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THE UNITED STATES SUPREME COURT AND RATE REGULATION.

Of all the great questions which confront the highest federal appellate court, there is none in such a nebulous condition as the valuation of public utilities for the purpose of regulating rates. The law is not only difficult to apply, but also difficult to state. It is of so recent an origin that it can hardly be said that many points are well settled. The words of Mr. Justice Brewer are just as applicable today as when he stated them:[1]

"Few cases are more difficult or perplexing than those which involve an inquiry whether the rates prescribed by a state legislature for the carriage of passengers and freight are unreasonable. And yet this difficulty affords no excuse for a failure to examine and solve the question involved."

The purpose of this article is to select from the cases which have been before the United States Supreme Court questions which are the most interesting. The reason that the inquiry is confined to the views of the Supreme Court is that nearly all questions which arise in rate regulation can be made federal questions. This being the case, it is more important to determine how the Supreme Court of the United States view these

[1] Chicago, *etc.*, R. R. v. Tompkins, 176 U. S. 113 (1899).

questions, than the many state courts. This will be by no means a comprehensive study of the cases, and many points will, no doubt, be suggested in the mind of the reader which are not covered in this article.

WHERE IS THE POWER TO REGULATE RATES TO BE CLASSED?

It is not merely an academic question to classify the power to regulate rates, but rather a real substantial question. If this power is in its fundamental characteristics a branch of the power of eminent domain, then all the rules of eminent domain relative to the determination of what is property, and what is the proper method of valuing that property are necessarily pertinent in the valuation of property for the purpose of rate regulation. But on the other hand, if it is essentially a part of the police power, then the rules of eminent domain are not so pertinent.

The power of every state has been classified by one writer[2] into six classes: power of taxation; power of levying special assessments; power of requiring personal services; power of destruction from necessity; power of eminent domain; and police power.

It is obvious that the power to regulate rates cannot be classed under the power of taxation, for that is a power to impose a pecuniary burden for the support of the government,[3] while the former is a power to establish an equitable rate for a service which is affected by a public interest. Nor can this power be classed under the powers of levying special assessments, of requiring personal services, or of destruction from necessity. By this process of elimination, the only two powers remaining are the power of eminent domain, and the police power.

One argument which may be advanced in support of the contention that the Supreme Court of the United States consider the power to regulate rates as part of the power of eminent

[2] Nichols: The Power of Eminent Domain (1909), §§ 1-18.
[3] U. S. v. R. R. Co., 17 Wall. 322 (U. S. 1872)

domain is the frequent references made to that power. Only a few of them need be cited here. In *Reagan* v. *Farmers' Loan and Trust Company*[4] where the rates of a railroad had been regulated by a Texas commission, and the question was whether they were confiscatory, Mr. Justice Brewer made the argument that if the state were to take over these railroads under its power of eminent domain the Constitution would require that the corporation be paid just compensation. He then asks, "Is there any less a departure from the obligations of justice to seek to take not the title but the use for public benefit . . . ?"[5]

In *Willcox* v. *Consolidated Gas Company*[6] where the rates of a gas company had been regulated, the Court cited as an authority for the proposition that a franchise was property and had a value which must be considered in the valuation of the company's property for the purpose of rate regulation, *Monongahela Company* v. *United States*[7] which was a taking by eminent domain.[8] And in *German Alliance Insurance Company* v. *Kansas*,[9] Mr. Justice Lamar in speaking of whether a business was affected by a public use said, if it were not it could not be taken, "whether the taking be of the fee for a lump sum assessed in condemnation proceedings, or whether the use be taken by rate regulation, which is but another method of exercising the same power."

But it is submitted that the power to regulate rates is not a part of the power of eminent domain. It is not, as it has been

[4] 154 U. S. 362, 410 (1893).

[5] Quoted with approval in Covington, *etc.*, Turnpike Co. v. Sanford, 164 U. S. 578, 594 (1896).

[6] 212 U. S. 19, 44 (1908).

[7] 148 U. S. 312 (1893). In Ames v. Rwy., 64 Fed. 165, 177 (1894), Brewer, J., used the analogy to eminent domain, and this was followed by Judge Ross in San Diego Land Co. v. National City, 74 Fed. 79, 83 (1896). (1896).

[8] Eminent domain cases were cited as authorities in valuation questions in the following rate regulation cases: Chicago, *etc.*, R. R. v. Tompkins, *supra*, note 1; Minn. Rate Case, 230 U. S. 352, 451 (1913). "There cannot well be one basis for condemnation, and another for determining whether regulations illegal because confiscatory," W. C. Bailey, Esq.: The Legal Basis for Rate Regulation, 11 COL. L. REV. 534 (1911).

[9] 233 U. S. 389, 429 (1914) This is taken from the dissenting opinion.

termed, "a *pro tanto* condemnation."[10] In order to be a "taking," a something must exist and be property of value. The public utility never had a property right to charge rates which exceeded the legal rate, which has been termed the reasonable rate; it was only legally entitled to this reasonable rate.[11] If that part of the rate which the utility was not legally entitled to is taken away from it, there can be no taking of property without due process of law. When the legislature either directly or indirectly establishes the valid maximum rates for a public service corporation nothing has been taken, for nothing which had a legal value has been taken; the utility still can charge the legal rate.[12] If the power to regulate rates were essentially like the power of eminent domain, then when the legislature reduced the rates to a legal maximum, compensation would have to be made to the utility.

It is fundamental law that in eminent domain proceedings the owner of the property is entitled to a notice and hearing upon the question of the value of his property which is to be taken.[13] Yet in the valuation of property for the purpose of rate regulation, there has recently appeared a doubt in the minds of the Court whether a notice and hearing is essential. The cases will not be discussed here, but are cited only to show that the Supreme Court could not have classified the two powers under the one head.[14] In *Omaha* v. *Omaha Water Company*,[15] where the valuation of a water plant was for the purpose of public purchase under the terms of the ordinance which authorized the construction, the Court drew a distinction betwen such cases and those where the valuation was for the purpose of rate regula-

[10] Judge Hough in Consolidated Gas Co. v. New York, 157 Fed. 849 (1907).

[11] Munn v. Ill., 94 U. S. 113 (1876).

[12] Of course the maximum rates established must allow the proper return, or else there is a confiscation.

[13] *Supra*, note 2, § 298.

[14] Home Telephone Co. v. Los Angeles, 211 U. S. 265, 278 (1908). See also San Diego Land Co. v. National City, 154 U. S. 362 (1893), where a slight doubt is also cast upon the necessity of the provisions. A full discussion of this point will follow.

[15] 218 U. S. 180, 203 (1909).

tion. Again while the power of eminent domain cannot be bargained away,[16] nevertheless the power to regulate the rates of a public service corporation can.[17]

If the extended definition of eminent domain which was urged by Judge Cooley be accepted, then it could well be argued that rate regulation was a division of eminent domain. He defines eminent domain as

"the rightful authority, which exists in every sovereignty, to control and regulate those rights of a public nature which pertain to its citizens in common, and to appropriate and control individual property for the public benefit, as the public safety, necessity, convenience, or welfare may demand."[18]

Although it has received the sanction of writers, and of some courts in their *dicta,* it has never been accepted by the courts in general and has been pointed out by one writer as objectionable.[19]

The only power now remaining is the police power. No one can read the rate regulation cases from the Granger Cases[20] down to the present day without being impressed with the idea that the Court base the power to regulate the rates of a public utility on the police power of the state.[21] That is, the Court have justified the power of the state to do this on the ground that it was a police measure. That cannot now be doubted, but what can be doubted, and what is doubted, is whether the Court have treated this power as a part of the so-called police

[16] Long Island Water Supply Co. v. Brooklyn, 168 U. S. 685 (1897); Nichols: The Power of Eminent Domain (1909), § 305.

[17] *Infra,* note 27.

[18] Cooley: Const. Lims., 524.

[19] Lewis: Eminent Domain (1909), vol. I, § 2.

[20] 94 U. S. 113, *et seq.* (1876).

[21] The power of the federal government to regulate rates cannot be based on the police power, as it is understood to exist in the states, for it has no such power. It is based upon the power to regulate foreign and interstate commerce, although it may be considered as a part of that so-called police power which has been attached to the express power of regulating foreign and interstate commerce. See the Lottery Case, 188 U. S. 321 (1903); Hipolite Egg Co. v. U. S., 220 U. S. 45 (1911), supporting the Federal Pure Food and Drug Act; Hoke v. U. S., 227 U. S. 308 (1912), supporting the White Slave Act.

power as it is generally understood. It is submitted that a study of the cases will justify the statement that the Court have not treated the power to regulate rates as a part of the power which they claimed was the reason for its existence.

One of the best statements of the nature and scope of the police power was given by Mr. Justice Brown in *Lawton* v. *Steele*.[22] He said:

"It is universally conceded to include everything essential to public safety, health and morals, and to justify destruction or abatement by summary proceedings of whatever may be regarded as public nuisances."

After thus stating the scope of this power, he gave concrete examples of its exercise:

"Under this power it has been held that the state may order the destruction of a house falling to decay or otherwise endangering the lives of passersby; the demolition of such that are in the path of conflagration; the slaughter of diseased cattle; the destruction of decayed or unwholesome food; the prohibition of wooden buildings in cities; *the regulation of railways and other means of public conveyance,* and of interment in burial grounds; the restriction of objectionable trades to localities; the compulsory vaccination of children; the confinement of insane or those afflicted with contagious disease; the restraint of vagrants, beggars and habitual drunkards; the suppression of publications and houses of ill fame; and the prohibition of gambling-houses and places where intoxicating liquors are sold."

