ESSAY IV.

ON THE

NATURE AND PRINCIPLES

OF

PUBLIC CREDIT.

CONTAINING

Observations on the Syſtem of Redemption laid down in the late Act of Parliament; and on the Means of preſerving the Sinking Fund in its proper Line of Service: together with a brief Account of the Riſe, Progreſs, and Preſent State, of the Public Debts.

TO WHICH IS ADDED,

AN APPENDIX.

Containing Tables of the Comparative Values of Annuity Stocks bearing different Rates of Intereſt; with their Explanation, and Uſe.

Gale.

LONDON:

Printed for B. WHITE and SON, at Horace's-Head Fleet-Street.

M,DCC,LXXXVII.

To the Right Honourable

WILLIAM PITT,

CHANCELLOR OF THE EXCHEQUER, *&c. &c. &c.*

I BEG leave, with the utmoſt reſpect, to addreſs the following ſheets to You, Sir, becauſe the Subject of which they treat appertains entirely to the buſineſs of that great Department over which you preſide.

When I conſider that the great and important Buſineſs of the State muſt, neceſſarily, ſo occupy your time, as to afford you little or no leiſure for conſiderations of ſmall moment; I think it my duty to mention, that the Doctrines and Obſervations which I here beg leave to lay before you, are conſidered to be of the utmoſt National Importance; and that they are not the productions of haſty or tranſient thought; but are derived entirely from a REGULAR INVESTIGATION of the NATURAL and IMMUTABLE LAWS and PRINCIPLES of the SUBJECT.

INFLUENCED by the ſame conſideration, I beg leave to ſubjoin, by way of Introduction, a conciſe Summary of the principal Poſitions and Arguments contained in the Work; to the end, that no greater portion of your time may be required in the peruſal of the whole, or any part of it, than the Importance of the Poſitions and Arguments there briefly ſtated ſhall appear to merit. And, although it may perhaps, at the firſt ſight, appear ſingular, that I ſhould prefix this Addreſs to a work of the following Purport; yet, I am ſtrongly perſuaded, Sir, that the Soundneſs of its MATTER will not fail to render it acceptable to a mind like yours.

I have the Honour to be,

With the higheſt Reſpect,

SIR,

Your moſt obedient,

And moſt humble Servant,

LONDON,

Jan. 25, 1787. S. GALE.

INTRODUCTION.

HAVING given a brief account of the Doctrines contained in the preceding Eſſays, by way of an Introduction to the Third; I ſhall here confine myſelf to the ſubject matter of this Fourth Tract.

This FOURTH ESSAY is divided into four ſections; to which is added an Appendix.

The FIRST SECTION contains ſome obſervations reſpecting the ſyſtem of redemption preſcribed by the Act paſſed in the laſt Seſſion of Parliament.

The arguments contained in this firſt ſection are briefly theſe: viz.

'That the doctrines laid down by ſundry writers, reſpecting the effects of an *unalienable* ſinking fund as computed at compound intereſt, are inapplicable to the preſent ſtate of the public debts of Great Britain: becauſe, (among other reaſons) in the preſent ſtate of the public debts of this nation, the quantity of ſtock or of annuity required to be granted in order to obtain any given ſum of money in the market, muſt be *greater* than the quantity of ſtock or of annuity that would be redeemed by an equal ſum of money applied as a ſinking fund: and, conſequently, 'such unalienable sinking fund would, in fact, 'increase the debt by the very act of making the 'redemption.

'That although the alterations made in the 'Bill at its third reading in the House of Com'mons, render these losses avoidable *temporarily* 'in time of war, by empowering the commission'ers of the sinking fund to apply the monies in 'their charge towards the New Loans; yet, the 'system of redemption laid down in the Act is still 'exceedingly defective, and must prove entirely 'ineffectual; for the following reasons;—to wit; '—*First*, because the application of the sinking 'fund to the purchasing up of the stocks in the 'market, has a natural tendency to increase the 'prices to be paid for the redemption, and there'by to encourage *speculative* purchases in the 'market, which naturally tends to increase them 'still more: but, when a war becomes appre'hended, the speculative adventurers who had 'before flocked to market as purchasers, natu'rally crowd to market as sellers, and thereby de'press the value of the stocks *below* what they 'otherwise would be: in the same manner as the 'temporary purchasing carries them *above* what 'they otherwise would be: so that this system of 'redemption must naturally increase the loss to 'the public, not only with respect to the redemp'tion of the old stocks, but likewise with respect 'to the terms of obtaining new loans, when new 'loans shall become wanted.

'*Secondly*.—Because, the sinking fund being ap'plicable to the redemption during *peace only*, it can 'never prevent the further and further increase of 'the debts and incumbrances until the said sinking 'fund shall become so increased as to purchase up as 'much

'much stock or annuity during peace (with all the 'disadvantages of the increased price thereon), as 'shall be necessary to be granted for the additional 'monies required to be raised by loan during war: 'It is generally admitted that the debt and the in'terest thereon is already so large as to render it 'impracticable, even now, to raise the additional 'revenue that would be required for this purpose; 'and it must, evidently, become still more im'practicable when the debt and the interest thereon 'shall become further increased by new wars.'

The Second Section [Page 32, &c.] treats of the necessity of preserving the sinking fund in its proper line of service (agreeable to the *original intention* of Parliament, when the business was first introduced) as well during *war* as *peace*; and of the means whereby this desirable object may be accomplished.

