On

The Rate of Interest:

an Essay by

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of Statistics of the United

States of America.

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ON THE RATE OF INTEREST.

A Letter from Hon. Alexander Delmar,

Late Director of the Bureau of Statistics, Honorary Member of the Société Statistique of Paris, etc.

Dear Sir: It would afford me great pleasure to prepare for the National Insurance Convention a complete review of the subject of Interest, and the inductions arising therefrom; but lack of time forbids, and I can only glance at it, and make a few hurried conclusions, which, though drawn from somewhat imperfect data, may nevertheless stand the test of closer analysis of the facts. At all events they will serve to throw open a hitherto almost entirely unexplored subject.

A number of questions occur in this connection:

1. What is a rate of interest?
2. What is the general history of the rate of interest?
3. What is its history in this country?
4. What are generally the ultimate causes of a rate of interest?
5. What influences at present affect, in this country, the rate of interest?
6. What is generally the present tendency of the rate of interest?
7. What is its tendency in this country?
8. To which might be added this question: What are the prevailing sophisms concerning the rate of interest?

I. What is a Rate of Interest?

A rate of compensation for capital loaned. As a general thing, however, interest is applied to money only; and it is from this fact that spring most of the erroneous theories prevalent on the subject. It is also common to still further and still more erroneously limit the meaning of the term. The "rate of interest" is used to indicate the legal rate—the rate fixed by law: *e.g.*, "the rate of interest in New York is seven per cent," this being

the legal limit in that state. From this looseness of expression springs another crop of errors. Some of these will be briefly pointed out hereinafter. For the present it is sufficient to know that a rate of interest means simply a rate of compensation for money or property loaned. This rate may either be stipulated between the parties, limited by law, or determined in open market. It is the latter, viz., the open market price of or compensation for loans of money or property that I shall hereinafter refer to by the term rate of interest, unless otherwise specified.

Interest is a modern term. The word usury was formerly used to mean the same thing. Now the latter word is only employed to express excessive interest; though for my own part I do not believe that any rate of interest, freely agreed upon, is excessive. On this subject, however, Bentham has already said all that is worth saying, while O'Callaghan has, on the other hand, extolled every absurdity on the subject which the former so mercilessly derided.

II. General History of the Rate of Interest.

My exceedingly limited time will only permit the merest glimpses into this portion of the subject. Mention of the earliest rate of interest I can at present recall will be found in Buckle, (*Hist. Civ.*, Appleton's edition, i, 54), and relates to India, where, in B.C. 900, according to the Institutes of Menu, the minimum legal rate was 15 and the maximum 60 per cent per annum. This information merely furnishes a ground for conjecture that the market rate on the best security was about 15 per cent. Boeckh, in his *Public Economy of the Athenians*, furnishes more definite information. The common market rates in Athens were 12 to 18 per cent; no date given. (Little and Brown's edition, p. 181.) In the time of Pompey the Great, say 100 to 50 B.C., the rate in Tenos varied from 8 to 12 per cent. In the third century before Christ the state bank in Ilion paid 10 per cent on state security. (*Ibid*, p. 182.) Interest was lower still in Rome in the age of Cicero. (*Id.*, p. 174.)

From these rates, which do not appear to have been much, if any, higher, than those which prevail at present in the western and southern states of America, the Pagan history of interest is silent until the obscurity that characterized the Dark Ages partially cleared away. This is part one. It begins in the obscurity of

mythology and remote tradition, and ends in the obscurity of mediæval vandalism and destruction. It opens with the first page of Pagan history, and closes with the subjugation of Greece and the subsequent fall of Rome. Part two opens with the texts in the Pentateuch (Exod., xxii, 25, 26; Lev., xxv, 35, 36, 37; and Deut., xxiii, 20); and ends with the discovery of America, at which period the two streams of history become united.

The scriptural interdiction of interest was put in force three thousand years ago on the plains of Arabia; it is enforced to-day in Wall street by the laws of the state of New York. The Pentateuch forbade the taking of interest at all; the revised statutes merely forbid the taking of more than seven per cent per annum. The difference is one of degree, not of principle. The one law, in fact, originated in, and is merely a continuation of, the other.

The early Christians, when they reconstructed the religion of Pagan Rome, reconstructed also her commercial laws.

By the civil law (reign of Justinian, A.D. 533) persons of illustrious birth were limited, both in borrowing and lending, to the annual rate of 4 per cent, while 6 per cent was established as the ordinary legal standard. For the convenience of manufacturers and merchants 8 per cent was allowed; to loans on shipping 12 per cent; but except in such "perilous" business only 8 per cent was permitted. It is difficult to say how nearly these arbitrary rates indicate the market rates. Rome then meant, substantially, the whole world, but Justinian resided at Constantinople, while the barbarous and profligate Theodatus reigned in the Eternal City, whither Belisarius was on his way to conquer and depose him.

The civil law on interest appears to have stood until the Christian church, in its vast plan of reconstruction, assumed temporal power.

In A.D. 800, during the reign of Charlemagne, the taking of interest was entirely forbidden by the canon law. This marked the restoration of the Levitical code in the Western Empire. In A.D. 950, the same prohibition was adopted in the Eastern Empire, in the Basilican code. From this moment the entire Christian and commercial world was forbidden to take interest.