This is a typical illustration of the way the Court have spoken of the power to regulate railways, which must also necessarily include the power to regulate all public service utilities. But if all of these belong in the same class, why are not all of them treated alike? Why can certain phases of trade be prohibited in the interest of public health and morals without one cent of compensation,[23] but the rates of a utility must not be

[22] 152 U. S. 133 (1894).

[23] Oleomargarine: Powell v. Penna., 127 U. S. 678 (1888); Plumley v. Mass., 155 U. S. 461 (1894); Hammond Packing Co. v. Montana, 233 U. S. 331 (1914). Intoxicating liquors: Mugler v. Kansas, 123 U. S. 623 (1887). Prohibition of laundry business during certain hours of the night: Barbier v. Connelly, 113 U. S. 27 (1885).

lower than will earn a non-confiscatory return?[24] The same question could be asked of all these so-called similar illustrations of the exercise of the police power, such as prohibition of wooden buildings in cities, and destruction of decayed or dangerous buildings.

The difference in the exercise of the so-called police power and the power to regulate rates can as well be pointed out, if the illustrations are confined to regulations of railroads. Why must a railroad be allowed a non-confiscatory return, if it can be compelled to construct overhead or subway crossings at its own expense?[25] And it would seem to make no difference if the railroad would be forced into bankruptcy due to its uncompensated obedience to the police power of the state in erecting these crossings. Yet it cannot be so ruined by rate regulation. Is the fact that the railroad is bankrupt less important than the method by which it is thrown into bankruptcy? Why must the schedule of rates be non-confiscatory, when a railroad can be compelled to submit to certain regulations, although by so doing it suffers a great loss?[26] If the power to regulate rates is in the same category as the power to legislate for the health, safety and morality of the people, why can the State contract the former away,[27] and not the latter?

[24] Smyth v. Ames, 169 U. S. 466 (1898); San Diego Land & Town Co. v. Jasper, 189 U. S. 439 (1903); Willcox v. Consolidated Gas Co., 212 U. S. 19 (1909); Minnesota Rate Cases, 230 U. S. 352 (1913).

[25] Cincinnati, *etc.*, R. R. v. Connersville, 218 U. S. 336 (1910) and cases cited therein. Uncompensated obedience to a regulation enacted for public safety under the police power is not a taking without due process of law, Chicago, *etc.*, Rwy. v. Ill., 200 U. S. 561 (1906). A city can even open a highway near the tracks of a railroad and compel the railroad to put in an overhead bridge, Chicago, *etc.*, Rwy. v. Minneapolis, 232 U. S. 430 (1914).

[26] A state can require certain heating apparatus to be installed in trains. N. Y., *etc.*, R. R. v. N. Y., 165 U. S. 628 (1897); that three regular passenger trains stop each way daily at any village with at least three thousand inhabitants, Lake Shore R. R. v. Ohio, 173 U. S. 286 (1899); that trains slow down in a city to a certain speed, Erb v. Morasch, 177 U. S. 584 (1900); that cattle trains maintain certain speed, Chicago, *etc.*, R. R. v. Comm., 228 U. S. 70 (1913).

[27] Detroit v. Citizen Rwy. Co., 184 U. S. 368 (1902); Vicksburgh v. Water Works, 206 U. S. 496 (1907). But the contract restricting this undoubted governmental right must be expressed in clear and unmistakable terms, and all doubts will be resolved in favor of the retention of the power. Railroad Commission Cases, 116 U. S. 307 (1886); Stanislaus County v. San Joaquin C. & I. Co., 192 U. S. 201 (1904).

When such questions are pointed out, it proves conclusively that the power to regulate rates cannot be a part of the power to legislate for the health, safety and morals of the people. The statement that the police power includes "the regulation of railways and other means of conveyance," cannot possibly include the power to regulate the rates of the railways, but only the operation of the railroad which has a direct bearing on the health and safety of the people. The very fact that the state can bargain away the power to regulate rates and cannot bargain away the power to compel roads to install safety devices and proper crossings, is an unanswerable proof that the powers are essentially different. Dr. Harrison Standish Smith was convinced of this when he wrote:[28]

"A matter of some interest is suggested by the court's assertion that immunity from rate control may be given a railroad charter. It has always been said that the fixing of rates is an exercise of the police power. Yet it is a well settled doctrine of the police power that a state cannot dispossess itself of that power—cannot contract it away. It would seem, therefore, that rate regulation is not in reality a phase of the police power, but that it stands on a different basis."

It is too late now to argue that the Court should not treat the power of rate regulation as a phase of the police power. Decision upon decision has ruled that it is and it is inconceivable that the Court would change this view. But it is at least possible so to divide the police power and classify the various phases of it, that there need be no inconsistent results. It has been pointed out by a recent writer that the Supreme Court have used the term police power not only to include that branch of legislation which is essential to the public safety, health and morals, but also have used it "in a broader sense to denote all the power of government which the states did not expressly or impliedly surrender by the adoption of the Federal Constitution, a power which has no bounds except those imposed by the Federal Constitution."[29]

[28] Publications of the American Economic Association, May, 1906, pp. 23, 24. The general police power of the city does not include power to regulate rates, Mills v. Chicago, 127 Fed. 731 (1904).

[29] Reeder: Validity of Rate Regulations (1914), 110 and notes.

If, then, the power to regulate rates is classified under this second branch of the police power, it is not so hard to answer the questions which were put forward earlier in the article. As it is not a phase of the power which legislates for the health, safety and morals of the people, but a part of an all-reaching governmental power which was not given up by the adoption of the Constitution, the state can contract it away the same as it can contract away the power to tax.[30] As this power is subject to the Fourteenth Amendment, and the power to regulate for the health, safety, and morals is not,[31] it is not hard to see why the rates cannot be lowered beyond the line of a non-confiscatory return, while grade crossings, safety devices, and full crew measures may be imposed even if they cause great loss.

The Various Theories of Valuation.

The property of any public service corporation may be valued for one of four purposes: (1) taxation, (2) accounting and capitalization, (3) public purchase, and (4) rate regulation.[1] The purpose of the valuation is the main consideration, in determining what and how much shall be included. That a franchise has value for the purpose of taxation, is not of itself a reason for giving it value for the purpose of rate regulation.[2] It is clear that the purpose of each is radically different; the former is to raise revenue, and the other is to establish an equitable rate for a service which is affected by a public interest. In view of these divergent purposes, it is essential to point out in the beginning that this article will deal only with the question of valuation for the purpose of rate regulation.

There are three theories or methods of making this valua-

[30] New Jersey v. Wilson, 7 Cranch 164 (U. S. 1812); Wright v. Georgia R. R., *etc.*, Co., 216 U. S. 420 (1910); but such an immunity from taxation or rate regulation does not accompany the property of the utility in its transfer to a purchaser, in the absence of express direction in the statute to that effect, St. Louis and San Fran. Rwy. Co., 156 U. S. 649 (1895).

[31] Barbier v. Connelly, *supra,* note 23; Mo. Pac. R. R. v. Humes, 115 U. S. 512 (1885); Atlantic Coast Line R. R. v. Goldboro, 232 U. S. 558 (1914).

[1] Whitten: Valuation of Public Service Corporations (1912), §§ 1-12.

[2] Willcox v. Consolidated Gas Co., 212 U. S. 19 (1912).

tion which are generally advocated: (1) actual cost, (2) market value as a going concern, (3) cost of reproduction, either deducting or not deducting depreciation.[3]

In short, the actual cost theory adopts the original cost of the plant plus the cost of all additions and betterments which are proper charges to the capital account and not due to replacements and renewals. The market value theory requires that a value be found equal to the sum which a ready buyer would offer to a ready seller for a going business concern. The third theory demands the valuation of a reproduced plant which is sufficient to furnish an adequate present day service, with or without the proper allowance for depreciation due to use and age. It is evident that the cost of reproduction may mean: (a) the cost of a substantially identical reproduction of the existing plant; or (b) the cost of a substitute plant of the most modern, approved design, capable of performing the same service as the existing plant.[4]

In this discussion no argument will be made in advocacy of any particular theory. It is immaterial which will bring the greatest blessing to all concerned. All that is hoped to be done, by the review of the cases, is to point out how each theory was received by the Supreme Court and the growing tendency of the Court to adopt one of the three theories as the *basis* of all rate making valuations.

Although the Supreme Court have been considering this problem since 1885, yet they are not prepared to lay down any strict formula to guide the regulating bodies. As was said in a recent case, "Each case must rest upon its special facts."[5] Therefore it seems most helpful to study the attitude of the Supreme Court by a historical review of the cases.

Apparently the first cases where a theory of valuation was

[3] Whitten: Valuation of Public Service Corporations (1912), p. 40. Wyman: Public Service Corporations (1911), §§ 1080-1112, advocates four theories; (1) original cost, which was the common law basis; (2) outstanding capitalization; (3) present value; (4) cost of reproduction; and Pond: Public Utilities (1913) § 437, suggests the same four theories.

[4] Whitten, §§ 73-75.

[5] Hughes, J., in Minn. Rate Cases, 230 U. S. 352, 434 (1912).

considered were the Railroad Commission Cases.[6] Here a trustee under a mortgage brought a bill in the federal court to enjoin the commission of Mississippi from regulating the intrastate rates of the railroad. The commission was authorized and directed to "revise such tariffs as to allow a fair and just return on the value of such railroad." The theory of the bill was that this provision, along with others, impaired the obligation of a contract made by the state with the road by a charter provision empowering its directors to regulate the tolls. The bill was dismissed by the majority of the Court on the ground that the charter provision was not a contract that the directors alone should fix the tolls, and therefore no contract had been impaired by the statute authorizing regulation by the commission. But there appears in the dissenting opinions of Mr. Justice Harlan and Mr. Justice Field, the thought that the true theory of valuation is actual cost.

