹⁹ With only 7 years of fluoridation, Evanston experienced a 58 percent decrease in dental decay among children in the 6 to 8 age bracket.²⁰ A study comparing dental costs for 6-8 year old children in a fluoridated area—Newburg, New York—and a non-fluoridated area—Kingston, New York—revealed an initial per capita cost of \$14.16 in the fluoridated area as compared with \$32.38 in the non-fluoridated area.²¹ The maintenance cost for the following year was also substantially less in the fluoridated area.²²

At the present time over 60,000,000 people in the United States drink water with the fluoride content adjusted to the optimum level for the control of dental caries.²³ About 9,500,000 people live in communities with adequate natural fluoride waters.²⁴ The greatest single increase in number, 8,500,000, was achieved in September, 1965, when New York City began to fluoridate its water supply. In 1965, Connecticut became the first state to require fluoridation; all public water supplies serving a population of 20,000 or more were required to be in compliance by October, 1967. Kentucky adopted a similar measure in 1966.²⁵

¹⁶ *Id.*

¹⁷ Dunning, *supra* note 2, at 3.

¹⁸ *Id.* at 4.

¹⁹ *Id.*

²⁰ 74 J. AM. DENTAL ASS'N 220, 236 (1967). This special issue of the Journal is devoted to reports of findings in the Evanston Dental Caries Study.

²¹ Bernhardt, *Fluoridation: How Far in 20 Years?*, 71 J. AM. DENTAL ASS'N 1115, 1117 (1965).

²² *Id.*

²³ Baker, *Current Trends in Fluoridation*, 71 J. AM. DENTAL ASS'N 1145 (1964).

²⁴ Nathan and Scott, *supra* note 3, at 3.

²⁵ *Id.* at 4.

Practically all medical, dental and public health associations including the American Dental Association and the American Medical Association approve and recommend fluoridation of community water supplies.²⁶

Although the above would seem to indicate rather compellingly that fluoridation is a most desirable means of dealing with the problem of dental caries, there is today a vocal and persistent opposition sharing quite a different view.²⁷ Fluoridation has been said to cause everything from cancer to rust in water pipes. It is said to be socialized medicine, a poison, the illegal practice of medicine, and even a promotional scheme of the aluminum trust.²⁸ The manifold objections to fluoridation are not exactly unprecedented. Public health measures of today such as vaccination against smallpox, chlorination of water, and the pasteurization of milk, had vociferous opposition before gaining public acceptance.

Although many of the objections to fluoridation are of the fanatical or crack-pot type, others are phrased in constitutional terms. Fluoridation, it is claimed, is a deprivation of individual liberty within the meaning of the fourteenth amendment, and is violative of religious freedom guaranteed by the first amendment. The remainder of this article examines the substance of these constitutional contentions.

II

It is contended that fluoridation of the public water supply is an unconstitutional deprivation of individual liberty within the meaning of the fourteenth amendment to the United States Constitution. It denies the individual freedom of choice in a matter relating to his bodily care and health by compelling him to drink fluoridated water. The prevention and treatment of diseases of the

²⁶ Other organizations include The American College of Dentists, The United States Public Health Service, The American Water Works Association, The United States Armed Forces, and The American Cancer Association. See *Rogowski v. City of Detroit*, 374 Mich. 408, —, 132 N.W.2d 16, 19 (1965); *Readey v. Saint Louis County Water Co.*, 352 S.W.2d 622, 627 (Mo. 1961), *cert. denied*, 371 U.S. 8 (1962); Nathan and Scott, *supra* note 3, at 2. Also supporting fluoridation are such organizations as The United States Junior Chamber of Commerce, The American Legion, The American Federation of Labor, The Congress of Industrial Organizations, and The Parent Teachers' Association. Bernhardt, *supra* note 21, at 1116.

²⁷ *Comments on the Opponents of Fluoridation*, 71 J. AM. DENTAL ASS'N 1155 (1965).

²⁸ The University of Michigan's School of Public Health has published *Classification and Appraisal of Objections to Fluoridation*, by Elwell and Easlick, which catalogues and refutes over 150 objections to fluoridation. For a discussion of many of the objections to fluoridation see Clark and Sophy, *Fluoridation: The Courts and the Opposition*, 13 WAYNE L. REV. 338 (1967).

teeth, it is argued, is a matter of private health, not public health. Fluoridation therefore is allegedly an invasion of one's liberty to treat his health as he thinks best. And it is likewise said to be a denial of a parent's right to safeguard the health of his children.

Despite the fact that the United States Supreme Court has not specifically addressed itself to the question of fluoridation, its delineations of the scope of the fourteenth amendment in related areas provide some guidelines. We do know that the personal freedom and liberty guaranteed by the due process clause of the fourteenth amendment is very broad. However, the constitution does not recognize an absolute and uncontrollable liberty.²⁹ "Liberty implies the absence of arbitrary restraint, not immunity from reasonable regulations and prohibitions imposed in the interests of the community."³⁰

In *Jacobson v. Massachusetts*,³¹ the defendant refused to submit to compulsory vaccination. He claimed that a compulsory vaccination statute was unreasonable, arbitrary and oppressive and that it was hostile to his right to treat his health as he thought best. In upholding the constitutionality of the statute the Supreme Court of the United States said,

But the liberty secured by the Constitution of the United States to every person within its jurisdiction 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. On any other basis organized society could not exist with safety to its members. 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, whether in respect of his person or his property, regardless of the injury that may be done to others.³²

The contention that fluoridation impinges upon one's liberty as protected by the due process clause of the fourteenth amendment involves an application of that clause "for its own sake."³³

²⁹ *West Coast Hotel Co. v. Parrish*, 300 U.S. 379, 391 (1937).

³⁰ *Chicago, B. & O.R.R. v. McGuire*, 219 U.S. 549, 567 (1911).

³¹ 197 U.S. 11 (1905).

³² *Id.* at 26.

³³ "[I]t is important to distinguish between the due process clause of the Fourteenth Amendment as an instrument for transmitting the principles of the First Amendment and those cases in which it is applied for its own sake. The test of legislation which collides with the Fourteenth Amendment, because it also collides with the principles of the First, is much more definite than the test when only the Fourteenth is involved. Much of the vagueness of the due process clause disappears when the specific prohibitions of the First become its standard. The right of a State to regulate, for example, a public utility may well include, so far as the due process test is concerned, power to impose all of the restrictions which a legislature may have a 'rational basis' for adopting. . . ." *Board of Educ. v. Barnette*, 319 U.S. 624, 639 (1943).