At Westminster, England, September 9, 112[illegible], at a grand council of the church, all clergymen were ordered to abstain from interest and "base lucre,"—*usuram et turpe lucrum*—

from which it would seem that the general interdiction of the canon law had not proved sufficient. In 1197, reign of Richard I, all Christians were forbidden to take interest. This threw the stigmatized trade into the hands of the Jews, who, from the fact that the Scripture does not forbid the taking of usury from Gentiles and strangers, had no scruples on the subject, and grew rich by it. In 1180 they owned one-half of Paris, in France! (Hallam, *Middle Ages*, i, 157.) However, to "equalize" matters again, the royal plunderers, when they did not directly share the profits of usury (*New York Social Science Review*, p. 358), robbed the usurers outright (a). Henry III, in 1253, robbed and slew seven hundred of them. Charles II, in 1672, openly plundered them. Intermediately, the story is the same, right along. After the first event, interest rose to 50 to 70 per cent (Hume, *Hist. Eng.*, chap. xii, and Matthew Paris); and after the second, loans were impossible to negotiate. (Somers' Collection of Tracts, vol. iv, p. 67, quoted in Sinclair's *Hist. British Revenue*, London, 1803, i, 400.) It is curious that the small portion of this plundered money afterward recognized as an obligation by government, forms the basis of the present national debt of Great Britain, and, in point of fact, is unpaid to this day! (His. Rev., by James Postlethwayt, p. 107.)

These repeated acts of robbery and oppression had two remarkable effects upon the history of interest. First, by impoverishing the Jews it forced Christians into the coveted and indispensable, but interdicted trade; and second, by forcing Christians into it, it forever broke down the barriers which Leviticus and the church had raised up against it. At this point in history, it dropped its disreputable name of usury, and adopted the parvenu, but now entirely respectable, title of interest.

It is about this time that we have the earliest record of the rates paid for money. The following will be found mentioned in an essay on the subject which I published in 1865 (New York Social Science Review, i, 357). For some of the rates mentioned I am indebted to Walford's Insurance Guide, London, 1857:

MARKET RATES OF INTEREST IN ENGLAND.

Date.	*Place.*	*Condition.*	*Rate p. c.*
1173	Norwich, Eng.,	Convent bond	16 to 19
1272	York, "	Nobleman's bond	43
1547	London, "	Royal bond	14
1553	" "	" " and mortgage . . .	12
1560	" "	" " "	14

Date.	Place.	Condition.	Rate p. c.
1624	London, Eng.,	Royal bond	8
1641	" "	Parliamentary loans	10
1641	" "	" "	8
1650	" "	Land Purchases	6 to 7
1655	" "	Exchequer bills	8 to 12
1670	" "	Market rate	7
1680	" "	Municipal loan	4 to 5
1680-90	" "	Exchequer tallies	10 to 12
"	" "	East India Company's loan	4
"	" "	Goldsmiths' call loans	6
1697	" "	Bond and mortgage	6 to 10
1700	" "	Exchequer bills	5½
1704-1815	" "	Bank rate of discount	4 to 5
1815-1821	" "	" " "	5
1821-1825	" "	" " "	4
1825-1827	" "	" " "	5
1827-1836	" "	" " "	4
1836	" "	" " "	4½
1837	" "	" " "	5
1838	" "	" " "	4
1839	" "	" " "	4 to 6
1840	" "	" " "	4½ to 5
1840-1843	" "	" " "	5
1843	" "	" " "	4
1844	" "	" " "	2½

Through the operations of the Bank Act of 1844, the rate of discount from this time forward merely indicates the temporary plentifulness or scarcity of the bank reserve.

These scattered data might be greatly multiplied had I time to consult works of reference; but those adduced, strengthened by my general recollection on the subject, prove at least one point of interest in this connection; that the rate of interest in England has steadily fallen during the past seven hundred years, and fallen at a sensible rate, and that on the average it is lower at the present epoch, than ever before. Let us now glance at its history in Europe generally.

Market Rates in Other Countries.

Date.	Place. Condition.	Rate.
1171	Venice, forced loan	4
1201	Flanders, market rate	20 to 30
1311	France " "	30
1336	Florence, exchequer loans	15
1490	Piacenza, market rate	30 to 40
1545	Genoa " "	10
1560	Antwerp, loan to Queen Elizabeth of England,	10 to 12
1560	France, national debt	12
1566	Low countries, market rate	12
1600	Spain, market rate	10 to 12
1600	Venice, " "	15
1600	France, " "	8½ to 10
1600	Low countries, market rate	6

Date.	Place. Condition.	Rate.
1650	Low countries, national debt	5
1655	" " " "	4
1660	Sweden, market rate	10
1660	Is. Barbadoes "	15
1660	Turkey, "	20
1661	Scotland, "	10 to 12
1690	Holland, "	3 to 4
1685	States of the church, market rate (*b*)	2⅔
1700	" " bond and mortgage	3

Except in Venice, and perhaps in some other of the former republics of Italy, where contrary to the general course of countries, the government and state of society has retrograded instead of advanced, the rate of "interest" in Europe generally presents the same aspect of steady and material decline. This decline is doubtless due less to the increase of wealth than the increase of security. There are many countries in Europe which were once richer in re-productive wealth than they are now, but where the rate of interest has nevertheless fallen. When the history of interest is studied, this observation will receive striking confirmation; for there we shall find instances where states have doubled and quadrupled their capital in a single decade without any perceptible fall in the rate of interest; while a trifling political disturbance has sufficed to increase it many fold.