It will be noticed that the act did not provide any theory of valuation, but only required a "fair and just return on the value of such railroad." This, according to Mr. Justice Harlan, violated the contract of the state with the railroad, for the commissioners were "required to fix rates, according to the value of the property, without any reference to what it originally cost, or what it had cost to maintain it in fit condition for public use," while the proper method would be to fix the rates according to the actual cost of the plant. The directors of the road would have fixed the rates according to the actual cost and a provision which makes any other lesser value the basis, violates this contract.

And Mr. Justice Field dissented for the same reason, *i.e.*,

[6] 116 U. S. 307 (1885). It is true that in Peik v. Chicago, *etc.*, Rwy. Co., 94 U. S. 164, 176 (1876), Waite, C. J., did state: "In Munn v. Ill., *supra*, p. 113 and Chicago, Burlington & Quincy Railroad Co. v. Iowa, *supra*, p. 155, we did decide that the state may limit the amount of charges by railroad companies for rates and freight, unless restrained by some contract in the charter, even though their income may have been pledged as security for the payment of obligations incurred upon the faith of the charter." This at first would lead one to think that actual cost as represented by stocks and bonds had no importance whatever. But it will be recalled that at this period the thought was that the rates set by the regulating body could not be reviewed by the Court, and hence the Court had no reference to any theory of valuation.

that the act required the commissioners to value on the theory of reproduction. He said:

"But the act of Mississippi allows only such compensation as parties appointed by the legislature . . .. shall determine to be a fair return on the *value* of the road, and its appurtenances, though that may be much less than the original cost. Within the last few years, such have been the improvements in machinery, and such the decline in the cost of materials, that it is probably less expensive by one-third to build and equip the road now than it was when the constructors completed it. Does anybody believe that they would have undertaken the work or proceeded with it, had they been informed that, notwithstanding their vast outlays, they should only be allowed, when it was finished, to receive a fair return upon its value, however much less than cost that might be?"

The next case is the ambiguous case of *Dow* v. *Beidelman.*[7] Early in April, 1887, the Arkansas legislature enacted that all railroads in the state over seventy miles in length could only charge a maximum of three cents per mile for intrastate passenger transportation. Later in the same month the railroad property in question was sold under a mortgage foreclosure and a new company organized. It was this last company which complained that the statute confiscated its property. The original cost of the road was four million dollars, with a mortgage of two million eighty-five thousand dollars. It was argued, that under the three cent tariff the net revenue would pay less than one-half per cent. of the original cost, and only a little over two per cent. on its bonded indebtedness. This contention was clearly in line with the arguments of Mr. Justice Harlan and Mr. Justice Field. But it was rejected by the Court as not the proper evidence, who intimated that the proper basis of valuation was market value as represented by the price paid at the sale under the foreclosure, only a month or so before. Mr. Justice Gray said:

"It certainly cannot be presumed that the price paid at the sale under the decree of foreclosure equalled the original cost of the road, or the amount of the outstanding debt. Without any proof of

[7] 49 Ark. 325 (1887); 125 U. S. 680, 690 (1887). It might well be argued that this case stood for no rule as to valuation, because the Court yet doubted whether they had the right to review the maximum rates fixed by the legislature.

the sum invested by the reorganized corporation or its trustees, the court has no means . . . of determining that the rate of three cents a mile fixed by the legislature is unreasonable."

It might be contended that the Court regarded the actual cost in this case to be represented by what the last company actually invested in the road, and that the market value theory was not intended to be used as the basic element. Yet this must give way to what was said in a later case,[8] that this case decided that "price is evidence, we might say, more important evidence than original cost."

If the Court in this case did regard the market value theory as the proper test, they soon abandoned that idea and never again made it the basis of a valuation. In *Reagan* v. *Farmers' Loan and Trust Company*,[9] Mr. Justice Brewer said:

"But we do hold that a general averment in a bill that the tariff as established is unjust and unreasonable, is supported by the admitted facts that the road cost far more than the amount of stocks and bonds outstanding; that such stock and bonds represent money invested in its construction. . . . "

Here it will be noticed that there was no "watered stock," but rather the actual cost was greater than the amount of stock. The thought here is that the actual cost of the road is better evidence of value than the amount of the outstanding stocks and bonds. This certainly smacks of the actual cost theory, especially when it was conceded that the plant could be reproduced for about fifteen million dollars less than the actual cost.

But with the advent of the leading case of *Smyth* v. *Ames*,[10] the Supreme Court appear to have dropped the actual cost theory

[8] San Diego Land Co. v. Jasper, 189 U. S. 443 (1902).

[9] 154 U. S. 362, 412 (May 26, 1884). Mr. Whitten cites this case for market value theory, *supra*, note 1, § 60. This quotation is especially interesting in the light of what Mr. Justice Brewer said in Ames v. Rwy., 64 Fed. 165, 177 (March 12, 1894): "If it be said that the rates must be such as to secure the owner a reasonable per cent. on the money invested, it will be remembered that many things have happened to make the investment far in excess of the actual value of the property-injudicious contracts, poor engineering, unusually high cost of materials, rascality on the part of those engaged in the construction or management of the property." Covington, *etc.*, Turnpike Co. v. Sandford, 164 U. S. 578 (1896), seems to be based on the principle that actual cost is the basic element.

[10] 169 U. S. 466, 546 (1898).

as the basic element. It is true that in the opinions of both the Circuit Court and the Supreme Court, language can be found which will tend toward a consideration of the actual cost, yet the trend of both opinions is toward the present value, whether it be more or less than actual cost. Mr. Justice Harlan said:

"We hold, however, that the basis of all calculations as to the reasonableness of the rates to be charged by a corporation maintaining a highway under legislative sanction, must be the fair value of the property being used by it for the convenience of the public."

This is to be the *basic element*—the fair value at the present day of the property used in the public service. But so that the commissioners may not run wild with this theory, it is to be checked up by the actual cost of the plant and other considerations, for in continuing he said:

"And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stocks, the present as compared with the original cost of construction, the probable earning capacity of the property under the particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case."

And in order that he would not miss any fact in the consideration, he added:

"We do not say that there may not be other matters to be regarded in estimating the value of the property. What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that no more be extracted from it for the use of a public highway than the services rendered by it are reasonably worth."

Admitting that the company is entitled to have its property appraised at its present value, it still leaves open the question which of the two standards is to be adopted to determine this value, the market value theory, or the reproduction, with or without depreciation, value theory.

If the opinion in the above case is examined for its bearing on this question, the reproduction theory will be found to be underlying its thought. Not only does Mr. Justice Harlan speak

of the present cost of construction as contrasted with the original cost, but he also, with much satisfaction, notices and comments, on the fact that his own finding that the proposed rates are unjustifiable is supported by the Board of Transportation for Nebraska, who ascertained the value "not by taking the cost of construction and equipments, nor the amount of the stocks and bonds issued per mile, but by making . . . computations upon the basis of what it would cost to duplicate the property at the present time."[11]

In answer to the railroads' contention that to constitute due process of law the rate must be such as will give a reasonable return on the actual cost as represented by *all* the outstanding indebtedness and the capital stock, he said:[12]

"It is unsound in that it practically excludes from consideration the fair value of the property used. . . . The apparent value of the property and franchises used by the corporation, as represented by its stocks and bonds and obligations, is not alone to be considered when determining the rates that may be reasonably charged."

This same thought was taken over by the same Justice in *San Diego Land Company* v. *National City*.[13] In answer to the argument that the basis of valuation should be the actual cost of the plant, he said:

"The basis of calculation suggested by the appellant, is, however, defective in not requiring the real value of the property and the fair value in themselves of the service renderd to be taken into consideration. What the company is entitled to is a fair return upon the reasonable value of the property at the time it is being used for the public. The property may have cost more than it ought to have cost, and its outstanding bonds for money borrowed and which went into the plant, may be in excess of the real value of the property. So that it cannot be said that the amount of such bonds should, in every case, control the question of rates, although it may be an element in the inquiry as to what is, all the circumstances considered, just to both the company and the public."

[11] *Ibid.*, page 549.

[12] *Ibid.*, page 544.

[13] 174 U. S. 739, 757 (1898). The theory of the lower court as represented in 74 Fed. 79 (1896), was the reproduction value. After commenting on the many considerations which must be taken into account, he added (p. 83): "In my judgment it is the actual value of the property at the time the rates are to be fixed that should form the basis. . . ."

This is proof sufficient to convince one that at this time the proper basic theory was considered the reproduction theory. The allusions to the actual cost, stocks and bonds, are only brought in to check up the result. This theory was still adhered to in *Chicago, Milwaukee, etc., Railway* v. *Tompkins.*[14] In this case District Judge Carland arrived at the present value upon the reproduction theory. As his valuation was accepted by the Supreme Court as correct, although the case was reversed on other grounds, it is well to quote from his opinion:[15]

"There is testimony as to the original cost of rolling stock bought years ago; and there is the estimated cost of a good many articles of property, by the officers of the company, but in no case does any witness swear to the present actual value of any piece of property. . . . But the court has carefully examined the testimony introduced in regard to the value of the property in question . . . and is unable to find that the present fair value . . . used for railroad purposes, is to exceed $10,000,000. It is true that the record shows that the property is bonded and mortgaged for an amount largely in excess of this sum,[16] but the amount of a mortgage upon property is no evidence of its value, and, therefore, is not worthy of consideration.[17] Neither is the fact that a railroad company bought engines at a certain price ten or fifteen years ago, any binding evidence that the engines are now worth a dollar, in absence of any testimony as to where they have been used, how they have been kept, and what their present condition is."

The same method of valuation was approved by Mr. Justice Brewer in *Cotting* v. *Kansas City Stock Yards Company,*[18] although the decision of the lower court, containing the theory, was overuled upon other grounds; and it was also approved in *Minneapolis and St. Paul Railroad Company* v. *Minnesota.*[19] In this case the railroad refused to adopt a joint rate fixed by

[14] 176 U. S. 167 (1899).