Such a contention is not concerned with the application of the due process clause as an instrument for enforcing the specific prohibitions of the first amendment against the states. The liberty with which we here deal is not a freedom which enjoys the preferred position suggested by some Supreme Court decisions as belonging to first amendment freedoms.³⁴

Inherent in the concept of state sovereignty is the state's right to provide for the health, safety, and general welfare of the community. Legislation for the promotion of these ends has generally been upheld where it is reasonable. If the legislative objective is within the reach of the police power and the means adopted reasonably related to achieving that objective, the measure is valid provided it is not arbitrary or capricious and does not otherwise contravene the Constitution of the United States.³⁵ The question remains whether the prevention of dental caries is properly within the purview of the state's police power.

It has been said that the police power extends to all the great public needs.³⁶ That the health and physical well-being of the community is a public need and hence a proper object of the police power is beyond question.³⁷ "The preservation of the health and physical safety of the people is a purpose of prime importance in the exercise of the police power."³⁸

The possession and enjoyment of all rights, including the liberty secured by the fourteenth amendment, is subject to such reasonable conditions and limitations as may be deemed by the state to be essential to the health of the community.³⁹ In upholding the constitutionality of a Washington statute fixing the minimum wages for women, the court, in *West Coast Hotel Co. v. Parrish*, stated,

But the liberty safeguarded is liberty in a social organization which requires the protection of law against the evils which menace the health, safety, morals and welfare of the people. Liberty under the Constitution is thus necessarily subject to the restraints of due process, and regulation which is reasonable in relation to its subject and is adopted in the interests of the community is due process.⁴⁰

³⁴ *Readey v. Saint Louis County Water Co.*, 352 S.W.2d 622, 629 (Mo. 1961), *cert. denied*, 371 U.S. 8 (1962); Note, 12 AM. L. REV. 97 (1963); Note, 38 NOTRE DAME L. REV. 71 (1962).

³⁵ *Nebbia v. New York*, 291 U.S. 502, 537 (1934).

³⁶ *Louis K. Liggett Co. v. Baldridge*, 278 U.S. 105, 111 (1928).

³⁷ *Jacobson v. Massachusetts*, 197 U.S. 11, 25 (1905).

³⁸ *Commonwealth v. Town of Hudson*, 315 Mass. 335, —, 52 N.E.2d 566, 570 (1943). See also *Schuringa v. City of Chicago*, 30 Ill. 2d 504, —, 198 N.E.2d 326, 329 (1964) *cert. denied*, 379 U.S. 964 (1965); *Readey v. Saint Louis County Water Co.*, 352 S.W.2d 622, 624 (Mo. 1961), *cert. denied*, 371 U.S. 8 (1962).

³⁹ *Jacobson v. Massachusetts*, 197 U.S. 11, 26 (1905); *Crowley v. Christensen*, 137 U.S. 86, 89 (1890).

⁴⁰ 300 U.S. 379, 391 (1937).

During the first third of this century the Supreme Court freely used the guarantee of liberty in the due process clause to strike down state economic and social legislation. A New York statute setting the maximum number of hours of employment for bakery employees was held unconstitutional as nothing more than a regulation of the hours of labor.⁴¹ The Court pointed out that the statute had no direct or substantial relation to the health of employees and therefore could not be considered a health law, the indication being that, had the Court found such a relationship to health, the statute might very well have been upheld. On the other hand, the Washington statute fixing minimum wages for women was upheld in the *Parrish* case by a court that asked, "What can be closer to the public interest than the health of women?"⁴²

The recognition of community health as a proper subject for the exercise of the police power, is especially appropriate when it comes to the health of children. In *Chapman v. City of Shreveport*, the Supreme Court of Louisiana said,

The health of the children of a community is of vital interest and of great importance to all the inhabitants of the community. Their health and physical well-being is of great concern to all the people, and any legislation to retard or reduce disease in their midst cannot and should not be opposed on the ground that it has no reasonable relation to the general health and welfare.⁴³

When only one individual is involved, *e.g.*, in the case of a headache from sinus, a backache from lumbago, there is little difficulty in classifying the malady as one of private health. There is no question of the police power being invoked in such situations. But the problem of dental caries is national in scope. The courts, in answering the private health objection, point out that dental caries is a serious and widespread disease which constitutes one of the most important, continuing and unsolved problems of general health confronting the community today.⁴⁴ In *Dowell v. City of Tulsa*, the court took judicial notice of the fact that the health of teeth bears a direct relationship to general physical health.⁴⁵

One court has said that whether a particular disease presents a problem of public or private health does not turn on whether it

⁴¹ *Lochner v. New York*, 198 U.S. 45 (1905).

⁴² *West Coast Hotel Co. v. Parrish*, 300 U.S. 379, 398 (1937).

⁴³ 225 La. 859, —, 74 So. 2d 142, 145 (1954), *appeal dismissed*, 348 U.S. 892 (1954).

⁴⁴ *Id.* at 145-46. *See also* *Schuringa v. City of Chicago*, 30 Ill. 2d 504, —, 198 N.E.2d 326, 330 (1964), *cert. denied*, 379 U.S. 964 (1965); *Froncek v. City of Milwaukee*, 269 Wis. 276, —, 69 N.W.2d 242, 246 (1955).

⁴⁵ 273 P.2d 859, 863 (Okla. 1954), *cert. denied*, 348 U.S. 912 (1955). *Accord*, *Kraus v. City of Cleveland*, 163 Ohio St. 559, —, 127 N.E.2d 609, 611 (1955), *appeal dismissed*, 351 U.S. 935 (1956). *See also* Note, 3 St. Louis U.L.J. 284 (1955); Note, 13 WASH. & LEE L. REV. 38 (1956).

affects a few or many or whether it is contagious, but rather on the ability of public authority to effectively cope with it.