Legal Rates of Interest for Centuries back.

The very little bearing which the legal rate of interest has upon the market rate is scarcely apology enough for referring to it here. But briefly, interest or "usury" was first permitted in England in 1545 and the limit fixed at 10 per cent; 1552, interest was again forbidden; 1571, re-enactment of 10 per cent limit; 1624, 8 per cent; 1651, 6 per cent; 1715, 5 per cent; 1856, interest made free. The following table affords the only information I can put my hands upon in this emergency, of the legal rates of interest in other European countries in past ages:

Table showing the legal rates of interest which were enacted in Continental Europe at various times.

Year.	Country.	Legal Rate.
1228	Verona	12½
1270	Arragon	18
1270	Modena	20
1272	France, limit for Jews	48
1311	" " fairs of Champagne	20
1600	"	06¼
1661	"	07

Year.	Country.	Legal Rate.
1545	Low countries	12
1640	" "	05
1680	" "	04
1720	" "	03
1760	" "	02
1566	Scotland	10
1660	Sweden	06

The effect of a legal upon the market rate is to heighten rather than lower it, since the penalties which accompany usury laws enhance the risk of lending. Nevertheless, since important commercial laws are scarcely ever flagrantly arbitrary—for commerce controls the necessities of kings and parliaments as well as those of merchants—the legal rate is generally something of a rude approximation to the market rate. Taking this rule for a guide, we have another proof that the rate of "interest" has hitherto steadily declined.

PRESENT (TEMPORARY) MARKET RATES ON SHORT LOANS AND THE BEST SECURITIES.

The following table shows the rates of interest current in open market in the leading cities of the world, in the early part of May, 1872:

London, (stringency)	3⅞
Paris, (stringency)	4¼
Amsterdam	2¼
Hamburg	3
Berlin	3¼
Frankfort	3¼
Vienna and Trieste	5
Madrid, Cadiz and Barcelona	6
Lisbon and Oporto	7
St. Petersburg, (stringency)	7
Brussels	3½
Turin, Florence and Rome.	5
Antwerp	3¼
Bremen	2¼
Leipzig	4½
Melbourne	8
New York, (stringency)	5

[illegible].—HISTORY OF INTEREST IN THE UNITED STATES.

Rate of interest yielded on investments in U. S. bonds at intervals from from 1798 to the present time.

Year.	Rate p. cent.	Remarks.	Year.	Rate p. cent.	Remarks.
1798	.08	Peace 8's	1807	.06⅛	" 6's
1805	.06½	" 6's	1808	.06	" 6's
1806	.05	" 3's	1809	.05⅞	" 6's
1806	.06¼	" 6's	1812–14	.10	War 8's
1807	.04½	" 3's	1813	.06½	" 6's

Year.	Rate p. cent.	Remarks.
1814	.06½	War, 6's
1815	.07¾	" 6's
1816	.06⅛	Peace, 6's
1817	.06	" 6's
1818	.06	" 6's
1821	.04¼	Peace.
1834	.03¼	"
1844	.04¾	" 5's
1854	.04¼	" 5's
1854	.03¼	" 6's
1859	.04½	" 5's
1859	.03¾	" 6's
1860	.05	" 6's
1861	.08¼	War, 5's
1861	.07	" 6's
1861	.06	War 6's, Av. of all the gold bonds.
1862	.05½	" "
1863	.07¾	War. Av. of all the gold bonds.
1864	.10¼	"
1865	.08½	"
Average rate yielded by all gold interest bond investments during war,	.08¼	
Average rate yielded by all currency interest bond investments during war,	.10¾	
1866	.08	Peace, 6's
1867	.07	"
1868	.06¼	"
1869	.06¼	"
1870	.06¼	"
1871	.06¼	"
1872	.06	"

But owing to the long continued existence of those political disturbances which culminated in the late civil war, these facts serve rather to show the fluctuations which have occurred in the credit of federal government, than the course of the rate of "interest." This view is confirmed by the fact that the bonds of the several states of Massachusetts, New York, and Ohio stand higher in the market than those of the federal government, a fact due mainly to the temporary inferior credit of the latter. Capital is loaned on private credit at rates more favorable still. The rates charged for loans of money "on call" are affected more by the immediately local supply and demand of currency for the time being than by any of those more basic and permanent causes and influences which eventuate in an average rate of interest. For this reason they will not be adduced in support of the assertion last made. They are nevertheless adduced in this place, together with the current market rates of interest on various classes of securities throughout the United States, because of their general pertinence in this connection

Table showing the Market Rates of Interest in certain principal States of the United States in the year 1872, after a Table on the same subject compiled in 1866, and published in "Statistics of the United States," by Alexander Delmar, Director of the Bureau of Statistics.