[15] 90 Fed. 363, 369 (1898).

[16] $19,000,000.

[17] This appears to answer Mr. Justice Brewer's question in Ames v. Rwy., 64 Fed. 179: "Or, to put a case in a little stronger light, suppose the promoter of the enterprise had been some private citizen, who had advanced his $16,000 a mile as a second lien, and that the road could today be constructed for only $16,000 a mile. Would it be reasonable and just to so reduce the rates as to simply pay to the holder of the first lien reasonable interest, and leave him without any recompense for his investment?"

[18] 183 U. S. 79, 91, 92 (1901).

[19] 186 U. S. 257 (1902).

the commission. A mandamus was asked for, and one of the grounds of defense was that the rates were confiscatory. In sustaining the issuance of the writ the Supreme Court of Minnesota held [20] that the railroad had failed in its proof, in that it offered evidence of cost of construction, repairs, equipment, and additions, but not a particle of proof as to the present value or cost of reproduction. This, said the court, was the theory announced in *Dow* v. *Beidelman,*[21] *Smyth* v. *Ames,*[22] *and Railroad* v. *Tompkins.*[23] It is well to quote what the court said by way of conclusion:[24]

"It is evident that there was a lack of proof as to the present, as compared with the original, cost of construction, unless as urged by counsel, we assume that either the amount of the stock and bonds outstanding or the construction account represent it. We decline to act upon this assumption, and we do not regard the authority cited (*Ames* v. *Union Pac. Ry. Co.,* 64 Fed. 177) as so holding."

This language is too strong to be passed without a comment by the Supreme Court of the United States unless it clearly represented their views. When the Supreme Court affirmed this decision, it is maintained that they approved the theory upon which the lower court proceeded. If they did not think the cost of reproduction was the true theory, surely they would not have affirmed the conclusions of the Minnesota court without some expression, especially when the Court had expressly said that the cost of reproduction was the theory advanced in several of their former decisions.[25]

The next case which throws light upon this subject is *San*

[20] 80 Minn. 191, 204, 205 (1900).

[21] *Supra,* note 7.

[22] *Supra,* note 10.

[23] *Supra,* note 14.

[24] 80 Minn. 205 (1900).

[25] We are not unmindful that on page 268 (186 U. S.), Mr. Justice Brewer did state: "Each case must be determined by its own consideration and while the rule stated in Smyth v. Ames is undoubtedly sound as a general proposition that railways are entitled to earn a fair return upon the capital invested, it might not justify them in charging an exorbitant mileage in order to pay operating expenses, if the condition of the country did not permit it." But we still maintain that unless the theory of the lower court had represented the view of the Supreme Court that the judgment would never have been affirmed without some comment other than the one quoted.

Diego Land and Town Company v. *Jasper et al.*[26] Mr. Justice Harlan ruled that it is no longer an open question, but that the Constitution affords a fair return only upon the reproduction value of the plant.[27] He added:

"That is decided, and decided as against the contention that you are to take the actual cost of the plant, annual depreciation, *etc.*, and allow a fair profit on that footing over and above expenses. . . . Yet the only evidence in favor of a higher value in the present case, is the original cost of the work, seemingly inflated by improper charges to that account and by injudicious expenditures (being the cost to another company which sold out on foreclosure to the appellant), coupled with a recurrence to testimony as to the rapid depreciation of the pipes. In this way the appellant makes the value over a million dollars." [28]

In this case it was expressly ruled [29] that neither the Constitution nor justice demanded a valuation on all of the utility's property, if only part of it was at the present day necessary in the business. If the actual cost of the plant had been the basic theory, surely the Court would have allowed the value of all the property which was bought for the public service, although not necessary for it. Upon no other than the reproduction theory can the value of the property not actually needed be discarded.

The death knell of the actual cost theory was sounded by Mr. Justice Peckham in *Stanislaus County* v. *San Joaquin and King's River Canal and Irrigation Company.*[30] After approving the prior decisions which sustained the reproduction value theory, he said:

"The actual cost may have been too great. Mistakes of construction, even though honest, may have been made, which necessarily enhanced the cost; more property may have been acquired than necessary or needful for the purposes intended. Other circumstances might exist which show the original rates much too large for fair or reasonable compensation at the present time. Notwithstanding such facts, are the shareholders in the company to be for-

[26] 189 U. S. 439 (1903).

[27] For this he cited San Diego Co. v. National City, *supra*, note 13.

[28] Under the reproduction theory the board estimated the present value at $350,000.00.

[29] P. 446.

[30] 192 U. S. 201, 214, 215 (1904).

ever entitled to eighteen per cent. upon this cost, and does a reduction in amount . . . take away property in violation of the provisions of the Federal Constitution? We think not."

The act [31] under which this valuation was made, after providing that the supervisors should value the property "actually used or useful" in the appropriation of water, provided that they "may likewise take into estimation" all other facts and circumstances "which will make the value just to both." In commenting upon this, Mr. Justice Peckham said:

"To take the amount actually invested 'into estimation' does not mean necessarily that such amount is to control the decision of the question of rates. Other language would have been employed to express that thought."

Does not this indicate that the Supreme Court were so convinced of their position, that they did not want any other suggestion to sweep it aside?

It is true that in these California cases [32] the valuation was based upon the statutes which provided that the property "actually used or useful" in the appropriation of water should be valued. But this does not sustain the point that in these cases the Supreme Court were merely construing an act and not developing their own theory of valuation. In one of the cases they expressly said, after having laid down the reproduction value theory, that this is what the statute contemplated.[33] In *San Diego Land and Town Company* v. *Jasper, et al,*[34] the actual cost was almost a million dollars, while the valuation allowed under the reproduction theory was only three hundred fifty thousand dollars. If the actual cost theory had been the true theory of valuation, would not the act have been unconstitutional as depriving the utility of some six hundred thousand dollars? Surely it cannot be doubted that if the Federal Constitution contemplates

[31] Cal. Stat. 1885, page 95. In San Diego Land Co. v. Jasper, *supra*, note 26, it was ruled that this statute contemplated the reproduction-less-depreciation theory of valuation.

[32] San Diego Land Co. v. National City, 174 U. S. 759 (1898); San Diego Land Co. v. Jasper *et al.*, 189 U. S. 439 (1903); Stanislaus County v. San Joaquin, *etc.*, Co., 192 U. S. 204 (1904).

[33] *Supra*, note 26, also note 30.

[34] *Supra*, note 26.

a fair return upon the actual cost of the property, a state statute or an order of a commission, which does not at least allow that value, cannot stand.

The first case which definitely stated that in the reproduction value, allowance must be made for depreciation was *Knoxville* v. *Knoxville Water Company*.[35] The Master in his findings had based the value on the cost of reproduction new, and was reversed because he had not made allowance for depreciation. Mr. Justice Moody said:

"The cost of reproduction is one way of ascertaining the present value of a plant like that of a water company, but that test would lead to obviously incorrect results, if the cost of reproduction is not diminished by the depreciation which has come from age and use. . . . The cost of reproduction is not always a fair measure of the present value of a plant that has been in use for many years. The items composing the plant depreciate in value from year to year in a varying degree. Some pieces of property like real estate, for instance, depreciate not at all, and sometimes, on the other hand, appreciate, in value. But the reservoirs, the mains, the service pipes, boilers, meters, tools and appurtenances of every kind begin to depreciate with more or less rapidity from the moment of their use."[36]

Counsel for the utility in this case offered another theory of valuation which the Court promptly rejected. The idea was that in making the valuation, take the present value of plant as it actually existed and to this add complete depreciation, which represents "that part of the original plant which, through destruction or obsolescence, had actually perished as useful property," and incomplete depreciation, which represents "the un-

[35] 212 U. S. 1, 11, 12 (1909).

[36] The Court on page 13, said that the utility ought to set aside so much each year as a depreciation fund, that this was a charge somewhat like operating expenses, and that it was not only right for the utility to do this, but that it was its duty. But if it has failed to do this, this fault was its own, and the present value cannot be enhanced to cover the errors.

But the Court apparently take the ground that extension or improvements constructed from the proceeds of the reserve set aside for depreciation, are not to be included in the present value, Railroad Comm. v. Cumberland Tel., *etc.*, Co., 212 U. S. 414 (1909). But this has nothing to do with a valuation where the surplus earnings, after providing for a depreciation fund, are invested in extensions and additions. This the Court expressly reserved for further consideration.

impairment in value of the parts of the plant which remained in existence and were continued in use."

As stated before,[37] there are two methods of applying the reproduction-less-depreciation value theory:

1. Reproduction value of substantially the existing plant.

2. Reproduction value of a substitute plant, of the most modern approved design, capable of performing the same service as the existing plant.

The case of *Willcox* v. *Consolidated Gas Company*,[38] may be said to adopt the first of these views. The writer realizes that time and again it has been written, "the whole subject of valuation is still in a development stage," [39] and that the Supreme Court of the United States have refused to lay down a hard and fast rule which later might have to be reversed when

[37] Whitten: Valuation of Public Service Corporations (1912), §§ 73, 75.

[38] 212 U. S. 19 (1909).

[39] Whitten: Valuation of Public Service Corporations (1912), § 72.

The Supreme Court have gone through too many campaigns in the determination of the correct principles of large questions to be caught without some avenue of escape. In the Willcox Case they have thrown out a hint that if they ever think that this reproduction theory is not sound, they will change to another. In one portion of the opinion, it was said (page 42): "Of course there may be cases where the rate is so low, *upon any reasonable basis of valuation*, that there can be no just doubt as to its confiscatory nature." And again (page 50): "It may be, as already suggested, that in many cases the rates objected to might be so low that there could be no reasonable doubt of their inadequacy upon *any fair estimate of the value of the property*."