The argument of this section is briefly this—'That, it being admitted to be impracticable to 'raise the additional revenue that would be re'quired for the purpose of redeeming as much 'debt during *peace*, as shall be incurred during '*war*; the only possible method of preventing the 'further and further increase of the public debts 'and incumbrances *ad infinitum* (which would evi'dently produce a public bankruptcy in any na'tion whatever), must be, to render the sinking 'fund applicable to the redemption (not during '*peace only*, but) during both *peace* and *war*: And 'that the only *possible* method of doing this, is, to 'convert the debt (by the subscriptions of the 'creditors) into stocks bearing a rate of interest 'as high as (or higher than) the ordinary rate of 'the market, subject to a *limited tender* for the 'periodical

'periodical redemption of the capital; whereby 'to give the new ftock a free and fecure capacity 'for rifing in value *above par* for the advantage 'of the creditors, without injury to the public 'with refpect to the price to be paid for the ne- 'ceffary periodical redemptions; and whereby 'alfo, the finking fund fhall be enabled to re- 'deem a quantity of ftock or of annuity equal to '(or greater than) the quantity of ftock or of an- 'nuity that fhall be required to be granted for 'obtaining an equal fum of money in the market: 'without which, the application of the finking 'fund to the redemption, muft, in fact, *increafe* 'the debt, inftead of *checking* it.'

The THIRD SECTION [page 37] treats of the comparative values of annuity ftocks bearing different rates of intereft, fubject to different tenders for their periodical redemption.—This fection confifts chiefly of algebraic demonftrations, and numerical illuftrations, which do not admit of abridgment. I fhall, therefore, only obferve here, that the great leading principle, or pofition, is this—'That the *value* of any annuity ftock carry- 'ing a higher intereft than that of the market, 'fubject to a limited tender for its periodical 'redemption, will bear the fame proportion to 'the *nominal capital,* as the SUM of the *tender* and '*market intereft* fhall bear to the SUM of the *tender* 'and *intereft on the ftock.*'

The FOURTH SECTION [page 51, &c.] contains a brief hiftory of the rife and progrefs of our public debts; with obfervations and remarks thereon.

Thefe remarks evince—Firft—'That had the 'nature and principles of the fubject been in- 'veftigated, the lenders, when they advanced 'their

'their money, would never have accepted of any 'other kind of ftock, but that which is here re- 'commended;—to wit;—" A ftock bearing a 'higher intereft than that of the market, fubject 'to a limited tender for its periodical redemp- 'tion." By demanding this kind of ftock, they 'would have avoided the loffes they fuftained by 'the reductions of their intereft in the two late 'reigns, and by the depreciation of the value of 'their capitals, which has fince taken place in 'confequence of thofe reductions: and, the public 'would likewife have been free from that im- 'menfe load of *artificial* debt which has fince been 'accumulated.' Secondly—'That the *artificial* '*debts* and *premiums,* which have been fo much 'complained of, are confequences abfolutely in- 'feparable from the depreciations of the ftocks: 'becaufe, when a man can lay out his money in 'any ftock at a *difcount,* with a profpect of ob- 'taining fuch or fuch an advantage from the fu- 'ture *rife* of the ftock, his own intereft will not 'fuffer him to advance it on any other ftock, 'without having, in fome way or other, an *equal* '(or a *greater*) profpect of advantage: and, con- 'fequently, the only thing that can be done, after 'the depreciation fhall have actually taken place, 'is, to grant thefe advantages to the creditors in 'fuch a way, as fhall be attended with the *leaft* '*difadvantage* to the public. Neither can the 'further and further loffes to the creditors by '*future* depreciations (nor the further and further 'loffes to the public by *future* accumulations of 'artificial debt in confequence of thofe deprecia- 'tions) be prevented, but by a converfion of the 'debt into ftocks of the abovementioned kind. 'And hence, if fuch converfion be not offered in 'a time 'a time of peace, when Government (by having 'it at its option whether to redeem or not) has it 'in its power to command reasonable and equitable terms; it will naturally be demanded by the 'lenders in a time of war, as a part of the conditions of the new loans; and, Government being 'then as it were in the power of the lenders, the 'terms demanded will, of course, be more unfavourable to the public.'

The APPENDIX contains Tables for ascertaining the comparative values of Four per Cent. Five per Cent. and Six per Cent. Annuity Stocks, subject to different tenders for their redemption; the value of a Three per Cent. Stock being given. An explanation of their construction is likewise added; together with easy rules for their application, which are illustrated by examples: And these illustrations are accompanied with practical observations, which support and confirm the doctrines before laid down.

ESSAY

ESSAY IV.

SECTION I.

Observations on the Act of Parliament, [26 GEORGE III. Chap. 31.] *for vesting certain Sums in Commissioners, to be by them applied to the Reduction of the* NATIONAL DEBT.

1. THE immense increase of our Public Debt, and the very low prices to which the Public Stocks had fallen towards the latter end of the late war, together with the low prices at which (except for a few weeks at the immediate restoration of peace) they continued more than two years after the peace took place, awakened the minds of men in general to very serious reflections.*. The necessity of establishing some permanent system of finance that should prevent the excessive increase of the public debts and incumbrances in future, was universally admitted. Every body agreed with respect to the object to be accomplished, whatever differences of opinion there might be with respect to the means of accomplishing it.

2. A regu-

* In the Spring of the year 1782, the *three per Cents* were at about 54l. and from the middle of the year 1783 to the middle of the year 1785 they were on the average under 58l.

B

2. A regular attention to the redemption of the Public Debt ſeemed to be the moſt natural, (and, I ſhould conceive, the only poſſible) means of accompliſhing the deſired object: the differences of opinion related, therefore, chiefly, to the *manner* of putting the debt into a regular courſe of redemption.

3. I have, indeed, lately, heard ſome very ingenious arguments, importing that a diminution of the debt would be an improper ſtep;—that the *injuries* which the members of the ſtate muſt neceſſarily ſuſtain from the *taxes* wherewith to form a ſurplus revenue or ſinking fund, would be much greater than the *benefits* that would be produced by the application of ſuch ſinking fund to the diminution of the debt.