Locality.	Rate p. c. per annum real estate bonds and mortgages.	Rate p. c. per annum 1st class comm'l paper, 60 days, endorsed.	Rate p. c. per annum 1st class comm'l paper, 6 months, endorsed.	Rate p. c. per annum comm'l paper, 6 months, unendorsed.	Call loans, 1st class collateral, rates p. c. per annum.	Rates p. c. per month pawnbrokers loans.
Alabama—Mobile	8	9	9–12	18–36	8	....
Arkansas—Little Rock	10	12–18	18–30	30–60	10	....
California—San Francisco	6–12	12–15	18–24	24–36	6–12	4
Connecticut—Hartford	6	6–8	6–8	12–15	6	....
Delaware—Wilmington	6	6	10	10–12	4–8	....
Dist. Columbia—Washington	6–10	8–10	10	12–16	12	....
Illinois—Chicago	8–10	10	12–15	18–24	7–8	....
Indiana—Indianapolis	10	10	12–15	18–24	7–8	....
Iowa—Burlington	10	10	12–18	18–24	8–10	....
Kansas—Leavenworth	12	12	12	18–24	......	....
Kentucky—Louisville	6–10	9	12	18	4	2
Louisiana—New Orleans	8–9	10	12–15	15–18	6	....
Maine—Portland	7 3-10 – 8	7 3-10	7 3-10	12–18	6–9	....
Maryland—Baltimore	8–9	7–10	9–12	12–15	4–6	....
Massachusetts—Boston	6 – 7 3-10	5½	5½	8–12	3–4½	....
Michigan—Detroit	7–10	8–8½	12	24–36	6½–9	2–6
Minnesota—St. Paul	10	10	10–12	24–36	7	....
Missouri—St. Louis	10	8–10	10–15	18–36	8–10	....
New York—Albany	6	7	7	......	6	....
New York—New York	6–7	6	6½–7	9–12	2–5	2
Ohio—Cleveland	8	9	10	15–18	7	....
Pennsylvania—Philadelphia	6	6	10	10–12	4–5	....
Pennsylvania—Pittsburg	8–12	9	10	24	8–9	2
Virginia—Richmond	10–12	12	12–18	24–30	9	....
West Virginia—Wheeling	6	8–10	10	10–18	10	....
Wisconsin—Milwaukee	10	10	12	18–20	7 3-10	3

But the rates allowed on bank balances do furnish a tolerably correct indication of the prevailing rates of interest on good security in a given locality, and these, in New York, will hardly average, taking savings and private banks together, more than 3½ to 4 per cent. The same rate will hold good for Philadelphia. But in Boston, I am informed, that the rate allowed on the same class of security is fully one-half of one per cent below that current in New York.

There is yet another indication to the average rate of interest earned by capital in the United States during long periods, which is fully as safe and immeasurably broader than that afforded by the rates paid for bank balances.

7 3/10

7 3-10 @ 8

7 1/3

The nature of interest (*c*)—a subject which will be treated in its due order—proves that the net rate of interest realized in a community, state, or nation, of any considerable size, is necessarily correctly marked by the rate at which the wealth of such community, etc., augments, after allowance is made for augmentation or diminution by removal, emigration, war, or other exceptional, arbitrary, or violent causes. In other words, that in the long run, the annual rate at which the whole mass of capital increases, and the average annual rate paid for the loan of any portion of it, is necessarily the same (*d*).

Taking this great principle for a guide, we find that the net increase of wealth in such states of this Union as have been least disturbed by any of the exceptional causes alluded to, was during the forty years from 1830 to 1870, as follows: Maine 4½ per cent; New Hampshire, 4; Vermont, 3; and Massachusetts, 3½ (*e*) Connecticut has been largely affected by the overflowing of New York population and wealth caused by the abundant immigration of both into the last named state from abroad. Rhode Island (the other New England state) has been affected by other exceptional causes.

The indications presented by this view of the subject, as well as that afforded by the sales of our Federal bonds at the most favorable period in our history, point to 3 to 3½ per cent per annum as the net rate which investments of capital have realized in the United States, from the foundation of the government to a recent period.

The rates actually realized by certain leading life insurance companies, which have been adduced in a paper on this subject read by Mr. William Barnes, at the October session of your convention, are, in my opinion, not entitled to be regarded as valid evidence at all.

1st. Because they do not prove what average rate of interest has been realized by all companies, the weak, the inexperienced, the insolvent, and the bankrupt, as well as the ably-managed, the experienced and the successful.

2nd. Because they only embrace an average period of eleven years, one entirely too short for any such conclusion as that reached, which affects the entire future of life insurance contracts.

3rd. Because they embrace the period of the late civil war, when the interest accounts of the companies adduced, were

largely swollen by accessions of revenues from "premium on gold," an item which by no conceivable sort of logic can properly be included in interest (x).

4th. Because no allowance is made for the cost of superintendence.

Deducting gold premium, allowing for losses of the whole or part of the principal sustained by the companies adduced, and those not adduced, and allowing also for the cost of supervising the loans, and I think it will be difficult, even during the brief and exceptionably prosperous period covered by the tables alluded to, when the currency was continually increased by new emissions of legal-tender paper money, when nominal prices kept continually advancing, and when commercial failures were rare—to show that even 4 per cent, *net*, in gold, or equally good money with that loaned, was earned upon the investments instanced.

IV.—The Ultimate Causes of a Rate of Interest.

These may be briefly summarized in the form of a diagram:

Interest:
(as the term is commonly used.)