If the rates will allow a sufficient return upon the value of the property as determined by the reproduction-less-depreciation theory, what does it matter that under another theory, the rates may be confiscatory? If this theory is the proper one, then it matters not what value any other theory may produce. Language such as that quoted weakens the value of the actual decision. It makes it almost impossible for one to look into the future with any degree of clearness. It practically puts the whole subject back to the days of Smyth v. Ames, *supra*, note 10.

Another mode the Court have of throwing confusion into the law is their refusal to correct statements in the lower courts' opinions which doubt the advisability of the reproduction theory. In the same volume which contains the Knoxville Water Company and the Consolidated Gas Company Cases, where the actual decisions were based on the reproduction-less-depreciation theory, is the peculiar case of Railroad Comm. of La. v. Cumberland Tel. Co., 212 U. S. 414 (1909). In this case the present value of the telephone company was determined by the regulating body solely upon the reproduction theory. In the federal court, where the order of the commission reducing the rates was enjoined, Judge Saunders practically repudiated this theory as the basic element in valuation, 156 Fed. 823, 833 (1907). And yet the Supreme Court in reversing the decree upon other grounds did not deem it advisable to correct the impression of the lower

more light has been thrown on the problem, yet the trend of the opinions is in the direction of the valuation according to the reproduction of the things "as they are." In the lower court Judge Hough emphatically emphasized this in his opinion,[40] and the Supreme Court, through Mr. Justice Peckham, in adopting the theory of valuation of the lower court, except as to the question of franchises, said:[41]

"And we concur with the court below in holding that the value of the property is to be determined as of the time when the inquiry is made regarding the rates."

It will be noticed that the Court speak of the value of "the property." This ordinarily means the property as then in existence. Without more comment than this, it would be straining the language to claim that it refers to a "substitute plant, of the most modern, approved design." And especially so when the lower court had expressly stated that the value was placed on the reproduction of the plant then in existence and not of a hypothetical plant.

Yet the authority for this is considerably shaken by their treatment of *Cedar Rapids Gas Light Company* v. *Cedar Rapids*.[42] In valuing this plant the lower court proceeded upon the theory that, "the worth of a new plant of equal capacity, efficiency and durability, with proper discount for defects in the

court if it was in error on this point. Does this not suggest the possibility that the members of the Supreme Court, themselves, were also in doubt? On the other hand, the case was decided only a few weeks after the other two and there is no express positive repudiation of their theory of valuation.

[40] See 157 Fed. 849, 854 (1907): "In every instance, however, the value assigned in the report is what it would cost presently to reproduce each item of property, in its present condition, and capable of giving service neither better nor worse than it now does. As to all of the items enumerated, therefore, from real estate to meters, inclusive, the complainant demands a fair return upon the reproductive value thereof, which is the same thing as the present value property considered. To vary this statement: Complainant's arrangements for manufacturing and distributing gas are reported to be worth the amounts alone tabulated if disposed of (in the commercial parlance) 'as they are.' Upon authority, I consider this method of valuation correct." This is very strong language and especially when Judge Hough cited as authority many of the Supreme Court cases which we have already considered.

[41] *Supra*, note 38, p. 52.

[42] 223 U. S. 655, 670 (1912).

old and depreciation for use, should be the measure of value rather than the cost of exact duplication." [43] The decision of the lower court dismissing the company's bill without prejudice, was affirmed by the Supreme Court, Mr. Justice Holmes, saying:

"In the case the court fixed a value on the plant that exceeded its cost. . . . Its attitude was fair and we do not feel called upon to follow the plaintiff into a nice discussion of details."

Although the attitude of the state court may have been fair enough, yet it is contended that there is such a difference in the results of the application of the reproduction of things "as they are," and reproduction of a substitute plant, that the Court should have pointed out the difference. No one realizes the difficulties of this great question more than does the writer and appreciates that the Court do not want to commit themselves at a comparatively early period in the development of this law, yet no end can ever be reached when the highest federal Court affirm two decisions of valuation based on entirely different theories, without some comment other than that the attitude of the lower court "was fair."

The reproduction theory was evidently approved in *Lincoln Gas and Electric Light Company* v. *Lincoln.*[44] In this case not only did the Court affirm the rule of valuation as applied in *San Diego Land and Town Company* v. *Jasper, et al,*[45] but also apparently approved the reproduction method of valuation adopted by the lower court,[46] although the case was sent back to the Master for a more accurate finding of the facts.[47]

The next case[48] which throws light upon this question is

[43] Opinion of Ladd, J., in 144 Iowa, 426, 438 (1909).

[44] 223 U. S. 349 (1912).

[45] *Supra,* note 26.

[46] See 182 Fed. 926, 977 (1909).

[47] This is the proper practice. Where the utility seeks to enjoin the enforcement of the rates as prescribed by the commission, the court must send the case to a Master to determine all the facts and make all the computations. Chicago, *etc.,* Rwy. v. Tompkins, 176 U. S. 167, 179, 180 (1900). But the report of the Master in these cases is not like the report of the Master in other equity cases in that the findings are not regarded as so conclusive. Knoxville v. Water Co., 212 U. S. 1 (1904).

[48] It is true that Louisville v. Cumberland Tel. Co., 225 U. S. 530 (1902), was a rate case, yet the opinion of Mr. Justice Holmes does not help us. And

the Minnesota Rate Case.[49] It is true one can find much language in this case derogative of the reproduction-less-depreciation theory, yet the Supreme Court apparently still favor this view and were condemning not the *use* of this theory, but the *abuse.*

The valuation was divided into "land," and "property other than land." The former included the right of way and terminals; the latter embraced all items of construction, including roadbed, tunnels, structures of every sort, and all appliances and equipment. The Master and lower court in finding the reproduction value of the land included all cost of acquisition, consequential damages, and "railway value," the latter being a fictitious sum supposed to represent the value of the land to the railroad as a part of its system. These values greatly exceeded the normal value of the land adjacent to the right of way and terminals of the company. The Court could not see their way clear to set aside a legislative act upon the ground of confiscation when the value of the property was represented by such inflated values. Mr. Justice Hughes said:

"These are the results of endeavors to apply the cost of reproduction method in determining the value of the right-of-way. It is at once apparent that, so far as the estimate rests upon the supposed compulsory feature of the acquisitions it cannot be sustained. It is said that the company would be compelled to pay more than what is the normal market value of property in transactions between private parties; that it would lack the freedom they enjoy, and, in view of its needs, it would have to give a higher price. It is also said that this price would be in excess of the present market value of contiguous or similarly situated property. It might well be asked who shall describe the conditions that exist, of the exigencies of the hypothetical owners of the property, on the assumption that the railroad were removed. But, aside from this, it is impossible to *assume*[50] in making a judicial finding of what it would cost to

the report of the lower court in 187 Fed. 637 (1911), is not much more satisfactory. The plant was valued at its "present value", but as the statements are so general it is not worth reviewing.

[49] 230 U. S. 352, 433, 458 (1913).

[50] The writer italicized this word. It is unfortunate that Mr. Justice Hughes used the word "assume". It naturally leads one to think that if the railroads had been able to prove that they were forced to pay more for property than the "fair market value", that he would have considered it as a factor

acquire the property, that the company would be compelled to pay more than its fair market value. It is equipped with the governmental power of eminent domain. In view of its public purpose, it has been granted this privilege in order to prevent advantage being taken of its necessities. It would be free to stand upon its legal rights and it cannot be suggested that they would be disregarded."

Moreover, the Justice pointed out that it is foolish to attempt to estimate the cost of reproducing the road on the supposition that the road is not there, while the rock bottom prices for the reproduction of the land are all based on the presence of the railroad in the community. He concluded:

"The cost of reproduction method is of service in ascertaining the present value of the plant, when it is reasonably applied and where the cost of reproducing the property may be ascertained with a proper degree of certainty. But it does not justify the acceptance of results which depend upon mere conjucture."

The question then is, how can this theory be reasonably applied? This, it is submitted, is answered by the Court when they ruled out the "railway value," [51] the multipliers,[52] the allowance for a conjectural cost of acquisition, and consequential damages;[53] and held that the "increase so allowed apart from any

in the case. As a matter of fact this is what the railroads did prove. It is just what Judge Sanborn ruled in the lower court (see 184 Fed. 806): "But the evidence in this case is conclusive, nay, we may say it is without conflict that every railroad company is compelled to pay more than the normal market value of property in sales between private parties for the irregular tracts it needs and acquires for rights of way, yards and station grounds." With the evidence and the ruling of the lower court before him, it is impossible to think that Mr. Justice Hughes intended to say to the railroads that if they proved their contention, it would have been considered. The word "assume" must be read in the light of all the evidence and holding of the lower court. It is submitted that Mr. Justice Hughes' thought was that it was impossible for the court even to *consider* that the railroad would be compelled to pay more than the fair market value.

[51] Page 455: "It is an increment which in the last analysis must rest upon an estimate of the value of the railroad use as compared with other business uses; it involves an appreciation of the returns from rates (when rates themselves are in dispute), and a sweeping generalization embracing all the activities of the community. For an allowance of this character there is no warrant."

[52] These multipliers are used to cover outlays in the hypothetical reconstruction. See Whitten: Valuation of Public Service Corporations (1912), § 135, *et seq.*

[53] Page 455: "And, in this view, we also think it was error to add to the amount taken as the present value of the lands the further sums, calculated as that value, which were embraced as the items of 'engineering, superintendence, legal expenses', 'contingencies' and 'interest during construction'."

improvements it may make, cannot properly extend beyond the fair average of the normal market value of land, in the vicinity having a similar character." In other words, the land is to be valued with respect to the present normal value of the adjacent land as viewed in the light of things "as they are," but no allowance to be made for cost of acquisition, consequential damages, or "railway value."