This objection would doubtleſs be of very great weight, in caſe the taxes were to be taken entirely from channels, where they would otherwiſe be employed as capitals, for the ſupport of productive induſtry; and, in caſe the rate of intereſt for money (which may be conſidered as the expence of putting capitals into action) was not affected by the accumulation of Public Debt.—But, on examination, we ſhall not find it reaſonable to admit, as an *axiom*, that the monies raiſed by taxes would actually be employed as capitals for the ſupport of productive induſtry, in caſe they were not ſo collected for the public ſervice: We ſhall, on the contrary, find, that although a part thereof would undoubtedly be ſo employed, yet, another part thereof would be *uſeleſſly* expended; and ſome part would probably be expended in *vicious* purſuits. We ſhall alſo find, on examination, that if a public debt be incurred whenever occaſion or conveniency ſhall require,

quire, and no attention be paid to the diminution thereof, the increaſe in the *quantity* of the public ſtocks or annuities will naturally produce a depreciation of their *value*; with which depreciation the rate of intereſt for money naturally riſes, and a much greater burthen of taxes muſt thereby become neceſſary for the payment of the *intereſt only*, than would (on a proper ſyſtem of practice) be required both for the payment of the intereſt, and for the neceſſary redemption of the principal.

For the above reaſons, I fully admit the verity of the *primary poſition* by which the legiſlature was actuated in the paſſing of the preſent Act of Parliament, to wit:—"The neceſſity of a regular attention to the diminution of the debt": Without it, I ſhould not conſider it poſſible for the public incumbrances to be prevented from increaſing to ſuch an exceſs as muſt terminate in a public bankruptcy.

4. But, although I thus fully admit the verity of the *primary poſition* by which the legiſlature was actuated, I am fully perſuaded that the ſyſtem of practice laid down by the Act, is not, in its nature, capable of producing the deſired effects; it muſt, on the contrary, increaſe and accelerate thoſe very maladies which it is intended to prevent. To point out the defects in the ſyſtem of practice preſcribed by the Act, with that dutiful reſpect which ought always to be obſerved towards the Legiſlature, on the *one hand*, and with that decent firmneſs which is always due to well examined truths, on the *other*, is the intention of the preſent Section.

5. The reader will recollect, that when the ſubject-matter of the preſent Act was firſt brought

 under

under consideration in the House of Commons, the declared intention was, to establish such a permanent provision for the gradual diminution of the debt as should never be interrupted in its operation: and for this purpose it was proposed to vest in Commissioners (by Act of Parliament) a certain part of the Revenue, to be by them sacredly and inviolably applied to the redemption of the debt as well during war as peace.

A Bill was accordingly brought in, directing that *One Million* a year [Two Hundred and Fifty Thousand Pounds quarterly], together with such of the temporary Annuities for Lives or Years as should from time to time fall in or expire, and, together also with the Interests or Dividends on such parts of the Debt as should be from time to time redeemed, should be regularly issued to the Bank, and carried to the account of Commissioners appointed by the Bill, to be by them applied "Either in quarterly "payments for the redemption of such Re-"deemable Annuities as should be at or above "par: or, To the purchase of redeemable Pub-"lic Annuities below par, in regular portions "as nearly as may be, on every day (Saturdays "and Mondays excepted) on which the same "should be transferable." And the Bill further directed, that this system of practice should continue until the Annual Sums to be issued to the Bank on account of the said Commissioners (including the abovementioned *One Million*, together with the temporary Annuities for Lives or Years fallen in, and the Dividends or Interests on the Debts so to be redeemed) should amount to *Four Millions*; after which, the said

annual sum of *Four Millions only* should be so issued and carried to account of the Commissioners; and the Dividends or Interests on the stocks to be thenceforth redeemed, and the temporary Annuities for Lives or Years that should thenceforth fall in, should cease to be so issued, and should remain to be disposed of by Parliament *.

6. We may observe here, that the monies consigned to the Commissioners were intended, by the bill, to be uninterruptedly improved at *Compound Interest*, until the Surplus Revenue or net Sinking Fund should become accumulated to *Four Millions* a year; which, it was considered, would be sufficient to check the excessive increase of the Debt in future; and would be accomplished in about twenty-eight years. Gentlemen were not indeed entirely agreed with respect to the propriety of stopping the accumulation of the Surplus Revenue or Sinking Fund at *Four Millions*, some thinking it insufficient for the purpose of preventing the excessive increase of the Debt: If, however, there were nothing more amiss than this, it might be very easily remedied, by extending the accumulation further hereafter, in case it should actually be found necessary.

7. The establishment of an unalienable Sinking Fund, to be uninterruptedly applied to the Redemption of the Debt as well during war as peace, has been long recommended by sundry writers on the subject: But those writers considered the nature of the subject only in part. Their

* Such was the substance of the Bill, with the Amendments after the Second Reading, as printed, by order of the House of Commons. Some few alterations were made on its *third* Reading, which will be taken notice of in their turn.

Their doctrines were founded only on superficial considerations of the remote powers of compound interest: Powers which, unless fully examined in all their parts and attendant properties, are, perhaps, considering them in a *practical* point of view, the most illusive of all possible considerations.

We were told (by people who wrote in the newspapers in praise of the above-recited Bill) that "a Sinking Fund of *One Million* a year, sacredly and inviolably applied, would redeem a Debt of *Two Thousand Six Hundred and Ten Millions* in the space of One Hundred Years." This would indeed be the case if the Debt so to be redeemed should be composed of *irreducible five per cent. Stocks* *. But (besides forgetting that the great bulk of our Public Debt consists of *three per cent. Stocks*, of which, such Sinking Fund would not, in the same time, redeem *a quarter part* of the above sum) these writers seem not to have observed that an annual revenue of *One Hundred and Thirty one Millions and an Half*, would be required to produce the effect they mention: That is to say— In addition to the *One Million* Sinking Fund, *One Hundred and Thirty Millions and an Half* would be required for the annual Interest; without which, the effect they mention could not be produced. And, if a nation shall be only able to raise a revenue of *Eighteen* or *Twenty* (or, suppose we say *Thirty*) Millions, she cannot surely be benefited by those *wonderful effects* which might be produced by an *equally wonderful Revenue* of *One Hundred and Thirty-one Millions and an Half*.