1 Cost of superintendence of loans.
- 1 Duration of Human life.
- 2 Progress of the Arts.

2 Net interest, or Usufruct, or Capital Gain.
- 1 Production.
- 2 Abstinence.

3 Risks.
- 1 Vital.
- 2 Political, Legal, and Commercial.
- 3 Ultra-Social.

Growth.

If this diagram seems a little fanciful, the fact is due less to incorrectness in respect of the relations indicated, than to the difficulty of properly expressing such relations in a pictorial manner.

Interest depends directly upon the usufruct or the net rate of the increase of capital. This again depends upon Abstinence; and Abstinence upon the least consumption of the total product of labor, compatible with average enjoyment. Consumption is restrained and Production stimulated mainly through the development of the vital and other forces of nature.

Interest rests finally upon Growth; for pared down to its core, it is simply the rate at which Production exceeds Consumption.

Interest depends collaterally upon two other elements, the first of which is Risk. Risk is divisible into commercial and political Risks; and these depend upon Government and Justice.

Interest depends upon the cost of superintending loans of capital; and this depends upon two other elements, the Progress of the Arts in economizing labor, and the Duration and Intensity of Life in increasing our sum of individual capacity to perform labor.

Lastly, Interest rests upon Growth and Credit.

It would seem that Interest is a subject somewhat more complex than is commonly supposed; and that interest without the cost of superintendence, or interest without risk, proves to be quite a different thing from interest constituted of both.

That a function so complex as interest, should, under all circumstances, whether embracing the elements of Labor and Risk, or not, be known by the simple name of Interest, goes to prove what little attention has been paid to its analysis. If the word *usufruct* were used to signify net interest or capital-gain, or interest divested of the cost of superintendence and risk, a very useful and necessary term would be added to the language.

In order roughly to illustrate the various elements that enter into Interest, let a loan of money, unsecured, say for example on [illegible] paper, in the state of New York, at the usual legal limit, seven per cent, be instanced.

Of this seven per cent perhaps one-half of one per cent is a fair compensation for labor performed, or time lost, either in waiting for the borrower to come, or upon him when he does come, or in drawing or printing and stamping the notes, bonds, or other evidences of debt; or in collecting it when due—say one-half per cent.

Then for the risks of war or civil commotion which may vitiate the contract, or render it worthless, let a similar amount be allowed—say one-half per cent.

Then for, I regret to say it, comparatively the greatest risk of all in New York, that of the law power proving inadequate to compel due observance of the contract, and also for the risk of *ex post facto* or other laws which may be passed and impair the contract—say one per cent.

Then for the risk that the borrower may fail to pay the debt when due, either from temporary inability, or permanent insolvency—say one and one-half per cent.

Finally, for the risk that the agent, if any, or the immediate lender, may fail to collect the debt, either through inexperience,

neglect, absence, sickness or death; and for other remote risks, such as forgery, the dishonesty of agents, attorneys, or trustees, etc.—say one-half per cent.

Usufruct, and Interest, Illustrated.

Net interest, or usufruct,		3
Labor of superintendence		½
Risks:		
Political	½	
Legal	1	
Commercial	1½	
Personal (*g*)	1½	—3½
Interest, loaded (or "interest") as commonly understood		7

Any rate exceeding the legal limit is termed *usury*, or interest interdicted.

The term "interest" is often used indifferently with reference to both: 1st. net interest, or usufruct; 2nd. interest loaded. When used with reference to life insurance valuation, or premium tables, it is always net interest that is meant, because the elements of labor and risk that enter into the composition of loaded interest are entirely extraneous to the necessary elements of calculation upon which such tables are predicated.

It is claimed that a general review of the foregoing facts lead substantially to the following conclusions:

1. The rate of loaded interest, or "the rate of interest" as the term is generally used, has a tendency to fall.

2. The rate of net interest, or usufruct of capital, or "interest" divested of superintending labor and risk, has a tendency to rise.

V.—Influences at Work in the United States.

Beside the permanent tendency, as it appears to me, of net interest, to rise, as the rate of production gradually exceeds that of consumption, (*h*) there are certain other influences at work which more or less temporarily affect the rate of loaded interest in the United States. The first of these finds its origin in a comparison between our political and social affairs and those of other nations. A steady influx of capital into this country from countries where lower rates of interest prevailed, occurred from the close of the war of 1812 (*i*) to the opening of that of 1861. Then the tide turned backward, until success rewarded our arms, when it resumed its previous flow with a vigor increased many fold, so that while the sum of foreign investments in this country was

estimated at 222 millions in 1853, and was probably considerably increased up to 1861, then so largely withdrawn as to amount to but a comparatively insignificant sum toward the end of the civil war, it is now estimated by financial writers at about 1,500 millions. This influx of capital has hitherto tended to lower the rate of loaded interest in the United States. What further effect this influence is destined to have, depends much upon the course of affairs in Europe; for it would seem that the rate of loaded interest in the chief money markets of the two hemispheres is almost equalized already. In some places indeed, and on seemingly equally good security it is at present higher in Europe than America; but this is not general, and may be but temporary.