Under our modern existence the law must change and expand with mechanical and scientific progress. What did not concern public health yesterday, because of an inability of science to cope with the problem at hand, may very well today become a matter of public health due to scientific achievement and progress. The use of fluoridation to prevent dental caries is an excellent example of this proposition. Science has discovered a method whereby dental caries may be diminished. The prevalence and danger of such caries are well known and the only practicable application of such scientific knowledge is by treating drinking water with fluoride. Thus the problem of dental caries has of necessity become one of public health.⁴⁶

Closely related to the public-private health argument, is the contention that inasmuch as dental decay is not infectious or contagious, fluoridation cannot be justified as a proper exercise of police power. Opponents of fluoridation are quick to point out that the *Jacobson* case was concerned with compulsory vaccination against smallpox where, apparently, there was a real threat of an epidemic. They would restrict the *Jacobson* decision to cases of epidemics or threatened epidemics. Courts which have considered this argument, however, have not been persuaded to so restrict *Jacobson*.⁴⁷ The fact that dental caries is not contagious is immaterial. What is important is the fact that it is widespread, serious and affects the health and well-being of the community. Protection of public health includes protection from the introduction or spread of both contagious and noncontagious diseases.⁴⁸

Nor has the argument that public necessity is a requisite for the invocation of the police power found favor with the courts.⁴⁹ Likewise, the contention that compulsory fluoridation must withstand the clear and present danger test has been rejected.⁵⁰

⁴⁶ *Kraus v. City of Cleveland*, 163 Ohio St. 559, —, 127 N.E.2d 609, 612 (1955), *appeal dismissed*, 351 U.S. 935 (1956).

⁴⁷ *Rogowski v. City of Detroit*, 374 Mich. 408, —, 132 N.W.2d 16, 24 (1965); *Readey v. Saint Louis County Water Co.*, 352 S.W.2d 662, 630 (Mo. 1961), *cert. denied*, 371 U.S. 8 (1962); *Dowell v. City of Tulsa*, 273 P.2d 859, 863 (Okla. 1954), *cert. denied*, 348 U.S. 912 (1955); *Baer v. City of Bend*, 206 Ore. 221, —, 292 P.2d 134, 137 (1956).

⁴⁸ *Chapman v. City of Shreveport*, 225 La. 859, —, 74 So. 2d 142, 146 (1954), *appeal dismissed*, 348 U.S. 892 (1954); *Kaul v. City of Chehalis*, 45 Wash. 2d 616, —, 277 P.2d 352, 356 (1954); Note, 4 UTAH L. REV. 416 (1955).

⁴⁹ *Kaul v. City of Chehalis*, 45 Wash. 2d 616, —, 277 P.2d 352, 356 (1954). It has been said that necessity is the limit of the legitimate exercise of the police power; a reasonable exercise of such power is one required by public necessity. An examination of Words and Phrases establishes that in only a very few instances does the word "necessary" mean indispensable. Necessary means convenient, beneficial, appropriate, suitable, relevant, helpful and desirable.

⁵⁰ *Readey v. St. Louis County Water Co.*, 352 S.W.2d 622, 630 (Mo. 1961),

Since a valid exercise of police power must be in the interest of the public generally and not merely in the interest of some particular limited class,⁵¹ it might be contended that fluoridation legislation is invalid since it primarily benefits children. As such, fluoridation legislation would seem to be class legislation. Courts have held, however, that adults are also benefited in that children become adults.⁵² Not only does fluoridation reduce the disease in children, but its beneficial results will also continue on into their adult life thereby ultimately benefiting all.⁵³ Moreover, one cannot say that parents are not benefited by a reduction of the incidence of dental caries in their children.⁵⁴ The court in *Chapman v. City of Shreveport* answered the class legislation argument in this way:

Children of today are adult citizens of tomorrow, upon whose shoulders will fall the responsibilities and duties of maintaining our government and society. Any legislation, therefore, which will better equip them, by retarding or reducing the prevalence of disease, is of great importance and beneficial to all citizens. In our opinion the legislation does bear a reasonable relation to public health.⁵⁵

Conceding then that dental caries presents a problem of public health within the reach of police power, the question still remains whether fluoridation of drinking water is a reasonable and rational method of solving it. The Supreme Court of Illinois has said that after considering all of the evidence they found "extraordinary accord" among professional and scientific authorities that fluoridation is effective in reducing and preventing dental caries.⁵⁶ In *Dowell v. City of Tulsa*, the court said that the evidence established "without contradiction, that [fluoridation] will materially reduce the incidence of caries in youth."⁵⁷ And in *Rogowski v. City of Detroit* the court took "judicial notice of the common knowledge... that fluori-

cert. denied, 371 U.S. 8 (1962); *Baer v. City of Bend*, 206 Ore. 221, —, 292 P.2d 134, 139-40 (1956); Note, 55 MICH. L. REV. 130 (1956).

⁵¹ *Readey v. Saint Louis County Water Co.*, 352 S.W.2d 622, 630 (Mo. 1961), *cert. denied*, 371 U.S. 8 (1962); *Baer v. City of Bend*, 206 Ore. 221, —, 292 P.2d 134, 136 (1956).

⁵² *Readey v. Saint Louis County Water Co.*, 352 S.W.2d 622, 632 (Mo. 1961), *cert. denied*, 371 U.S. 8 (1962); *Baer v. City of Bend*, 206 Ore. 221, —, 292 P.2d 134, 136 (1956).

⁵³ *Schuringa v. City of Chicago*, 30 Ill. 2d 504, —, 198 N.E.2d 326, 330 (1964), *cert. denied*, 379 U.S. 964 (1965); *Kraus v. City of Cleveland*, 163 Ohio St. 559, —, 127 N.E.2d 609, 612 (1955), *appeal dismissed*, 351 U.S. 935 (1956); *Froncek v. City of Milwaukee*, 269 Wis. 276, —, 69 N.W.2d 242, 247 (1955).

⁵⁴ *Dowell v. City of Tulsa*, 273 P.2d 859, 863 (Okla. 1954), *cert. denied*, 348 U.S. 912 (1955).

⁵⁵ 225 La. 859, —, 74 So. 2d 142, 145 (1954), *appeal dismissed*, 348 U.S. 892 (1954).

⁵⁶ *Schuringa v. City of Chicago*, 30 Ill. 2d 504, —, 198 N.E.2d 326, 332 (1964), *cert. denied*, 379 U.S. 964 (1965).

⁵⁷ 273 P.2d 859, 863 (Okla. 1954); 8 OKLA. L. REV. 472 (1955); 1 WAYNE L. REV. 141 (1955).

dation is beneficial to prevent dental caries and so improve public health."⁵⁸ This relatively strong language would seem to indicate that the courts have had little difficulty in finding that fluoridation is reasonably related to achieving a reduction in dental caries.