We

* By irreducible 5 per cent. Stocks, I mean, 5 per cent. Stocks having their *interest* irreducible.

We may observe from hence, that theoretical doctrines, founded on the remote powers of a Sinking Fund, computed at compound interest, are very likely to plunge into a labyrinth of difficulty those who shall place dependance upon them for *practical* purposes. The *Sinking Fund* is not the only thing to be considered: the *necessary interest* requires equal consideration; and the great *practical* question, from whence *alone* the practical financier can derive any real assistance, is, To ascertain such financial principle as shall require the *least* burthen of taxes that can be possible, for the *Interest* and for the *Sinking Fund* together, in order to bring the necessary capitals into action, and afterwards to repay them, so far forth, at least, as shall be necessary for preventing the debts and incumbrances from increasing to excess.

8. It is generally admitted as an undoubted truth, that without the establishment of some solid and permanent plan for the gradual diminution of the Public Debt, the incumbrances of this nation must, ere long, become increased to an excess beyond what the nation can be able to bear *. It is likewise generally admitted, that the nation cannot raise so large a Surplus Revenue or Sinking Fund, as would be required for keeping the debts and incumbrances within any reasonable bounds, if applied to the redemption during *Peace only*: This being admitted, it will necessarily follow, that, in order to give the

* I have already observed, [Article 3.] that although this position is *generally* admitted, I have lately heard some very ingenious arguments importing that a diminution of the Debt is *not* necessary. I cannot, however, for the reasons briefly stated in the aforegoing third Article, hesitate at giving the position a full admission.

the Sinking Fund a greater power, it muſt be applied to the Redemption of the Debt (not during *Peace only*, but) during both *Peace* and *War*. And this, as has been already obſerved, was the PRINCIPLE on which the Bill was founded.

9. But, on duly examining the nature and principles of the ſubject, and comparing them with the preſent ſtate of our Public Debt, a moſt important queſtion naturally ariſes, which, in the hurry of buſineſs, when the Bill was framed, eſcaped notice, to wit: In the preſent ſtate of our Public Debt, can a Sinking Fund, *practically ſpeaking*, be applied to its Redemption, in the manner mentioned in the Bill? I anſwer, It certainly cannot:—Or, at leaſt, ſuch a ſyſtem of practice muſt be diametrically repugnant to thoſe *immutable laws of nature* by which *cauſes* and *effects* are inſeparably connected; and if, in obedience to a *poſitive Law*, a Sinking Fund be ſo applied, it can only produce an *additional increaſe* of Debt, inſtead of contributing towards the deſired effect of keeping the Debts and Incumbrances within more reaſonable bounds.

The truth of this obſervation will be perfectly evident, if we only conſider, that when a new Loan ſhall be wanted, the ſtocks or annuities that ſhall be granted for ſuch Loan muſt be granted to the ſubſcribers at a price *below* the market price, in order to give them a reaſonable profit for the advancement of their money: And, in the preſent ſtate of the Debt, (the redeemable ſtocks or annuities being below par,) the ſtocks or annuities that ſhall be redeemed or purchaſed up by the Sinking Fund muſt require the *higheſt* market-price: Wherefore, a greater

greater quantity of ſtock or of annuity muſt be granted for each *One Hundred Pounds of the Loan*, that can be redeemed by each *One Hundred Pounds of the Sinking Fund*; and, conſequently, the debts and incumbrances, inſtead of being kept within more reaſonable bounds, muſt neceſſarily be *increaſed* by the *very act* of making the propoſed redemption.

For example—Let it be ſuppoſed that *Ten Millions* over and above the ordinary expenditure, ſhould be wanted for the Public Service; and that the Surplus Revenue or Sinking Fund to be iſſued to the Commiſſioners ſhould amount to *Two Millions*: Let it alſo be ſuppoſed, that the ſtock on which the buſineſs be tranſacted ſhould be worth in the market 80 *l.* caſh for 100 *l.* ſtock; and that the *bonus* required for the advancement of the Loan ſhould be *five per cent.* reckoning the ſtock at its uſual market-price; in which caſe $131\frac{1}{4}$ *l.* of ſtock, (which, at 80 *l.* would be worth 105 *l.* and would therefore, exactly, afford the required *bonus* of 5 per cent.) muſt be granted for each 100 *l.* of the Loan.

Now, if the whole *Ten Millions* ſo wanted be raiſed by Loan, the quantity of ſtock to be granted will be - - -	£. 13,125,000
And the *Two Millions* Sinking Fund to be applied to the redemption by the Commiſſioners, will purchaſe up - - -	2,500,000
Wherefore, the quantity of ſtock by which the Debt becomes actually increaſed will be -	10,625,000

But if the *Two Millions* Sinking Fund were to be applied to the

current

current ſervice, inſtead of being applied to the Redemption, only Eight Millions would be required to be raiſed by Loan, and the quantity of ſtock by which the Debt would ſo become increaſed, would be only - - £. 10,500,000

And, conſequently, the quantity of ſtock by which the Debt becomes increaſed, in caſe ſuch redemption be made, exceeds the quantity by which it would become increaſed if *no redemption* was made, by - - £. 125,000

10. It has been ſuppoſed by ſome (not indeed by many people) that, by applying the Sinking Fund to the redemption, in the manner abovementioned, and raiſing the intereſt of the New Loans by new taxes, the *Revenue*, and therewith the *Sinking Fund*, would be increaſed, ſo as to counterbalance (or more than counterbalance) the loſs ſo ſuſtained; but this is a moſt extraordinary kind of argument. The ſelf-ſame new taxes might *ſurely* be laid, and they would *ſurely* produce the ſelf-ſame Revenue, whether the ſuppoſitious redemptions were or were not made; and, as the *Debt* (in caſe the ſuppoſitious redemptions were not made) would be *leſs*, ſo, conſequently, the *Surplus Revenue* or *Sinking Fund* would be *greater*.