Another class of influences find their origin in the course of our political and social history regarded by itself. Previous to the civil war the contentions which arose out of the subject of slavery tended to enhance the loaded rate of interest, while low rates of federal, state, and municipal taxation, and a continually improving administration of justice, tended to lower it. Since the war these influences have to a great degree changed places. The permanency of the federal government seems more assured, but taxation has swollen to an extent previously deemed impossible, (*k*) and is coupled with a public wastefulness so general and so enormous (*l*) as to seriously affect prices, including the price of loans of money; while the administration of justice has grown so uncertain as to have somewhat impaired public confidence in the impartiality of the courts (*m*).

I trust that these influences are but temporary, but whether they are or not is a calculation lying entirely beyond the province of this paper.

VI.—The Present General Tendency of the Rate of Interest.

The sudden and surprising development of unsuspected forces in nature which has taken place since the beginning of this century, the improvement in hygiene and modes of living, the progress of invention and mainly the substitution of steam-power and electricity for vital forces, the advance of agriculture, the tried solidity of representative government, the paramount authority accorded to law, the improved forms of credit that have been introduced, are all causes which should result, and which, we

know have resulted, practically, in the increased ability of mankind to save. The increase indicated deductively by the general facts adduced, is proved inductively by the statistics of savings banks in various countries. While it does not follow, because the savings of certain classes in given countries, and at a given period, increase, that abstinence and its fruit, capital, increase, and that opportunities for the employment of capital increase; yet it does follow that a slow but general average improvement in the condition of mankind in given countries (I mean its condition irrespective of government), coupled with such a progressive advance in the arts as the past era exhibits and assures for the future, bespeaks a gradual increase in the rate of net interest or or usufruct of capital in those countries.

These signs of progress are not confined to the United States but are to be observed all over the world. Barbaric races are being brought to civilization; the enslaved are being brought into the arena of freedom; the desire of wealth is extending, and the means of accumulation multiplying; civilized nations are advancing into Asia; commercial enterprise is penetrating Africa; hardy and thrifty races are diffusing themselves over of the wilds of America; the steam engine has made its appearance in China; railways are spanning India; and a circle of electric wires is being wound around the entire globe. Myriads of human lives that before were passed in the night of serfdom, barbarism and sensuality are passing into the broad day of liberty, civilization and thrift; capital is being rapidly garnered in vast masses, and as rapidly again diffused into countless channels of profitable employment. The spirit of enterprise and providence affects the whole human race; old and restrictive forms of social organizations are disappearing; new, higher and stimulating forms are springing up in their place; the nearly extinguished momentum of long fatigued vital forces is being replaced by the fresh and powerful stimuli of newly discovered and newly subdued physical forces; the demand for capital is increasing; and the rate of net interest must advance!

Men are no longer simple organizations of rude muscular force; they are the intelligent guides of powerful engines and machines, which, under their direction, perform prodigies of skilled labor, each day eclipsing the prodigies of the day before. Each man thus becomes, so far as production is concerned, as effective as

were several men forty or fifty years ago; and instead of occupying himself as he was obliged to do then, in devising how best to distribute the little he produced, he is continually entertaining new wants, and encouraging new desires. All this betokens a radical change in the former relations of production and consumption—a change due to the 70,000 miles of railway, and to the countless steam engines and labor-saving machines which this country now possesses, and of which, half a century ago, it scarcely dreamed. And from this change, which is as yet scarcely accomplished, must necessarily result a change in the direction of the tendency of the rate of interest.

My opinion is that up to within the last half century, both the rate of loaded interest and of net interest, declined; the former because of increased security, the latter because of diminished means of employment for capital.

Since the commencement of the last half century, while the rate of loaded interest has continued to decline in consequence of continued and increased security, I believe that the net rate has advanced by reason of the conquests of steam and electricity.

The current rate of interest on the best securities in Holland during the last century was not above 2 per cent. With no material changes in the form of its government, or the spirit of its laws, that rate has since advanced. The same thing may be said of England, though in a lesser degree. In 1757 the 3 per cents were funded at par. They now stand at 93. In Germany, of late, the rate of interest has advanced. In this country, from thirty to seventy years ago, the rate of interest as roughly indicated by the market prices of government bonds, was not much over half the present rate; and although something of this great difference may be due to the altered credit of the government, yet only something of it is, and not all of it.

It is a common saying, now, that money flows toward a low rate of "interest." So it does—for security; but it flows also towards a higher rate—for investment. Yet since money on the whole, flows more toward than from London, Amsterdam, Frankfort, etc., where the lowest rates of interest prevail, it follows that, though seemingly lower, the rates current in those cities are, in the long run, and all things considered, higher. This fact serves to mark the distinction between net and loaded interest, and somewhat also to confirm the belief that, generally, the net rate of interest is advancing.

VII.—Its Present Tendency in the United States.

Though for the present, and on the whole, the net rate of interest in the United States may possibly be slightly higher than the net rate of interest generally (though this is doubtful), there are no reasons, so far as I can see, for believing that its tendency here, differs from its tendency generally. That tendency, as has been already indicated, is believed to be upward.

A SAFE RATE FOR LIFE INSURANCE COMPANIES.

If now I were asked the practical question: What is a safe rate to assume for life insurance companies in this country during the next half century, I should say 4 per cent. per annum, although in well-managed companies 4½, or even 5, might be, and undoubtedly are, practically, rates, safe enough. But were the question on the adoption of a valuation table I should not hesitate a moment in declaring for a four in preference to a four-and-a-half, or any higher rate.