Conceding the effectiveness of fluoridation, there remains the argument that it is nevertheless unconstitutional in that alternative methods of reducing dental caries are available which would be less restrictive of one's liberty. The availability of alternative methods of achieving a permissible legislative objective does not force the legislature to choose that method which is less restrictive of individual liberty. That, of course, is an important consideration, but it is not the sole criterion. Other factors such as efficiency, safety, convenience and costs are entitled to weight.⁵⁹ The court pointed out in *Readey v. Saint Louis County Water Co.*⁶⁰ that the city council, confronted with opposing evidence on the issue, could have reasonably concluded that alternative methods of achieving the purpose of fluoridation were not as effective. Two courts have held that the fluoridation of drinking water is the most practical and satisfactory method of reducing dental caries.⁶¹

In the last analysis it becomes manifest that the choice of a method to effect a reduction in dental caries is one of policy to be decided by the legislature.

And while, as we have noted, such legislative action is generally subject to judicial review to determine whether it is related to and reasonably necessary and suitable for the protection of the public health, safety, welfare or morals, courts will not disturb a police regulation where there is room for a difference of opinion, but in such case the legislative judgment will prevail. . . . Furthermore, the wisdom, necessity and expediency of police regulations are no concern of the courts, but are matters primarily for the legislative body of the municipality, and courts are without power to interfere merely because they believe a different regulation might have been wiser or better.⁶²

⁵⁸ 374 Mich. 408, —, 132 N.W.2d 16, 23 (1965).

⁵⁹ *Schuringa v. City of Chicago*, 30 Ill. 2d 504, —, 198 N.E.2d 326, 333 (1964), *cert. denied*, 379 U.S. 964 (1965).

⁶⁰ 352 S.W.2d 622, 632 (Mo. 1961), *cert. denied*, 371 U.S. 8 (1962).

⁶¹ *Kraus v. City of Cleveland*, 163 Ohio St. 559, —, 127 N.E.2d 609, 612 (1955), *appeal dismissed*, 351 U.S. 935 (1956); *Dowell v. City of Tulsa*, 273 P.2d 859, 864 (Okla. 1954), *cert. denied*, 348 U.S. 912 (1955).

⁶² *Schuringa v. City of Chicago*, 30 Ill. 2d 504, —, 198 N.E.2d 326, 332 (1964), *cert. denied*, 379 U.S. 964 (1965). *See also* *Bibb v. Navajo Freight Lines, Inc.*, 359 U.S. 520, 524 (1959); *Day-Brite Lighting, Inc. v. Missouri*, 342 U.S. 421, 423 (1951) ("If there are alternative ways of solving a problem, we do not sit to determine which of them is best suited to achieve a valid state objective."); *West Coast Hotel Co. v. Parrish*, 300 U.S. 379, 399 (1937). ("Even if the wisdom of the policy be regarded as debatable and its effects uncertain, still the legislature is entitled to its judgment."); *Jacobson v. Massachusetts*, 197 U.S. 11, 30 (1905); *Rogowski v. City of Detroit*, 374 Mich. 408, —, 132 N.W.2d 16, 23-24 (1965).

The foregoing is an attempt to weigh the constitutional objections to fluoridation insofar as they relate to deprivation of liberty. The sustaining or rejecting of such objections depends upon an analysis of the proper scope of the police power. If the prevention of dental caries is a valid concern of the legislature, constitutional language above cited, interpreting the police power, compels the conclusion that fluoridation as a means of resolving the problem, is constitutionally permissible notwithstanding the availability of other solutions. To say that dental caries is a purely private matter overlooks the magnitude and seriousness of the problem. The statistics cited at the beginning of this article bear testimony to the truly public nature of dental caries. Finally, it is difficult to accept the idea that fluoridation would constitute class legislation prohibited by the constitution. If the health of women is properly cognizable as a subject for legislative action, it is hardly logically or otherwise defensible to suggest that the health of children is beyond legislative reach.

III

Although fluoridation is an acceptable solution for dental caries within the scope of the states' police power, there remains the objection that first amendment guarantees of freedom of religion preclude state action.⁶³ The Christian Science Church, for example, teaches the sole reliance on the power of God for the cure of all physical and mental ailments. Since the church considers fluoride a drug, as such it may not be used to treat dental caries. Therefore, fluoridation forces the Christian Scientist to either abandon a tenet of his religion or obtain nonfluoridated water outside the community supply. The propriety of forcing such a choice over the objection of a constitutionally protected right of religious freedom necessitates inquiry into the nature of that right.

The first amendment provides that "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof."⁶⁴ This limitation upon the power of Congress applies with equal force against the states by virtue of the fourteenth amendment. In interpreting this provision Mr. Justice Roberts stated in *Cantwell v. Connecticut*,⁶⁵

The constitutional inhibition of legislation on the subject of religion has a double aspect. On the one hand, it forestalls compulsion by law of the acceptance of any creed or the practice of any form of worship.

⁶³ Nichols, *Freedom of Religion and the Water Supply*, 32 S. CAL. L. REV. 158, 159 (1958-1959).

⁶⁴ U. S. CONST. amend. I.

⁶⁵ 310 U.S. 296, 303-04 (1940).

Freedom of conscience and freedom to adhere to such religious organization or form of worship as the individual may choose cannot be restricted by law. On the other hand, it safeguards the free exercise of the chosen form of religion. Thus the Amendment embraces two concepts,—freedom to believe and freedom to act. The first is absolute but, in the nature of things, the second cannot be. Conduct remains subject to regulation for the protection of society. The freedom to act must have appropriate definition to preserve the enforcement of that protection. In every case the power to regulate must be so exercised as not, in attaining a permissible end, unduly to infringe the protected freedom.

It is not claimed that fluoridation of drinking water violates the “establishment of religion” clause of the first amendment. Fluoridation is said, however, to violate the “freedom to act” referred to in *Cantwell* by Justice Roberts.

Before examining United States Supreme Court decisions interpreting the free exercise clause, decisions of the highest state courts dealing with fluoridation and the free exercise clause will be considered. The Supreme Court of the United States has so far declined review of fluoridation cases.