For example — Let it be ſuppoſed that the monies wanted for the Public Service ſhould be *Ten Millions*: The Surplus Revenue or Sinking Fund

Fund *Two Millions*: The Market Value of the ſtock on which the buſineſs ſhould be tranſacted, 80 *l.* and the *bonus* required for the advancement of the Loan, *five per cent.* as in the laſt example; and let it alſo be ſuppoſed, that the ſaid ſtock ſhould carry an intereſt or annuity of *four per cent.* on its Nominal Capital.

Now, if the whole *Ten Millions* ſo wanted be raiſed by Loan, the quantity of ſtock to be granted will be 13,125,000 *l.* as mentioned in the laſt example; and the Revenue required to be raiſed by New Taxes, for the payment of the intereſt or annuity thereon, will be - - £. 525,000

And the *Two Millions* Sinking Fund will redeem (or purchaſe up) 2,500,000 *l.*; the intereſt or annuity on which is 100,000 *l.*; ſo that the ſaid Sinking Fund becomes thereby increaſed to - £. 2,100,000

But if the ſame additional Revenue of 525,000 *l.* be raiſed, and the *Two Millions* Sinking Fund be applied to the Current Service (inſtead of being applied to the Redemption), the quantity of ſtock to be granted will be 10,500,000 *l.* as mentioned in the laſt example, and the intereſt or annuity thereon will be 420,000 *l.* which ſubtracted from the ſaid additional Revenue of 525,000 *l.* leaves 105,000 *l.* for the increaſe of the Surplus Revenue

venue or Sinking Fund: and the said Surplus Revenue or Sinking Fund of Two Millions, will thereby become increased to - 2,105,000

Difference £. 5,000

Hence then, by making the abovementioned Redemption, the Debt (as was shewn in the last example) would be *greater* by 125,000 *l.* of stock, and the Surplus Revenue or Sinking Fund, wherewith to effect the *future Redemptions*, would be *less* by the annual sum of 5000 *l.* than would be the case if such Redemption was not made; the self-same taxes being raised in the *one* case as in the *other* *.

It is evident, therefore, that the idea of establishing an unalienable Sinking Fund to be uninterruptedly applied to the Redemption of the Debt, was taken up on a very erroneous hypothesis †. And that, unless each 100 *l.* of the Sinking Fund so to be applied, shall be previously enabled

* If the *actual* produce of the new Taxes should fall short of their *desired* produce, the deficiency would, in either case, remain to be afterwards provided for; or, on failure thereof, the *Surplus Revenue* or *Sinking Fund* would be diminished by the same amount; so that the above conclusion holds equally true, whether the new Taxes should or should not produce the sum for which they were laid.

† When I say that this idea was taken up on an *erroneous hypothesis*, I would not be understood to mean that the *idea itself* was erroneous in its *own* nature. A Sinking Fund ought to be applied uninterruptedly to the Redemption; but, it ought, previously, to be enabled to redeem a quantity of stock or of annuity equal to (or greater than) the quantity of stock or of annuity that shall be required to be granted for obtaining an equal sum of money in the market.—Of this, more hereafter, in the second section.

enabled to redeem as great a quantity of stock, or of annuity, as shall be required to be granted for each 100 *l.* of a new Loan, such system of practice can only produce an additional increase of the debts and incumbrances, instead of contributing towards the desired effect of keeping them within more reasonable bounds.

11. On the last consideration of the abovementioned Bill, which immediately preceded its Third Reading in the House of Commons, the following alterations were made in it, *viz.*

First, It appeared in the course of the consideration, that that part of the Bill which related to the redemption of such of the redeemable annuities as should be *at* or *above par*, differed in some respects from the conditions of redemption laid down in the former Acts of Parliament by which those annuities were established *; and, as it would be considered as a breach of the public faith to make any alterations, without the express consent of the proprietors, the measures necessary to be taken for the redemption of those annuities were left for a *future* consideration of Parliament; and a new clause was introduced, directing that the Commissioners of the Sinking Fund should continue to purchase them up in the market *above par*, in case the necessary measures

* The Bill, so far as it respected the redemption of stocks that should be *at* or *above par*, directed that the redemptions should be made Quarterly, and that notice thereof should be published in the London Gazette on or before the first day of the calendar month which should commence next after the end of the preceding quarter. This was giving a notice of but little more than two months; whereas the former Acts of Parliament stipulated that six months notice should be given; and that the redemptions should not be made in payments of less than *Five Hundred Thousand Pounds*.

ſures for redeeming them *at par* ſhould not be previouſly eſtabliſhed.

The intention of this new clauſe, as explained in the ſpeeches, was, to ſecure the future attention of Parliament to the eſtabliſhment of proper meaſures for the redemption of ſuch of the redeemable annuities as ſhould riſe to par; by requiring the Commiſſioners to continue purchaſing them up *at a loſs*, in caſe Parliament ſhould neglect its duty in that reſpect. This clearly ſhews, that the conditions of redemption laid down in the former Acts of Parliament were now conſidered to be improper; and that an alteration in them was intended to be brought about. The new clauſe might naturally induce *Parliament* to attend to the adoption of other conditions of redemption: But, as the conſent of the *Proprietors* is acknowledged to be indiſpenſably neceſſary; this queſtion naturally ariſes, *viz.* How can this new clauſe, by declaring, that if future meaſures be not provided, the ſtocks ſhall be purchaſed up by the Commiſſioners *above par*,—How, I ſay, can this new clauſe operate to induce the *Proprietors* to acquieſce in future meaſures, whereby the ſtocks ſhall be redeemable *at par*? It muſt evidently have a contrary tendency, ſo long as the preſent Act ſhall remain in force *.