I believe that the time will come, though not in this generation, when a four-and-a-half per cent. table will be more desirable; but it has not come yet.

THE FUTURE OF AMERICAN SECURITIES.

If I were asked another practical question: What is the probable future of American securities? I should reply, without a moment's hesitation, that all secure and flawless investments yielding interest or dividends to the amount of 4½ per cent per annum, and not maturing within fifty years, are destined to realize par, and to exceed par in proportion as the interest or dividends on them exceed 4½ per cent.

It should be borne in mind, however, that by "secure" is meant divested of all risk; and by "dividends," not expectant dividends, but dividends assured (*n*).

THE BONDS OF THE UNITED STATES.

If asked the same question with reference to the bonds of the federal government, I should say, that, with a material amelioration of taxation, they can be funded into 4 per cent perpetual annuities before the end of this century, and, in my opinion, *this is the best possible form into which the debt can be cast*; because it will enable the Treasury to take advantage of the prevailing, though, as I believe, erroneous opinion, that the rate of

interest is falling. Our federal bonds have hitherto remained depressed—I mean since the close of the war—mainly from three causes. 1st. The strength and revenue resources of the government were not sufficiently well appreciated. Governments need advertising, as well as individuals. The war advertised ours, somewhat; but our statisticians and bankers, in spite of their desire to magnify our country's resources, have actually, from maltreatment, succeeded in belittling them (*o*). 2nd. Taxation has been excessive, and although it is being somewhat reduced, the reduction is neither material nor rapid enough (*p*). 3rd. The bonds are funded at terms of time entirely too short. This is an error of administration, however, which, happily, under the act of April 12, 1866, is susceptible of being remedied by the Treasury at any time. In a word, I regard the outstanding bonds of the United States even upon the conditions of liquidation now attached to them, as not only the most secure, but the most profitable investment within the whole range of present observation.

With reference to the above predictions, it should be borne in mind that I leave entirely out of view whatever effect may be produced by such a change in the now prevalent conviction concerning the tendency of the rate of interest, as the views herein expressed, or the facts as they develop themselves, may serve to bring about.

VIII. Sophisms.

I have only space to notice a few that occur to me at the moment of writing.

1. It is not true, as held by Professor Perry (Letter to Hon. G. W. Smith, July 11, 1871, published in Rep. of Com. on Interest, Nat. Ins. Con., 1871) and others, that the supply of "legal-tender paper money," or, indeed, any kind of money, permanently affects the rate of interest. There is, indeed, an interval of time following new and redundant issues of money (whether specie, as when Spain was flooded with gold and silver, following the discovery of America; or paper, as when, during the late war, the United States treasury took advantage of new emissions of currency to "fund" certain bonds at lower rates of "interest") when the rate of "interest" rises. But so soon as the rise in prices which inevitably follows, suffices to employ all

the currency emitted, which it is soon bound to do, this temporary phenomenon disappears. See, on this subject, Essay in the New York *New Nation*, June 25, 1864.

The employment of the term "money" as synonymous with capital, in this connection, by Prof. Perry, must also be regarded as erroneous. Aristotle's objection to usury, on the ground that money could not grow, might possibly have some reason for its basis if the growth of all capital, or its power to stimulate growth, were as restricted in degree as the growth, or the power to stimulate it, which pertains to money. Live stock, corn, timber, cotton, wool, etc., will grow and increase solely by the operation of natural forces, as heat, air, moisture, etc. It is true that these forms of capital will grow more surely and rapidly if to the forces of nature is supplemented the labor of man; nevertheless, they will grow and increase without it. And even gold, silver, iron, houses, ships, and other inorganic commodities, though incapable of growth, are, nevertheless, susceptible of such application as to render them potent instruments to stimulate the growth of animals and plants. But money, when it ceases to become capital, as it might, if hoarded, or if issued in excess of the current demand for its employment, is utterly incapable either of growing by itself, or of contributing toward the growth of other things. It is solely from the fact that capital will enhance in quantity by growth, while it is in the hands of the borrower, that interest is defensible. I differ from the accomplished professor with great reluctance, but, in this respect, I am compelled to take issue with him (*q*).

2. The rate of "interest" is a term improperly used when applied to the rate (often lasting but a few hours) which indicates the temporary loanable value of capital in a stock or money market. It is properly used only when applied to the permanent loanable value of capital.

3. To ascertain the average rate of "interest" in a country, a practice has obtained of adding together the rates current at a number of places, and dividing the quotient by the number of places. This is erroneous, the amount loaned at the given rate in each place being a necessary element in the calculation.

4. A certain ~~Father~~ Mr. O'Callaghan published a work against usury, which, in 1856, had passed through no less than five editions in New York. There are here certain journalists

who make it a specialty to periodically advocate the establishment of an illimitable, irredeemable, interchangeable, elastic paper currency which, they claim, will permanently reduce the rate of interest. There is a society in New York, called the American Anti-Usury Society, which maintains that the giving of interest "subverts moral principle," "prevents the establishment of truth and righteousness among men," fosters monopoly, crushes commerce, destroys liberty, tramples on the poor, exalts the rich, and, in short, is responsible for the most terrible political and social evils. There is no answer to be made to such people. The only way is to let them alone. I would, however, say to the working classes whom they address, and, I regret to be obliged to believe, seriously affect, with their blatant nonsense, that to attack interest is to attack credit, and also to attack that divine law which commands animated nature to develop and increase; for interest is mediately born both of credit and of growth.