In *Dowell v. City of Tulsa*,⁶⁶ the Supreme Court of Oklahoma rejected the contention that the ordinance in question prescribed a form of medication or medical treatment forbidden by tenets of certain churches. The court reasoned that fluoridation was no more medication than a mother's furnishing her children with “a well-balanced diet, including foods containing vitamin D and calcium to harden bones and prevent rickets, or lean meat and milk to prevent pellagra.”⁶⁷ The court also rejected an attempt to distinguish fluoridation from chlorination on the basis that the latter treats water whereas the former treats people:

[T]hey here argue that such treatment [fluoridation] must be distinguished from treatment with chlorides, because the latter will kill germs, purify water and accordingly aid the prevention and spread of disease, whereas fluorides will not. We think that if the putting of chlorides in public water supplies will in fact promote the public health, the distinction sought to be drawn by plaintiffs is immaterial. To us it seems ridiculous and of no consequence in considering the public health phase of the case that the substance to be added to the water may be classed as a mineral rather than a drug, antiseptic or germ killer; just as it is of little, if any, consequence whether fluoridation accomplishes its beneficial result to the public health by killing germs in

⁶⁶ 273 P.2d 859 (Okla. 1954).

⁶⁷ *Id.* at 846. “Finally, neither the alliterative term ‘compulsory mass medication’ nor reference to the fluoridated water as a ‘concoction’ describes the situation before us; nor does the possible opprobrium, which may flow from their use, overcome the police power.” *Kaul v. City of Chehalis*, 45 Wash. 2d 616, —, 277 P.2d 352, 357 (1954).

the water, or by hardening the teeth or building up immunity in them to the bacteria that causes caries or tooth decay.⁶⁸

The Supreme Court of Oregon in *Baer v. City of Bend*⁶⁹ rejected the plaintiff's assertion that legislation which limits freedom of religion is presumptively unconstitutional. An exercise of police power is presumed constitutional when the object is permissible and the means adopted are reasonably related to achieving the objective. This presumption, however, has been questioned when legislation affects substantive rights protected by the Bill of Rights. In his well known footnote 4 in *United States v. Carolene Products Co.*⁷⁰ Mr. Justice Stone cautioned,

There may be a narrower scope for operation of the presumption of constitutionality when legislation appears on its face to be within a specific prohibition of the Constitution, such as those of the first ten amendments, which are deemed equally specific when held to be embraced within the Fourteenth.⁷¹

After the *Carolene Products Co.* case the rights secured by the first amendment were frequently said to enjoy a preferred position.⁷² In 1956, Mr. Justice Frankfurter, speaking for five other members of the Court said that "no constitutional guarantee enjoys preference."⁷³ Nor, in his view, should legislation affecting first amendment rights be presumed unconstitutional. In *Kovacs v. Cooper*,⁷⁴ he stated,

In short, the claim that any legislation is presumptively unconstitutional which touches the field of the First Amendment and the Fourteenth Amendment, insofar as the latter's concept of "liberty" contains what is specifically protected by the First, has never commended itself to a majority of this court.⁷⁵

Even if a preference for first amendment rights is assumed, it would seem that the usual presumption of constitutionality that attends legislation generally would be sufficient to offset the preference,⁷⁶ leav-

⁶⁸ *Dowell v. City of Tulsa*, 273 P.2d 859, 863 (Okla. 1954).

⁶⁹ 206 Ore. 221, 292 P.2d 134 (1956).

⁷⁰ 304 U.S. 144 (1938).

⁷¹ *Id.* at 152.

⁷² *Marsh v. Alabama*, 326 U.S. 501, 509 (1946); *Martin v. City of Struthers*, 319 U.S. 141, 149 (1943); *Jones v. Opelika*, 316 U.S. 584, 608 (1942).

⁷³ *Ullmann v. United States*, 350 U.S. 422, 428 (1956).

⁷⁴ 336 U.S. 77 (1949).

⁷⁵ *Id.* at 94-95 (concurring opinion) "It has been suggested, with the casualness of a footnote, that such legislation (affecting First Amendment rights) is not presumptively valid . . . and it has been weightily reiterated that freedom of speech has a 'preferred position' among constitutional safeguards. . . . The precise meaning intended to be conveyed by these phrases need not now be pursued." *Dennis v. United States*, 341 U.S. 494, 526-27 (1951) (Frankfurter, J.) (concurring opinion).

⁷⁶ *Thomas v. Collins*, 323 U.S. 516, 529-30 (1945).

ing no presumption either way.⁷⁷ Consequently it would be incumbent upon opponents of fluoridation to show that such legislation is an unreasonable and unjustified interference with the right of religious practice.⁷⁸

de Aryan v. Butler,⁷⁹ the first fluoridation case to be decided by a state appellate court, dealt very briefly with the religion aspects of the problem. The court merely pointed out that the United States Supreme Court, in discussing limitations on the freedom of religion, has distinguished between direct compulsion imposed upon individuals, with sanctions for violations and compulsion which is only indirect or reasonably incidental to a furnished service or facility and which involves no penalty for violations.⁸⁰ The court viewed fluoridation as compulsion of the latter type.⁸¹

Although the courts of California, Oregon and Oklahoma have sustained fluoridation legislation against the assertion that it infringes religious freedom, their decisions cannot be considered determinative of the question under the first and fourteenth amendments to the United States Constitution. At the same time, the Supreme Court of the United States has declined to review any of the fluoridation cases. Consequently, consideration must be given to those cases wherein the Court has had occasion to interpret the free exercise clause. Actually, most of the recent religious freedom cases decided by the Court have dealt with problems of church and state—the establishment clause; relatively few cases have involved the free exercise clause.

The free exercise cases decided prior to 1961, although important to the development of constitutional doctrines in the restricted factual situations involved, appear to be of limited value in delineating the scope, or extent, of protection afforded by the free exercise clause.⁸²

⁷⁷ *Baer v. City of Bend*, 206 Ore. 221, —, 292 P.2d 134, 138 (1956).

⁷⁸ *But see*, *Nichols*, *supra* note 63 at 171.

⁷⁹ 119 Cal. App. 2d 674, 260 P.2d 98 (1953), *cert. denied*, 347 U.S. 1012 (1954).

⁸⁰ *Id.* at 683, 260 P.2d at 103.

⁸¹ In 1957 the California Public Utilities Commission ordered a water company to fluoridate its water saying, "We recognize that it is a fundamental constitutional principle that a person is entitled to adhere to any religious belief which he may choose. However, there is another principle which is equally true and fundamental—that no person may, by exercising his religious belief, infringe the sovereign power of the state to provide for the health, safety, or general welfare of its citizens. When these two principles collide, the power of the state must prevail." *City of Oroville v. California Water Serv. Co.*, 17 P.U.R.2d 219, 221 (Cal. P.U.C. 1957).