It

* It ſeems, indeed, as if the preſent Act was intended, principally, to engage and ſecure the attention of Parliament to a further conſideration of the ſubject: and to the eſtabliſhment of a more perfect ſyſtem of redemption, in the room of the preſent Act. For, it would certainly be abſurd to ſuppoſe, that it could be *really intended* that the public ſhould be loaded with taxes for the purpoſe of purchaſing *above par*, any annuities that are redeemable *at par*: And, it would be

It evidently appears, from what has been obſerved, that the only thing which had *thus far* been attended to, was, the circumſtance of keeping the Sinking Fund continually applied to the redemption of the Debt, without regard to the price that might or might not be required for ſuch redemption: But I have already ſhewn (in the foregoing 8th, 9th and 10th Articles) that that idea, although a juſt one in its own proper nature, was taken up on a very erroneous hypotheſis.

12. The other alteration which was made in the Bill immediately preceding its Third Reading in the Houſe of Commons, is a departure from the original intention of the Bill with reſpect to the *uninterrupted* application of the Sinking Fund to the Redemption of the Debt.

It was obſerved in the Houſe, that if the Sinking Fund ſhould be applied to the Redemption of the Debt in time of war, the *Loans* muſt neceſſarily be the greater; and government would of courſe be more at the mercy of the Money-Lenders, with reſpect to the *Terms* of the Loans, than would be the caſe if the Sinking Fund ſhould be made applicable to the public Service: The *periodical accumulation* of the Sinking Fund, by the *intereſt* of the debt that would be paid off therewith, in caſe of its being ſo applied to the redemption, might, it was obſerved, be equally provided for, by laying additional taxes to the amount of the *intereſt* of ſuch ſums as ſhould

be

be ſtill more abſurd to ſuppoſe, that the *four per cents* ſhould be left to bear their intereſt, unredeemed, and the Sinking Fund be employed in the purchaſing up of *three per cents*, which would require (in proportion to the annuity) a ſtill *greater* price for their redemption.

be applied out of the Sinking Fund to the current service. A new clause was therefore introduced, authorizing the Commissioners of the Sinking Fund to apply the money in their charge towards the new Loans, when new Loans should be wanted; instead of applying it to the Redemption of the Debt, as had been before directed. And with these alterations the Bill passed into a Law.

13. The Act of Parliament, therefore, as it now stands, is, in substance, briefly this, *viz.*

First, That One Million a year [Two Hundred and Fifty Thousand Pounds quarterly], together with such of the temporary Annuities for Lives or Years as shall from time to time lapse or expire; and, together also with the Interests or Dividends on such parts of the Debt as shall be therewith from time to time redeemed, be regularly issued to the Bank and carried to the account of the Commissioners * of the Sinking Fund, until the annual sum so to be issued (including the abovementioned *One Million*, together with the temporary Annuities for Lives or Years fallen in, and the Dividends or Interests on the Debts redeemed) shall amount to *Four Millions*; after which, the said annual sum of *Four Millions only* shall be so issued; and the temporary Annuities for Lives or Years that shall thenceforth

* The Commissioners appointed, are, the Speaker of the House of Commons, the Chancellor of the Exchequer, the Master of the Rolls, the Accountant General of the Court of Chancery, and the Governor and Deputy Governor of the Bank of England for the time being.

thenceforth fall in, as also the Dividends or Interests on the Debts that shall be thenceforth redeemed, shall remain for the further disposal of Parliament.

Secondly, That the monies so to be carried to the account of the Commissioners shall (except when new loans are wanted) be by them laid out in the purchase of the stocks (whether *below par* or *above par*, until further provision be made) in equal portions as nearly as may be, on every day (Saturdays and Mondays excepted) on which the same shall be transferable.

Thirdly, That, in case new loans should render it expedient, the monies carried to the account of the Commissioners, shall be by them applied towards such new loans, and the interest thereof provided for by new taxes, in the same manner as if such monies were advanced by private individuals.

Such, in brief, is the substance of the Act, as it now stands on the Statute Book *.

14. The new clause, respecting the application of the Sinking Fund towards the new Loans, gives up the *original intention* of applying it *sacredly* and *inviolably* to the redemption of the Debt, as well during *War* as *Peace*; because, by applying the Sinking Fund to the new Loans in time of war, the *actual redemptions* must be made during *peace only*. So far, however, as the new Taxes shall actually produce the interest of the monies so applied from the Sinking Fund, in addition to the interest of the monies actually borrowed, so far the accumulation of the Sinking

* 26 Geo. III. Cap. 31.

ing Fund will undoubtedly be preserved; and if this accumulation be actually continued long enough, it will undoubtedly become sufficient to stop the increase of the Debt, although applied to the Redemption during *peace only*. But this cannot be the case until the Sinking Fund shall have become so increased as to redeem as much debt *during peace* as shall be incurred *during war*:—Is there any reason to suppose such an increase to be actually practicable? It is generally admitted by all ranks of people, as well Ministers as others, that our debt is already become so large as to render us unable to raise the additional taxes that would be required for redeeming as much debt during *peace* as will necessarily be incurred during *war*. And, if this be the case, how can we expect to raise the additional taxes that will be required for that purpose, when the Debt (and consequently the interest thereon) shall have become *further increased* by new wars?

15. By this new clause, the losses that were *particularly* mentioned in the aforegoing 9th and 10th articles will indeed be avoided, by avoiding (or omitting to make) the *Redemptions* there mentioned: But the *Cause*, from whence the losses attendant on *making the Redemptions*, naturally flow, still remains in its full force: And, while the *Cause itself* shall remain, the losses therefrom naturally flowing must unavoidably take place, whenever the redemption shall be attempted to be made. Causes and *Effects* are, in all cases, so inseparably connected by the immutable laws of nature, that the *Effect* cannot in possibility be got rid of but by the eradication of the *Cause* from whence it naturally flows. We may indeed make *Acts of Parliament*:— Superiors may command:—Inferiors

—Inferiors may obey: and the disobedient may, in any case, be punished, according as those *Acts of Parliament* shall direct: But, notwithstanding all this, the immutable laws of nature (by which *Causes* and *Effects* are inseparably connected) are not to be counteracted.