In valuing the property other than land, the Master found that there had been a depreciation in fact, but that it was offset by an appreciation, due mainly to solidification and adaption.[54] All that the Master did was to find a lump sum which he figured as appreciation and deducted a lump sum for depreciation. There was no scientific analysis of the subject. In disposing of this Mr. Justice Hughes remarked:

"We cannot approve this disposition of the matter of depreciation. . . . And where an estimate of value is made on the basis of reproduction new, the extent of existing depreciation should be shown and deducted. . . . If there are items entering into the estimate of cost which should be considered with appreciation, these should also appear, so that instead of a broad comparison there should be specific findings showing the items which enter into the amount of physical valuation on both sides. . . . And when particular physical items are estimated as worth so much new, if in fact they be depreciated, this amount should be found and allowed for. If this is not done, the physical valuation is incomplete. And it must be regarded as incomplete in this case."

It is interesting to note that in this valuation the appreciation did as a mater of fact exceed the depreciation. It has been asked by one writer that "if in fact the roads have not depreciated but are more valuable than when newly constructed, does this decision mean as a matter of law, that nevertheless depreciation must be deducted?"[55] And if it does mean this, he contends that it is a serious ruling for the railroads, for "many parts of the plant, although kept in repair, may be in fact, nearer the end of their life than when newly built, but as an entity, the co-ordinated whole may be worth far more than when first laid down."

[54] See *infra*, "Depreciation."

[55] Problems of Railroad Valuation, Royal E. T. Riggs in 13 COL. L. REV. 567, 579 (1913).

The proper conclusion to draw from this case, is that the correct theory of valuation is reproduction-less-depreciation. But the reproduction cost must not be inflated by such fictitious values, as "railway value," consequential damages, cost of acquisition, overhead expenses, or "forced price." [56] And the depreciation must be set out in detail and not lumped into one sum; likewise the appreciation. Some depreciation must exist for it is not a new plant, and whether it is offset by appreciation is a question of fact. The basis of this conclusion is that throughout the whole opinion, the Court condemn only the abuse of the theory, and do not repudiate the theory as the basic element in valuation. The Court affirmed and cited with approval cases which had adopted the reproduction theory in preference to all others.[57] They would hardly have done this if they had wanted to suggest to the regulating bodies the possibility of adopting a new theory as the basic element. And reproduction means, the reproduction at the present day of the things "as they are," and not a substitute plant of equal efficiency.

The Missouri Rate Cases [58] do not aid in the solution of this problem, for the finding of values in seven of the nine companies was taken from the values of the state assessing board and multiplied by three. The reason for this was that the assessments were made on the basis of one-third of the value of the property. In regard to the advisability of this method, Mr. Justice Hughes said: [59]

[56] This term is used as distinguished from the price an ordinary purchaser would have to pay. As remarked before, it is not our purpose to justify or condemn the theory which the Supreme Court has adopted. It may well be, as a matter of common knowledge, that a railroad is forced to pay much more for land than any other purchaser, see N. Pacif. R. R. v. N. D., 145 N. W. 135, 161 (N. D. 1914), but that is another question.

[57] San Diego Land & Town Co. v. National City, *supra,* note 13; San Diego Land & Town Co. v. Jasper, *supra,* note 26; Knoxville v. Water Co., *supra,* note 35; Willcox v. Consolidated Gas Co., *supra,* note 38. And on page 454, Hughes, J., used this language: "It is clear that in ascertaining the present value we are not limited to the consideration of the amount of the actual investment. . . . As the company may not be protected in its actual investment, if the value of its property be plainly less, so the making of a just return for the use of the property *involves the recognition of its fair value if it be more than it costs.*" This is clearly in line with the reproduction theory.

[58] 230 U. S. 474 (1913).

[59] Page 498. And the same may be said of the valuation in the Arkansas

"None of the members of the state assessing board were examined. There is no satisfactory proof of the grounds of their judgment. Nor was it shown that these valuations, made by them for the purpose of taxation, were upon a basis which could properly be taken in determining the fair value, where the sufficiency of prescribed rates is involved and the issue is one of confiscation."

That the reproduction-less-depreciation theory is the one adhered to to-day by the Supreme Court, appears to be the view of counsel in these valuation cases. In *San Joaquin and King River Canal Company* v. *Stanislaus County*,[60] the Master valued the property under the reproduction-less-depreciation theory. He repudiated the market value theory for the reason that there was really no market for public utilities and that the sale is based on the rate of return which is the unsolved question in these cases.[61] However, the Master and the lower court refused to allow a value on the "water rights" claimed by the company. The validity of a valuation of the "water rights" was the only question argued on the appeal to the Supreme Court, for "if the plaintiff is entitled to six per cent. upon its tangible property alone, it is agreed that the orders must stand." [62]

The Supreme Court's view of the proper or basic theory of valuation for rate regulation may be tested from a second standpoint. It is logical to state that by excluding from a comprehensive statement the part which does not apply to the solution of the problem, that which remains of the statement does necessarily apply. In *Smyth* v. *Ames*,[63] which is regarded as the fountain head of this branch of the law, Mr. Justice Harlan made this comprehensive statement:

"And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stocks, the present as compared with the original cost of construction, the probable earning capacity of the property under the particular rates preescribed,

Rate Cases, 230 U. S. 553 (1913), where the valuation of the state board of assessors was multiplied by two.

[60] 191 Fed. 875 (1911).

[61] Page 880.

[62] 233 U. S. 454 (April 27, 1914).

[63] *Supra*, note 10.

and the sums required to meet operating expenses are all matters for consideration, and are to be given such weight as may be just and right in each case."

It will be noticed that "the probable earning capacity of the property under the particular rates prescribed and the sums required to meet operating expenses," have nothing to do with the question of valuation. They follow the final determination of the value of the plant and are material only in determining whether the rate will be sufficient to afford a proper return on the determined value. Then there remains only two possible theories:

(1) Actual cost, which is represented by the statement "the original cost of construction, the amount expended in permanent improvements, the amount and market value of its stocks and bonds."

(2) Reproduction-less-depreciation, "the present as compared with the original cost of construction."

In all the cases from *Smyth* v. *Ames,* down to the present day, it was evident that the Supreme Court have rejected the original cost plus improvements in favor of the present cost of construction. And in a footnote is appended a list of cases which for one reason or another refuse to give any weight to the market value of the bonds and stocks.[64] The inference from this line of argument is that the only basic principle of valuation which the Supreme Court will regard is the reproduction-less-depreciation theory. And yet, this cannot be stated with assurance, for as late as the Minnesota Rate Cases, doubt is thrown upon any settled theory when Mr. Justice Hughes said:

"The ascertainment of the value is not controlled by artificial rules. It is not a matter of formulas, but there must be a reasonable judgment, having its basis on a proper consideration of all relevant facts. The scope of the inquiry was thus broadly described in *Smyth* v. *Ames.* . . . "[65]

[64] San Diego Land Co. v. National City, 174 U. S. 739, 757 (1898); Chicago, Milwaukee, *etc.,* Rwy. v. Tompkins, 176 U. S. 167, 175 (1900); Stanislaus County v. San Joaquin Co., 192 U. S. 201, 214 (1903); Knoxville v. Knoxville Water Co., 212 U. S. 1, 11 (1909); Minnesota Rate Cases, 230 U. S. 355, 440 (1913).

[65] And then followed the above quotation from that celebrated case.

And it is also interesting to find that the federal act of March 1, 1913,[66] which in amending the Commerce Act gives the Interstate Commerce Commission the power to value all interstate railroads, does not limit the valuation to any one theory. There are three theories specifically enumerated: (1) original cost to date; (2) reproduction new; (3) reproduction-less-depreciation. The value obtained in each theory is to be analyzed and the difference in result, if any, explained. It will be noticed that no special mention was made of the market value theory. But in the same paragraph the Commission is authorized to "ascertain and report separately *other* values, and elements of value, if any, of the property of such common carrier, and an analysis of the methods of valuation employed, and of the reasons for any differences, between any such value, and each of the foregoing cost values."[67] This gives the Commission power to suggest any theory.

It is probable that the final valuation of the Commission will settle this perplexing problem. As the act makes the final valuation "*prima facie* evidence of the property in all proceedings" to enforce the Commerce Act, it is not likely that the United States Supreme Court will overthrow the valuation, unless grossly unfair.

Depreciation.

Depreciation has been defined "as the loss in value of some destructible property over and above current repairs." [1] It is of two kinds: physical, and functional. The former "is the result of deterioration due to wear and age. It results from decay, and the action of the elements." The latter "is the result of lack of adaption to function. It results from changed conditions and surroundings which render the structure ill adapted to its work; from growth of the business which renders the structure inade-

[66] 37 United States Statutes at Large (Part 1), 701.

[67] It will will also be noticed that the stocks and bonds are only to be considered under the heading: "The original cost to date." This is provided by the fourth sub-section of § 19a of the act.

[1] Cumberland Tel. Co. v. Louisville, 187 Fed. 637, 653 (1914).

quate, or to decline of business which renders it too large; from the development of the art which makes desirable the substitution of other methods, equipment and structure." [2] The physical depreciation is a constant factor, but functional depreciation is not. "It may come into play during the lifetime of a particular structure or it may not."