⁸² *Tucker v. Texas*, 326 U.S. 517 (1946), *Marsh v. Alabama*, 326 U.S. 501 (1946), and *Jamison v. Texas*, 318 U.S. 413 (1943), involved the distribution of religious literature in the streets in violation of statute. *Follett v. McCormick*, 321 U.S. 573 (1944), *Murdock v. Pennsylvania*, 319 U.S. 105 (1943), and *Jones v. Opelika*, 319 U.S. 103

In 1961 the Supreme Court decided the case of *Braunfeld v. Brown*⁸³ upholding Sunday closing laws of Pennsylvania. The appellants, members of the Orthodox Jewish faith, contended that the statute interfered with their free exercise of religion in that it forced them to choose between giving up their religious observance of the Sabbath or sustaining substantial economic detriment. The economic detriment would derive from the fact that their religion required them to close on Saturdays. Obedience to the challenged law would necessitate closing on Sundays also. The Court rejected appellants contention, emphasizing the secular nature of the statute: "the establishment of a day of community tranquillity, respite and recreation, a day when the atmosphere is one of calm and relaxation rather than one of commercialism."⁸⁴ The statute according to the Court merely operated so as to make the practice of their religious beliefs more expensive.⁸⁵ This, then, was only an indirect burden on the exercise of religion.⁸⁶ The Court went on to say,

But if the State regulates conduct by enacting a general law within its power, the purpose and effect of which is to advance the State's secular goals, the statute is valid despite its indirect burden on religious observance unless the State may accomplish its purpose by means which do not impose such a burden.⁸⁷

The Court considered alternative means of achieving the State's goal of a common day of rest and found them unacceptable. The alternatives were impractical; created problems of enforcement; and were contrary to the common custom of most people.⁸⁸ Moreover, the State was not required to provide an exemption for Sabbatarians. Such an exemption would be administratively unworkable and provide the exempted class with an economic advantage.

(1943), dealt with violations of ordinances requiring occupation licenses for peddling of religious literature. *Fowler v. Rhode Island*, 345 U.S. 67 (1953), and *Niemotko v. Maryland*, 340 U.S. 248 (1951) were concerned with discrimination against Jehovah's Witnesses in the use of city parks. Although all of the above cases emphasized the free exercise clause, the same result could have been achieved by reliance upon the rights of free speech, free press, freedom of assembly or in the *Fowler* and *Niemotko* cases—equal protection.

⁸³ 366 U.S. 599 (1961); (Chief Justice Warren announced the judgment of the Court in an opinion in which Justice Black, Justice Clark, and Justice Whittaker concurred. Justice Frankfurter and Justice Harlan rejected appellant's claim under the free exercise clause in a separate opinion. Justice Douglas dissented. In separate opinions Justice Brennan and Justice Stewart dissented from the disposition of the free exercise clause claim.)

⁸⁴ *Id.* at 602.

⁸⁵ *Id.* at 605.

⁸⁶ "To strike down, without the most critical scrutiny, legislation which imposes only an indirect burden on the exercise of religion, i.e., legislation which does not make unlawful the religious practice itself, would radically restrict the operating latitude of the legislature." *Id.* at 606.

⁸⁷ *Id.* at 607.

⁸⁸ *Id.* at 608 (referring to *McGowan v. Maryland*, 366 U.S. 420, 450-52 (1961)).

The scope of the free exercise clause was further considered in *Sherbert v. Verner*.⁸⁹ The appellant, a Seventh-day Adventist, was discharged by her employer for refusing to work on Saturday, her Sabbath. Her application for unemployment compensation under the South Carolina Unemployment Act was rejected because to qualify she had to be "available for work" and her religion counseled against Saturday employment.

In evaluating her claim of denial of the right of free exercise of religion the Court said,

If, therefore, the decision of the South Carolina Supreme Court is to withstand appellant's constitutional challenge, it must be either because her disqualification as a beneficiary represents no infringement by the State of her constitutional rights of free exercise, or because any incidental burden on the free exercise of appellant's religion may be justified by a "compelling state interest in the regulation of a subject within the State's constitutional power to regulate."⁹⁰

The eligibility provision of the act was found to impose a burden on the exercise of her religion. It forced her "to choose between following the precepts of her religion and forfeiting benefits, on the one hand, and abandoning one of the precepts of her religion in order to accept work, on the other hand."⁹¹ In effect it was a fine imposed for Saturday worship.

The Court then considered the state's interest involved. There was, of course, no question of the state's interest in providing for unemployment compensation. Only the suitability of the means of accomplishing the objective was in question. The state contended that an exemption from the requirement for Sabbatarians might dilute the unemployment fund by encouraging the "filing of fraudulent claims by unscrupulous claimants feigning religious objections to Saturday work,"⁹² and employers might be hindered in scheduling Saturday work. The Court found that the state's interest in preventing fraudulent claims was not sufficiently compelling to justify the infringement of appellant's right to the free exercise of her religion. Consequently, the state had to grant an exemption to Sabbatarians.

The Court distinguished the *Braunfeld* case by pointing out that there the Court had found that the state had a strong interest in providing for a common day of rest, that acceptable alternatives were unavailable, and that an exemption for Sabbatarians would be impracticable.

⁸⁹ 374 U.S. 398 (1963).

⁹⁰ *Id.* at 403. (The Court's quotation is from *NAACP v. Button*, 371 U.S. 415, 438 (1963).)

⁹¹ *Id.* at 404.

⁹² *Id.* at 407.

Whether *Sherbert* adds anything substantial to *Braunfeld* as a statement of constitutional standard is questionable. Perhaps it is a difference in emphasis. The distinction between direct and indirect burdens on religion, although still considered, seems to have lost some weight. More is needed to prevail over an objection of violation of free exercise than the assertion of the secular nature of the state's goal and a showing that a regulation is rationally related to some colorable state interest.⁹³ Whether the state's interest is sufficiently compelling to justify legislation which limits the exercise of religion will depend upon the resulting restriction on the free exercise of religion. The availability of acceptable alternative means of achieving the state's goal which do not burden religion must be weighed on the side of the individual's right to be free to practice his religion.

In applying the *Braunfeld-Sherbert* interpretation of the free exercise clause to fluoridation legislation, it is necessary to evaluate the nature and extent of the state's interest; the nature and extent of the resulting restriction on the free exercise of religion; and the availability of acceptable alternatives.