NEW YORK, *May*, 1872.

ALEX. DELMAR,

Late Director of the Bureau of Statistics of the United States.

To H. S. OLCOTT, Esq.,
Secretary National Insurance Convention, New York.

NOTES.

(*a*) "They (the Jews) seemed to trade and acquire for his (the king's) profit as well as their own; for at one time or other, their fortunes, or a great part of them, came into his coffers." History of the Exchequer by Thomas Madox, chap. vii. § 1.

(*b*) This was on the conversion of the Pontifical 4 per cents, (market price 122) to 3 per cents, (market price 112) the first instance of voluntary funding to lower rates, I remember to have read of.

(*c*) See Social Science Review, I. 193.

(*d*) Buckle, I. 53. Consult also Mill, Fawcett and Hearn. (Hearn on *Plutology*). The theory alluded to in the text and which is fully treated in The Social Science Review, was caught sight of, but only caught sight of, by these illustrious economists.

(*e*) U. S. Censuses. For details according to census of 1860 see S. S. Rev. I, 208.

(*f*) Further to show the invalidity of the evidence embraced in Mr. Barnes' paper, it is neccessary to point out the fact that a large portion of the essay is devoted to the usury laws of the various states, a subject whose only connection with the topic under discussion is the remote one previously pointed out in this paper, viz: that legal rates during long periods of time rudely indicate market rates, and are thus, perhaps, of use to the historian. But when, as in Mr. Barnes' case, the subject is the market rate of interest within recent times, to quote the legal rate is simply irrelevancy. Not simply irrelevancy, in this case, either, for the compilation thus vainly paraded by Mr. Barnes, is merely a later revision of what is due originally to the industry of Col. J. B. C. Murray, (*History of Usury*, Philadelphia: Lippincott, 1866.) whom nevertheless, Mr. Barnes in his essay strangely fails even to allude to.

(*g*) Under this head is included such small risk as is noticed in the analytical diagram under the caption of Ultra-Social, and which is intended to embrace all those casualties not at present capable of being computed, as earthquakes, floods, &c.—in a word those not embraced in the field of insurance.

(*h*) The success of ten-hour, and recently of eight-hour strikes, is regarded as tending to confirm the belief that production is increasing its rate of gain over consumption in the United States.

(*i*) In 1803, out of $70,000,000 federal funded debt, $32,000,000 were held by foreigners, mainly English and Dutch. By the year 1818 the federal funded debt increased to $99,000,000, and the foreign-held portion fell to $25,500,000; but it is believed that the difference, and more, was invested by foreigners in other enterprises in this country.

(*k*) In 1830 the combined federal, state, county, and town taxes levied in the United States amounted to $32,837,383; population, 12,866,020. In 1860 the total taxes amounted to $150,241,346; population, 31,443,321. In 1870 the total taxes amounted to about $600,000,000; population, about 40,000,000. These taxes are divisible into three parts. 1st, That which is expended for the support of necessary government, including, of course, interest on the public debt. 2nd. That which is expended for

needful public works. 3rd. That which is expended wastefully or corruptly. So long as taxation does not exceed an amount requisite for the first two purposes specified, it is not believed that, in the long run, it will affect prices; but to the extent that it is expended uneconomically it must tend to enhance prices. While it is not believed that the taxes levied in this country either in 1830 or 1860 were expended uneconomically to any serious extent, the same cannot be said of those levied during the past seven years.

(*l*) In a single case (that of the New York Tammany ring) the amount of public treasures corruptly expended or stolen outright has been estimated at a sum sufficient to cover, for a year, the total expenses of the municipal government.

(*m*) In New York, several judges have been presented by the Bar Association (of lawyers) for impeachment on charges of corruption, and one of the number has resigned his office, pending the charges. There is no party bias entertained by the Bar Association.

(*n*) A practical plan was conceived and perfected by the writer, some years ago, for separating the element of risk from the interest and dividends of commercial and financial investments, by establishing a *Credit Assurance Institution*. The outline of this project, and some of the calculations upon which it is based, are given in The New York *Financial and Commercial Chronicle*, in August, 1865. The project, when matured, was submitted to, and met the approval of a number of leading capitalists in New York, but for lack of sufficient capital, it was, for the time, at least, abandoned.

(*o*) See on this subject *Debt and Resources of the People of the United States*, Social Science Review, pp. 387–417.

(*p*) For a more complete review of the extent and progress of taxation in the United States, since the war, than is afforded by the tables in the official census, and also with reference to the effect of excessive taxation on prices, see the writer's *Letter on the Finances*, September, 1868, published quite generally throughout the United States, at the time, and his Address at Columbus, Ohio, August 25, 1870, published in the *Statesman*, and other journals. Both of these compilations have since appeared in pamphlet form, corrected.

(*q*) "Capital, by persons wholly unused to reflect on the subject, is supposed to be synonymous with money." John Stuart Mill, Political Economy, ch. iv, § 1.