In *Knoxville* v. *Water Company*,[3] the utility divided depreciation into complete depreciation which "represented that part of the original plant which through destruction or obsolescence had actually perished as useful property," and incomplete depreciation which "represented the impairment in value of the parts of the plant which remained in existence and were continued in use." It is submitted that the term "complete depreciation" has no place in such a valuation. The plant is to be reproduced as it stands at the time of the valuation,[4] and, therefore, there is no deed in determining what parts have been discarded either as worn-out or as inadequate to satisfy present needs. When the parts which have replaced those discarded parts are valued the plant which is used and useful in the present day service will be valued and that is all that is required. There seems to be no reason why an engine which has been discarded either because it was worn-out or obsolete ought to figure in the present valuation. It is the engine that has replaced the old one that is considered and valued. For example: In a water plant one section of the main had so deteriorated that it had to be replaced by a new section. At the time of valuation this new section had been in use a year. The reproduction cost of this section would be estimated and then the depreciation which the section had undergone in that year would be deducted. Now there does not seem to be any good reason why there should be any consideration of the section which had been discarded as worn-out.

In the regulation of rates depreciation is considered in two

[2] Whitten (1912 Ed.), § 391: "The terms inadequacy and obsolescence are often used to denote in part what is here termed functional depreciation."

[3] 212 U. S. 1, 13 (1909).

[4] San Diego Land & Town Co. v. Jasper, 189 U. S. 439, 446 (1903).

distinct phases: (1) Accrued Depreciation, and (2) Annual Depreciation Allowance. The former is dealt with in the question of valuation upon which a return is allowed under the theory of reproduction-less-depreciation, while the latter is treated under the essentials necessary to earn the proper return and to keep the investment in tact. Broadly speaking the former has to do with the present value and the latter with the rate permitted on that value.

Accrued Depreciation.

It is well established that the Supreme Court will not consider accrued physical depreciation in any other light except as a deduction from the cost of reproduction new.[5] The cost of reproduction new would otherwise lead to obviously incorrect results if it "is not diminished by the depreciation which has come from age and use." This rule has been criticised because it fails to distinguish between purchase and rental values, for while it is true that "purchase value is affected by age and wear, rental value in the absence of decreased deficiency is not." [6] It is submitted that the depreciation the Court have in mind is that which is due not only to the wear, but also due to the age of the plant in that its life of usefulness is shorter than a newly constructed plant, although it may be as efficient. And even if a used plant is deemed more efficient yet it is subject to the depreciation from age because its life of usefulness has been shortened. "It is also to be noted" said Mr. Justice Hughes in the Minnesota Rate Cases, "that the depreciation in question is not that which has been overcome by repairs and replacements, but is the actual existing depreciation in the plant as compared with a new one." The thought here is that the accrued depreciation represents the loss which is due to deterioration which has not been replaced and also the loss of part of the life of the plant.

The accrued depreciation does not include any provision for functional depreciation, save possibly for the decline of the

[5] Knoxville v. Water Co., *supra,* note 3; Minn. Rate Cases, 230 U. S. 352, 457 (1913); Montana, *etc.,* R. R. v. Commission, 188 Fed. 991 (1912); Bonbright v. Commission, 210 Fed. 44 (1913).

[6] Mr. W. H. Winslow, see Whitten (1914), § 1280, for this argument.

business which has rendered the plant too large for present use. The reason for this is that the plant is to be reproduced as it is and not acording to the latest approved designs.[7] Hence although "the structure may be ill adapted to its work," and although it may be too small, or perhaps a new invention has scientifically relegated parts of the plant to the scrap heap, nevertheless it is the plant in being that is to be given a reproduction value and not a hypothetical plant which, according to the savants, would be perfect.[8] And that portion of the utility which is needless for the present use, either because the patrons have fallen off or have not increased as rapidly as expected, cannot be considered in the present valuation.[9] It might be argued that it is better not to class it under this heading for it really is given no valuation at all; it is not a consideration in the valuation.

Hand in hand with the question of accrued depreciation is the allowance for appreciation. Appreciation is the increase of certain portions of the plant above the cost of reproduction new. Under the reproduction-less-depreciation theory most of the appreciation is taken care of in the valuation, for the plant is hypothetically rebuilt at the present fair prices of the land, tools, equipment, *etc.* But there are certain forms of appreciation which have to be valued separately. One form is known as "solidification and adaption." This was one of the features of the Minnesota Rate Cases. Judge Sanborn allowed a certain sum for solidification and adaption of the roadbed but failed to designate any depreciation. He said: [10]

"It is clear that a new railroad may appreciate or depreciate as it grows older. It may be renewed, repaired, and improved day by day and year by year as it is operated, until its embankments become more solid, its culverts and bridges firmer and more reliable, its ties and rails more steadfast and secure, and its rolling stock more seasoned and better adapted to its service and to the railroad it

[7] See "Theories of Valuation," *supra*, where this question is discussed.

[8] This point was not squarely raised in Knoxville v. Water Co., *supra*, note 3, and is not in variance with that case.

[9] San Diego Land & Town Co. v. Jasper, 189 U. S. 438, 446 (1903).

[10] Shepard v. Northern Pac. Rwy., 184 Fed. 865, 910 (1911).

traverses, and until the whole property becomes more valuable than it was when it was first constructed. On the other hand, its embankments and its roadbed may be neglected and permitted to deteriorate, by the action of rain, snow, and frost, its ties may be allowed to become partially decayed, its bolts and rails loose, and its rolling stock worn, without adequate repairs, until the entire property suffer great depreciation. Whether at a given time a railroad property is more or less valuable than it would be if it had just been constructed is a question of fact, that in a suit of this nature must be answered by the evidence."

As the evidence of the case showed that the plant was more valuable today than a new one would be all the depreciation was offset by appreciation. This treatment of the question of depreciation could not satisfy the Supreme Court, and Mr. Justice Hughes in reversing the decree, said: [11]

"It is also to be noted that the depreciation in question is not that which has been overcome by repairs and replacement, but is the actual existing depreciation in the plant as compared with a new one. It would seem to be inevitable that in many parts of the plant there should be such depreciation, as for example, in old structures and equipment remaining on hand. And where an estimate of value is made on the basis of reproduction new, the extent of the existing depreciations should be shown and deducted. . . . If there are items entering into the estimate of cost which should be credited with appreciation, this should appear, so that instead of a broad comparison there should be specific findings showing the items which enter into the amount of physical valuation on both sides. . . . And when particular physical items are estimated as worth so much new, if in fact they be depreciated, this account should be found and allowed for."

There are several points to be noted in this excerpt: (1) that accrued depreciation does not consist merely in the physical depreciation but also in the loss of so many years of the useful life of the plant, (2) that appreciation is recognized and allowed, (3) that there can be no wholesale account of either depreciation or appreciation, but that each unit must be itemized and its proper depreciation or appreciation allowed.

Another form of appreciation is found in irrigation canals. In every new canal there is a loss caused by the water percolating through the canal which is called "loss from seepage." As the

[11] *Supra*, note 5, at page 457.

system grows older the loss from seepage is greatly reduced and more water can be delivered through the same system, and therefore it is more valuable. This was recognized by the lower court in *San Joaquin and King's River Company* v. *Stanislaus County,*[12] but Judge Morrow fell into the same error as did Judge Sanborn in lumping the sum of appreciation and depreciation. He said:

"After a carful examination of all the testimony on this question, I find I am unable to make either a calculation as to appreciation or depreciation of the latter works of the canal, and shall assume that the one offsets the other.".

Although this point was not raised in the argument upon appeal to the Supreme Court,[13] nevertheless from what Mr. Justice Hughes had said it is clear that such a calculation is highly faulty.

A public utility just like any other corporation is supposed to have set aside each year a sufficient sum to cover the depreciation, but if it has not done so, the utility must bear the loss, for the rate cannot be raised to cover this error.[14] And when it is being valued for the purpose of rate fixation it is incumbent upon the utility "to show that no part of the money raised to pay for depreciation was added to capital," that is to say, that it was not expended for extensions. "That it (the utility) was right to raise more money to pay for depreciation than was actually disbursed for the particular year there can be no doubt, for a reserve is necessary in any business of this kind, and so it might accumulate, but to raise more than money enough for the purpose and place the balance to the credit of capital upon which to pay dividends cannot be proper treatment." [15] And the burden of proving that the money raised for depreciation has not been diverted is upon the utility. If the books cannot show the exact amount which was spent for additions, then the officers must approximate the amount for the burden is upon the utility

[12] 191 Fed. 875, 884 (1911).

[13] 233 U. S. 454 (1914).

[14] Knoxville Water Co., *supra,* note 3. This is one of the examples of loss from bad business judgment which the investors must bear and not the patrons.

[15] La. Commissioners v. Cumberland Tel. Co., 212 U. S. 414, 424 (1909).

to prove confiscation.[16] The line of demarcation between additions and repairs may not always be accurately drawn, but absolute accuracy is not required in such matters.[17] The Court have left open the point where there is a surplus after providing for the depreciation fund, and the surplus is invested in extensions and additions.[18]

The Court have not laid down any rule to determine the accrued depreciation and they recognize the difficulty in determining it. "It is not easy to fix at any given time the amount of depreciation of a plant whose component parts are of different ages with different expectations of life." [19]

The two most popular methods used to measure depreciation are (1) straight line method, (2) sinking fund method.

The straight line method assumes a constant depreciation of the property for its entire life, and consists in laying aside annually a sum which is equal to the uniform reduction in value.[20] "If the assumed life is ten years, and six years of such life have elapsed, the existing depreciation amounts to six-tenths of the total wearing value. This method is the one most largely used in appraisals for all purposes. It has the merit of simplicity." "It is particularly simple where what is known as the fifty per cent. method can be applied. If the life of a street car is twenty years and the ages of the cars to be appraised vary all the way from one to twenty years, and the number of the cars of each age is the same, the average age of the total car equipment is ten years and this is just one-half of the total life. Assuming that the cars in question have a uniform cost new, the depreciation would be fifty per cent. of the total wearing value." [21] Mr. Wyer states that this fifty per cent. method can only be used when the following eight restrictive conditions are present: "All the elements entering into each constituent class (1) must be similar, (2) must have the same characteristics, (3) when defec-

[16] *Ibid.*

[17] San Joaquin Canal Co. v. Stanislaus County, 191 Fed. 875, 889 (1911).