The Cause from whence the abovementioned losses naturally flow, is this, to wit:—In the present state of the Debt, the quantity of Stock or of Annuity that will be required to be granted for each One Hundred Pounds of a Loan, must be greater than the quantity of Stock or of Annuity that will be redeemed by each One Hundred Pounds of the Sinking Fund.—If the *Loans* and the *Redemptions* be made on *one and the same day*, the losses thereon attendant are perfectly evident from what has been said in the aforegoing 9th and 10th articles: And, if we reflect for a few moments, we cannot but be convinced, that the consequent losses must necessarily be produced, whether the *Loans* and the *Redemptions* be made on *one and the same day*, or whether the Loans shall be made on *one* day or year, and the *Redemptions* on a *different* day or year *. In either case, the price to be paid for the

* The Debt, in either case, must be, *in effect*, increased by making the redemptions: The only difference is this:—If the Loans and the Redemptions be made at one and the same time, the increase will be in the *quantity* of stock or of annuity of which the Debt shall be composed, as explained in the aforegoing 9th and 10th articles: And, if the Loans be made at one time and the Redemptions at a different time, the increase will be in the *price* that will become required to be paid for the redemption. But, whether the increase shall be in the *quantity* to be redeemed, or whether it shall be in the *price* to be paid for the redemption, the difference is immaterial with respect to the *actual loss*.

the redemption of any Stock or Annuity, muſt be greater (excluſive of the *annuity itſelf)* than the price received; and from hence it is that the loſs, in each caſe, proceeds.

16. It is not my intention, in this place, to enter into the method by which theſe difficulties may be removed: That ſhall be the buſineſs of a future ſection. For the preſent I ſhall take notice only of the calamitous conſequences that muſt neceſſarily take place, if the ſyſtem of redemption laid down in the preſent Act of Parliament ſhould be practically perſevered in.

The great bulk of our Public Debt conſiſts, it is very well known, of *three per cent.* Stocks *: It is alſo well known, that a very conſiderable part of the *three* per cents. that were eſtabliſhed during the courſe of the late war brought leſs than

* The following ſtatement of the funded Debt is about mid-way between the different ſtatements I have ſeen; and may be reckoned ſufficiently near the truth for any general purpoſe of conſideration, viz.

Three per cent. Stocks about	£. 187,750,000
Four per cents. — —	32,750,000
Five per cents. about — —	18,000,000
Sundry temporary Annuities for Lives and different Terms of Years; worth (for even numbers) about †	21,500,000
Total (about)	£. 260,000,000
And the annual charge thereon (including the expence of management) amounts to about	£. 9,300,000

With reſpect to the Unfunded Debts, I have ſeen no regular ſtatement; but I have been informed that their amount may be reckoned (for even numbers) at about *Ten Millions.*

† N. B. The *riſe* in the prices of the ſtocks, ſince the paſſing of the Act of Parliament, has produced a conſiderable increaſe in this article, ſince the publicotion of my third eſſay.

than 60 *l.* in *money* for 100 *l.* of *ſtock.* But they are not (according to their original conſtitution) redeemable, without the conſent of the proprietors, for a leſs ſum than 100 *l.* in money; and, as the throwing of an additional quantity of money into the market for purchaſe, naturally cauſes their prices to riſe; ſo, of courſe, any attempt to purchaſe them up, muſt neceſſarily produce ſuch riſe, until at length the public ſhall become obliged to pay 100 *l.* for the redemption, although leſs than 60 *l.* had been received. By this means the public would be ſaddled with a loſs, in the redemption, of near *Sixty Millions*, which have never been received, nor any the moſt diſtant promiſe ever given with reſpect to their being paid.

Any attempt to effect a redemption by *purchaſing up the ſtocks*, would naturally be productive of this effect; but the rapidity with which the effect would be produced, and the loſs to the public theron attendant, would be *greater* or *leſſer* according to the *manner* of making the purchaſes, whereby a greater or leſſer degree of *fluctuation* would be produced in the prices of the ſtocks.

17. If the purchaſes were made by giving notice to the Stock-holders that it was intended, at ſuch a time, to pay off a part of the Debt, provided the terms to be by them propoſed ſhould be approved of; and that thoſe whoſe propoſals ſhould be the moſt reaſonable ſhould be preferred; ſuch method would be attended with the *leaſt* loſs that a redemption of the ſtocks *by purchaſe* could be capable of. Thoſe of the Stock-holders who have different employments for their capitals would gladly accept of a price very little higher than the ordinary price of the market for

for the time being; and the future prices of the ſtocks would be affected only by the quantity of ſtock ſo taken out of the market, and by the additional purchaſes that might thereafter be made with ſuch parts of the money as might come round again, in the common courſe of circulation, to be ſo laid out. The riſe in the value of the ſtocks that would be produced by this method of proceeding, would be ſlow, and of as permanent a nature as ſtocks of ſuch a conſtitution are capable of. It would indeed be attended with a loſs to the public in the future redemptions *; but the loſs would be in ſome meaſure (though not effectually) atoned for, by a decreaſe in the rate of intereſt for money, with which ſuch riſe in the value of the ſtocks would be attended, whereby government would be enabled to obtain future loans on eaſier terms.

18. But if the redemptions be made by purchaſing up the ſtocks daily in the market (as directed by the preſent Act of Parliament), thoſe redemptions muſt neceſſarily produce more violent fluctuations in the prices of the ſtocks than thoſe to which they have hitherto been ſubject; and thoſe fluctuations muſt neceſſarily be attended with great additional loſs and injury to the public.