The state's interest in the fluoridation of the public water supply cannot seriously be questioned. The health of the population, and especially that of children, has never been supposed to be beyond the legitimate interests of the state. Mr. Justice Rutledge, speaking for the Court in *Prince v. Massachusetts* said,

A democratic society rests, for its continuance, upon the healthy, well-rounded growth of young people into full maturity as citizens, with all that implies. It may secure this against impeding restraints and dangers within a broad range of selection. . . . It is too late now to doubt that legislation appropriately designed to reach such evils is within the state's police power, whether against the parent's claim to control of the child or one that religious scruples dictate contrary action.⁹⁴

Tooth decay, although not contagious, is an incurable, irreversible and chronic disease of grave public concern.

Today, the problem is the conquest of chronic disease rather than contagious disease. Health authorities have the same responsibility for effecting the control of chronic disease with the best available scientific knowledge that they have long had for communicable disease.⁹⁵

The economic burden of poor dental health is not limited to the individual or the family. It falls as well, for example, on public health facilities that provide dental health services, welfare departments

⁹³ *Id.* at 406.

⁹⁴ 321 U.S. 158, 168-69 (1944).

⁹⁵ Roemer, *supra* note 7, at 1345.

and even the military forces. In addition to the cost factor, the available dental manpower cannot provide for more than half the present dental needs.

There is no question then that the state has a compelling interest in the prevention of dental caries. "This is particularly true in this day and age of increasing state concern with public welfare legislation."⁹⁶

Inasmuch as *Sherbert* requires a balancing of the state's interest and the individual's religious interest, it follows that the nature of the religious claim and the extent of the burden must be evaluated. In the context of the present problem, how essential to the claimant's practice of his religion is the objection to the ingestion of fluoridated water? Given the claimant's good faith, courts accept the individual's characterization of his conduct or abstention as religious. Nonetheless, to determine the extent to which a government regulation burdens religion, the essentiality of the religious principle to the practice of his religion must be evaluated. This evaluation must be made in view of the factual context which gives rise to the claim of religious infringement.

Some are conscientiously opposed upon religious grounds to the use of medication in the treatment of disease. Their religion teaches them to seek the cure of disease in the power of God. They object to the fluoridation of public drinking water because, in their view, fluoridation is mass medication. For their own purposes, they are certainly free to determine what constitutes medication. Are they equally free, however, to define medication if their definition substantially affects the rights of others? May a community be denied the benefits to be derived from the fluoridation of its water supplies by one group's concept of what constitutes medication? And what if their concept of fluoridation as it relates to medication is medically and scientifically untenable? Medication is, of course, the application of a medical substance for the treatment or cure of disease. However, dental caries is incurable and nonreversible.⁹⁷ Once the dental enamel

⁹⁶ *Braunfeld v. Brown*, 366 U.S. 599, 607 (1961).

⁹⁷ *Easlick, An Appraisal of Objections to Fluoridation*, 65 J. AM. DENTAL ASS'N 124, 128 (1962), quoting a statement of H.T. Dean, *Hearings on H.R. 2341 Before the House Comm. on Interstate & Foreign Commerce*, 83rd Cong., 2d Sess. 273-76 (1954); "[A]ny assumption that fluoridation is mass medication reveals a lack of knowledge of the process of caries and its associated pathology. Medication implies the application of a medicinal substance or agent for the treatment or cure of a disease—the application of remedies. Fluoridation is not a treatment or cure for dental caries. Dental caries produces a nonhealing lesion; dental enamel once injured never repairs itself, with or without medication. Fluorine simply prevents the decay from developing. In short, fluoridation of public water supplies stimulates a purely natural phenomenon—a prophylaxis which nature has clearly outlined in those communities fortunate enough to have about 1.0 ppm of fluorine naturally present in the public supply of water, such as, Denver, Colo., Aurora, Ill., and others."

of teeth has been injured it can never be repaired, with or without medication. Thus fluorides have no curative effect upon existing caries. Consequently, from the medical and scientific standpoint fluoridation, not being a treatment of disease, is not medication. And, although the avoidance of medication may be an essential requirement to the practice of a particular religion, fluoridated water does not offend that requirement.

Again, it may be emphasized that no attempt is made here to evaluate the verity of religious doctrine but rather to evaluate the extent to which a particular governmental regulation burdens or restricts the free exercise of religion. The essentiality of a practice to the exercise of a religion must be determined in order to evaluate the alleged burden. Consequently, it may be asked, how essential is the abstention from fluoridated water to the practice of a religion which teaches the rejection of medication in view of the fact that practically all foods and natural water supplies contain fluoride?⁹⁸ Apparently, no religious objection is advanced against the ingestion of fluoride found in natural water supplies or in food. It would appear then, that there is no religious objection to fluoride as such, but rather fluoride as medication. If there is no religious objection to fluoride in milk or eggs because these foods are not ingested as a medication, it must follow that there cannot be a serious religious objection to fluoride in water. The fluoride in water can be equally rejected as a medication. It would appear then that the abstention from the ingestion of fluoridated water is not essential to the practice of a religion which rejects medication.

In practical terms, the burden on religion comes down to this: fluoridation imposes a condition on the enjoyment of services furnished by a public facility; those who want to use water from public sources must be willing to use fluoridated water and those who are unwilling to do so for religious reasons must turn to private sources. As in *Braunfeld*, the resulting burden on religion is only indirect. Fluoridation makes the practice of their religion more expensive. Un-

⁹⁸ McClure, PUBLIC HEALTH SERVICE, U.S. DEPT. OF HEALTH, EDUCATION, AND WELFARE, FLUORINE IN FOODS, FLUORIDE DRINKING WATERS, 287-90 (1962). Approximately 7,000,000 people live in areas where the natural fluoride content of the water is at optimum or above. Dunning, *supra* note 2, at 3. Of this number, about 1,000,000 are exposed to fluoridated water which is seriously above optimum. Some communities, such as Bartlett, Texas, are actually defluoridating their water. *Id.* at 7. Los Angeles and Houston have water supplies with a natural fluoride content not far from optimum. *Id.* at 10. See also PUBLIC HEALTH SERVICE, U.S. DEPT. OF HEALTH, EDUCATION, AND WELFARE: NATURAL FLUORIDE CONTENT OF COMMUNAL WATER SUPPLIES IN THE UNITED STATES (1959). Fluoride is found in all foods in various degrees of concentration. For example, whole hen's egg, 1.18 ppm; fresh carrots, 1.30 ppm; and even Cream of Wheat, 0.55 ppm. McClure, PUBLIC HEALTH SERVICE U.S. DEPT. OF HEALTH, EDUCATION, AND WELFARE, FLUORINE IN FOODS, FLUORIDE DRINKING WATERS, 287-89 (1962).

like *Sherbert*, however, an exemption for religious objectors is impossible.