[18] *Supra,* note 15.

[19] *Supra,* note 3.

[20] Wyer: Regulations, Valuations and Depreciation of Utilities (1913), § 363.

[21] Whitten (1914), § 394.

tive, must be renewed piecemeal, (4) must be under the same service conditions, (5) must have been renewed once. The property (6) must include a large number of parts, (7) repairs account must have reached its normal maximum, (8) must have been in use long enough so that the constituent parts represent all possible stages of conditions, *i.e.,* from full or one hundred per cent. wearing value to zero per cent. wearing value." [22] Where conditions permit the use of this formula it is easy to estimate the depreciation when the cost of reproduction new and the scrap value is known for the depreciation is just one-half the difference between these two factors.

The sinking fund method provides that a certain sum shall be regularly set aside during the commercial life of the plant, which at a certain rate of interest compounded annually or semi-annually, will equal the wearing value of the plant, *i.e.,* the cost less the scrap value.[23] There is nothing constant in this method for the sum to be set aside at the stated periods will depend (1) upon the rate of interest, (2) whether this interest is compounded annually or semi-annually. The higher the rate of interest, the smaller will be the sum set aside at each period. Also if the interest is compounded semi-annually the sum set aside will be smaller than if it were compounded annually. To find the depreciation at any time is a simple matter for it is the same as the amount in the fund accumulated.

Each method has found sufficient authority for its acceptance,[24] and it is believed that this is just such a question which the Supreme Court will allow each regulating body to determine for itself. The regulating body should adopt the system the utility has been using in the past, unless a manifest injustice would be done.

Annual Allowance.

If from the cost of reproduction-new there is to be deducted the amount of accrued depreciation, then it seems only natural and just that an allowance should be made in the annual

[22] Wyer, § 370.
[23] *Ibid.,* § 364.
[24] Whitten, §§ 402-405; 1270.

gross income which will enable the utility to preserve the integrity of the investment. If this is not done, one of two things must happen: (1) the investment will dwindle down to a vanishing point, or (2) the investor will be compelled to use part of his proper return to save the property. In either case such a result would be confiscation.

The first case where the annual allowance for depreciation appears to have been considered was *San Diego Land Company* v. *National City,*[25] where the Court held that "the annual depreciation of the plant (irrigation) from natural causes resulting from its use," undoubtedly ought to be taken into consideration when rates are being fixed. Four years later the question of annual allowance came up again from the same state (California) and involved the same class of utility. This case was *San Diego Land and Town Company* v. *Jasper,*[26] and has been cited by one eminent writer on the subject as apparently refusing to sanction this allowance.[27] This case is very ambiguous and it is hard to tell whether the Court thought that as a general rule an annual allowance was not necessary, or that under the precise facts it had been provided for under a different heading. In the lower court the utility proved that in this soil the pipes deteriorated very rapidly and hence a valuation was incomplete which did not provide for a fund for the depreciation, although the regulating body had provided for expenses and maintenance. Judge Ross said:[28]

"The evidence undoubtedly so shows [the fact of rapid deterioration] and that fact should be given due consideration in fixing rates and in determining their reasonableness; but it is not just, I think, to charge all the consequences of that unfortunate state of affairs to the consumers. To some extent, at least, it goes to lessen the value of the plant itself, and this fact must be given consideration by the court in deciding upon the effect of the action of the board of supervisors; for it must be remembered that it is the *result* of its action as embodied in the ordinance that is the subject for the determination of the court, not the processes by which it reached its conclusion."

[25] 174 U. S. 739, 757 (1899).
[26] 189 U. S. 439, 446 (1903).
[27] Whitten (1912), § 510.
[28] 110 Fed. 702, 715 (1901).

The underlying thought may be that if the depreciation is taken care of by the maintenance and repair account, then the *effect* and *result* of the valuation and regulation is not confiscatory. The same idea may have been in the mind of Mr. Justice Holmes when he approved the action of the lower court in dismissing the bill, saying:[29]

"We will say a word about the opposite contention of the appellant, that there should have been allowance for depreciation over and above allowance for repair. From a constitutional point of view we see no sufficient evidence that the allowance for six *per cent.* of the value set by the supervisors, in addition to what is allowed for repairs, is confiscatory." [30]

If, as a matter of fact, the utility was able to set aside enough for depreciation, it did not matter that there was no specific allowance for this fund. The conclusion, not the process, is that which determines the confiscatory nature of a regulation. Whether or not this is a proper explanation of the case does not matter, for if the Court at that time did hold that a utility did not have a right to charge rates which would provide for depreciation, the case has been overruled by later decisions.

In the Knoxville case, Mr. Justice Moody clearly stated that before the question of income for the investor is reached the utility must be allowed to charge rates which will permit it to take care of depreciation and this is separate and apart from the question of current repairs. It would be unconstitutional to compel the utility to use its property for the patrons and not allow it to make provisions out of the gross income for its replacements. "It is entitled to see that from earnings the value of the property invested is kept unimpaired, so that at the end of any given term of years, the original investment remains as it was at the beginning." The duty of the utility to provide for depreciations is not one owed solely to the investor, but also to the public, for the only method then available for the replacement of depreciated

[29] *Supra,* note 25.

[30] It has been ruled in San Diego Water Co. v. San Diego, 118 Cal. 556 (1897), and Redlands Water Co. v. Redlands, 121 Cal. 312 (1898), that a water company is not entitled to have the rights so fixed as to enable it to set apart a certain amount each year as a sinking fund for the depreciation of the plant. *Accord:* Manning v. Tel. Co., 18 App. (D. C.) 191, 222 (1901).

property would be to issue stocks and bonds and enlarge the capital account. This in time would lead to so great a difference between the real investment value and capitalization value that disaster would fall upon the investor and public alike. In *Lincoln Gas Company* v. *Lincoln*,[31] Mr. Justice Lurton said that one of the three questions of prime importance in rate regulations was, "what deductions, if any, should be made from the gross receipts as a fund to preserve the property from future depreciations." And in the same volume is found another recognition of this principle.[32]

In this, as in the question of accrued depreciation, the Court have not laid down any rule for determining the annual allowance, whether it be an arbitrary sum, or a sum computed either by the straight line method or sinking fund method. It is not likely that they will choose any one theory as long as substantial justice is done to all concerned. As was said in one case,[33] "we perhaps should have adopted a rule as to depreciation somewhat more favorable to the plaintiff (the utility), . . . but there is nothing of which we can notice in the case that could warrant us in changing the result . . . "

In some cases, the depreciation fund was provided for by increasing the cost of operating, as an allowance on every thousand feet of gas;[34] while in others an arbitrary sum was taken from the gross income;[35] or the straight line method was used;[36] and in another case a certain percentage on the reproduction-less-depreciation value of the plant was adopted on the basis

[31] 223 U. S. 439, 357 (1912).

[32] Cedar Rapids Gas Light Co. v. Cedar Rapids, at page 670.

[33] *Ibid.*

[34] Eleven cents *per M.* was allowed by Judge Hough in Consolidated Gas case, 157 Fed. 849 (1907); five cents *per M.* in Cedar Rapids Gas Light Co. v. Cedar Rapids, 144 Iowa, 426, 446 (1909), and this was chosen in preference to a sum computed in the sinking fund method. In the Consolidated Gas case, the question was not argued in the Supreme Court, but in the Cedar Rapids case it was, and the Supreme Court affirmed the action of the lower court.

[35] Lincoln Gas Co. v. Lincoln, 182 Fed. 926 (1909). The case was reversed in 223 U. S. 349, and on page 363 there is a suggestion that the sinking fund method might be better in this case.

[36] San Joaquin, *etc.*, Canal Co. v. Stanislaus County, 191 Fed. 875, 886 (1911), reversed in 233 U. S. 454 (1914), on another point.

of the average life of the plant as taken from the combined elements.[37] Whatever method is used to determine the accrued depreciation should be used to determine the annual depreciation allowance.

The annual allowance ought to cover the physical depreciation and the ordinary functional depreciation. "By ordinary functional depreciation is meant such part of the total loss from inadequacy and obsolescence as can be foreseen with reasonable certainty." [38] The depreciation, physical or functional, which should be considered when estimating the fund is that which can reasonably be foreseen. The hazard in the business is provided for in the rate of return,[39] and hence there is no reason for considering it again. And, too, the regulation of rates is such supervision which can be changed to meet the exigencies of an abnormal occasion. It was stated very well by Judge Hough:[40]

> "As to future losses of a kind not known in the past, such may well be encountered. It is said, probably with truth, that the crowded condidition of underground New York increases for the future the danger of explosion, and introduces a new peril in electrolysis resulting from the multiplication of underground electric current. These are dangers possible, so, somewhat more remotely, are lightning and earthquake. But it cannot be said, as a matter of law, that a corporation, even as against its shareholders, has the right to hoard income for the sake of maintaining dividends in years when extraordinary disasters may occur. . . . The case of a company or its directors is far weaker when its endeavor is to capitalize a large proportion of yearly earnings against the undoubted regulating power of the state."

It will be a question of fact in each case whether future losses are of such a nature to be included in estimating the annual depreciation allowance.

(To be continued.)

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[37] Cumberland Tel. Co. v. Louisville, 187 Fed. 637 (1911). The lower court decree was reversed because the evidence was too speculative to warrant a declaration that rates were confiscatory. 225 U. S. 430 (1912).

[38] Whitten (1912), § 481.

[39] See "Rate of Return", *infra.*

[40] Consolidated Gas case, *supra,* note 34, at page 866.