Finally, the availability of alternatives must be considered. Several alternatives to fluoridation of the water supply have been suggested and some have been extensively researched. Among these alternatives are the topical application of fluoride directly to the teeth, fluoride tablets, and the fluoridation of salt, bread, and milk.

The topical application of fluoride directly to teeth has received extensive study. This process takes approximately one hour, with the application of the fluoride solution to the teeth taking three minutes. The process must be repeated four times at intervals of about a week. All of the above constitutes one series. The topical application procedure requires four series, at ages 3, 7, 10, and 13.⁹⁹ Where followed, this procedure has resulted in approximately a 40 percent reduction in dental caries.¹⁰⁰ A 60 to 70 percent reduction is expected from the fluoridation of drinking water.

The topical application method is vastly inferior to water fluoridation for several reasons. It is time consuming and expensive. This method requires the conscientious cooperation of parents. Unfortunately the lack of dental personnel precludes widespread success even if parents were willing to cooperate. Consequently there is no way to insure the success of this method.¹⁰¹

The use of fluoride tablets is another method that has been suggested. Fluoride tablets have been used in two ways—taken as pills or dissolved in drinking water. A recent study has indicated that fluoride ingested in the form of a tablet is rapidly absorbed and largely excreted within the first three hours with very little fluoride metabolically available during the remainder of a 24 hour period. Consequently, fluoride tablets are deemed unacceptable as a substitute for fluoridated community water supplies.¹⁰² The major benefits derived from the use of fluorides occur during the first fourteen years of life during which time the deciduous and permanent teeth are being formed. This means that tablets would have to be taken daily for this extended period of time. Tablet taking is apt to eventually, if not initially, lose its appeal to both children and

⁹⁹ F. MAIER, *MANUAL OF WATER FLUORIDATION PRACTICE* 45 (1963).

¹⁰⁰ *Id.*

¹⁰¹ *Id.*; Sognnaes, *Relative Merits of Various Fluoridation Vehicles*, in *FLUORIDATION AS A PUBLIC HEALTH MEASURE* 188-89 (J. Shaw ed. 1954); Dunning, *supra* note 2, at 10.

¹⁰² Stookey and Muhler, *Laboratory Studies Concerning Fluoride Metabolism Using Two Different Types of Fluoride Tablets*, *J. DENTISTRY FOR CHILDREN*, Mar. 1966, at 100. The delayed-release type capsule more nearly duplicates the pattern of fluoride metabolism from the use of fluoridated water. *Id.*

their parents.¹⁰³ Concentrated fluoride preparations, moreover, would have to be varied from area to area depending upon the fluoride level of the water supply. Such concentrates in the form of tablets also constitute an accident hazard. The cost per person of tablets has been estimated at \$3.65 per year. This does not compare favorably with the cost of fluoridating the water supply which is from 5 to 15 cents per person per year.¹⁰⁴

Fluorides in salt, bread and milk have also been suggested as alternatives to fluoridation of water supplies. The problems here seem insurmountable, there being no proof that fluorides incorporated in these items would be effective.¹⁰⁵ There is more variation in the consumption of these foods than there is in the consumption of water, making control of the effective dosage very difficult. The addition of fluoride to milk would require extremely close supervision because of its natural fluoride content. This problem would be greatly magnified by the numerous milk sources, especially in large population areas.¹⁰⁶ There is the additional fact that fluoridated milk would be quite costly.¹⁰⁷

The above discussion of alternatives of fluoridation does not purport to be exhaustive. Other methods have been suggested, such as bottled water, tooth paste, mouthwash and chewing gum. Unfortunately, they all share in varying degrees the inadequacies discussed above.

It is apparent that there is no lack of suggested alternatives to accomplish a reduction in dental caries. As a private approach to the problem, however, they are expensive, inefficient and less effective. Because of the increased expense which is involved the alternative methods would not bring the benefits of fluoride to the children of lower income families whose level of general health is usually lower. As a public health measure, the alternative methods must

¹⁰³ "In one study of a well publicized program in Hawaii free distribution of fluoride pills was arranged, and 90 percent of the parents of children of appropriate age were using the tablets during the early period of the study. Four years later approximately 12 percent of the parents were continuing to feed tablets to their children." Dunning, *supra* note 2, at 9.

¹⁰⁴ *Id.* at 7-8.

¹⁰⁵ F. MAIER, *supra* note 99 at 47.

¹⁰⁶ Wilkowske, *Fluoridation of Milk?*, 17 J. OF MILK AND FOOD TECHNOLOGY 107-08 (1954) (editorial). The fluoride content of water can be analyzed by a relatively simple procedure requiring approximately one hour. The analyses of milk, on the other hand, necessitates evaporation, ashing, distillation of the fluoride and trituration requiring up to 24 hours. Cox, *Is There a Case Against Fluoridation?*, 35 J. MO. DENTAL ASS'N 8 (1955).

¹⁰⁷ The cost of fluoridated milk for school children in New York City amounted to \$2.14 per child as compared to 10 cents for fluoridated water. F. MAIER, *supra* note 99, at 47.

rely too heavily upon active individual participation and cooperation, making them very inefficient. Centralized supervision and control which is required to assure uniformity and safety is possible only through the fluoridation of water supplies. Moreover, the alternatives to fluoridation are inadequate as a public health measure because they cannot bring the benefits of fluoride to a sufficiently large number of children. Fluoridation of the communal water supply is the only acceptable public health approach to the problem of dental caries.

It has been said "that no liberty is more essential to the continued vitality of the free society which our Constitution guarantees than is the religious liberty protected by the Free Exercise Clause explicit in the First Amendment and imbedded in the Fourteenth."¹⁰⁸ At the same time, it has never been said that religious liberty is absolute. Religiously motivated conduct is not totally free from regulation. The protection afforded by the Constitution is against "undue" infringement by governmental action. The question in every free exercise case then is whether the challenged regulation unduly infringes one's right of religious liberty. It is apparent that in the case of fluoridation, the infringement upon religion is minimal. Supreme Court decisions dealing with the free exercise clause, and State court decisions dealing with fluoridation, compel the conclusion that fluoridation legislation is not violative of religious liberty.

¹⁰⁸ *Sherbert v. Verner*, 374 U.S. 398, 413 (1963) (concurring opinion).