The Sinking Fund, by being applied to the purchaſe of the ſtocks in the market, naturally cauſes an additional demand; and thereby naturally raiſes their price. The ſtocks being thus riſing in price, many people who would otherwiſe employ their money in induſtrious occupations,

* This loſs cannot be avoided but by the uſe of ſtocks of a different conſtitution; which I ſhall treat of in the future ſections.

tions, naturally become induced to lay it out in the ſtocks (not for the ſake of the intereſt or annuity but) from the expectation of gain by a future ſale. Many people alſo, that are poſſeſſed of ſtock, and have occaſion for their money in their reſpective callings, become induced to keep their ſtock for the ſake of the expected riſe; and to borrow money, even on *extravagant* terms, rather than ſell out *. Every of theſe circumſtances have a natural tendency to raiſe the prices of the ſtocks higher, and thereby cauſe the loſſes to the public, in the redemption, to be greater, than they otherwiſe would be. Theſe obſervations are ſo perfectly evident in their own nature, that a bare mention of them is ſufficient to evince their truth.

19. There is alſo another circumſtance by which the prices of the ſtocks will be further affected; a circumſtance ariſing from diſcommendable practices in the market, rather than from principles of actual reaſon. Sundry people, who make the ſtock-market their chief buſineſs, buy and ſell *fictitiouſly* for no other end but to produce a temporary *riſe* or *fall* in the prices of the ſtocks, according as the *one* or the *other* ſhall beſt ſuit their purpoſes. If they happen to know of there being poſitive orders for the *buying* of ſtock on or before a given day (as the cloſing of a mail, the ſailing of a ſhip, or the like), theſe fictitious bargains are calculated to *raiſe* the prices of the ſtocks; or, if they know of

* I have been informed by gentlemen in that line, that it has actually been common, ſince the late riſe in the ſtocks, to borrow money at the extravagant rate of *One and an Half* (and ſometimes more) *per cent.* for ſix weeks; and to continue it at that rate from ſix weeks to ſix weeks for many months, which is giving an intereſt of more than *twelve per cent. per annum.*

of there being positive orders for the *selling* of stock on or before a given day, these fictitious bargains are calculated to produce a *fall* in the prices of the stocks.

The pernicious practices of Stockjobbing have been so universally known and complained of, from the first commencement of the Public Debt, that it is quite unnecessary to enter into a detail of them. I shall therefore only observe, that these fictitious bargains are often carried on, in the open market, after this manner; *viz.* A person announces himself as a *buyer* or *seller* (as the case may be) of such a quantity of stock:—Another announces himself as a *seller* or *buyer*, as the case may be:—The seller demands such a price; the buyer offers rather less; and, the bargain not being struck, a third person (who is also in the secret) declares himself to be the buyer at the price demanded. The next seller demands a price *an Eighth* or *a Quarter per cent.* higher than the last; another bids the price that was last given; but the bargain not being struck, a third person declares himself to be the buyer at the price demanded: and thus, when it is known that there are positive orders for *buying* on or before a given day, the market is raised. In like manner, when it is known that there are positive orders for *selling* on or before a given day, the market is sunk by fictitious sales*. These practices, among many others, contribute very much towards

* The truth of this observation is so well known to all who attend the stock-market, that those of my readers to whom the observation may be new (if any such there should be) will find no difficulty in satisfying themselves of its verity. I have been informed by a broker of the first reputation, that, at times, when it has been discovered that he has received orders for *buying*, even to the small amount of *eight* or *ten thousand pounds*, and has been limited, in time, to two or three days, (which is often the case when the account is to be transmitted by a particular time), the market has been thus actually raised upon him *two* and sometimes *three per cent.* and has fallen again immediately afterwards to its former level.

towards those sudden fluctuations which we often see in the prices of the stocks.

The Legislature, it is well known, has repeatedly endeavoured, by penal laws, to prevent the pernicious practices of stock-jobbing; but the nature of the case is such as does not admit of a remedy from penal laws. The only thing that can be done, is, to lessen the temptation, by securing to the stocks as permanent and steady a value as the nature of the thing can admit: and this can only be done by putting the Debt into such a course of redemption, as that the practices of stock-jobbing shall be attended with as little injury to the *public* as may be possible*. But the present Act of Parliament (by directing that the redemptions shall be made by purchasing up the stocks daily in the market, in equal portions as nearly as may be) evidently furnishes, however unintentionally, a peculiar encouragement to the abovementioned fictitious practice of raising the market; and every such artificial rise in the prices of the stocks evidently becomes an additional loss to the public in the redemption.

20. It is imagined by some (though not indeed by many) that although a rise in the prices of the stocks will naturally be attended with a loss to the public, in the redemption; yet, such loss will be counterbalanced by the decrease in the rate of interest which will therewith be produced, whereby people in business will be enabled to borrow money at a cheaper rate; and whereby goven-

* The manner of accomplishing this desirable effect will be shewn in the second section.

government will be enabled to obtain new loans (when new loans ſhall become wanted) on more reaſonable terms.—But this (eſpecially with reſpect to the obtaining of *new loans* on more reaſonable terms) is a very great miſtake.

How far a riſe in the prices of the ſtocks ſhall or ſhall not be attended with a decreaſe in the rate of intereſt for money, depends on the *Cauſe* from whence ſuch riſe in the prices of the ſtocks ſhall be produced.

If the riſe in the prices of the ſtocks ſhall be occaſioned by actual redemptions, whereby large quantities of ſtock ſhall be taken out of the market; or, if it ſhall be occaſioned by a permanent increaſe of wealth, whereby the *natural demand* for the ſtocks ſhall be increaſed; then, and in either of theſe caſes, the riſe in the prices of the ſtocks will naturally be attended with a decreaſe in the rate of intereſt for money; becauſe, the quantity of money flowing into the hands of the lenders will be increaſed, and thereby the demands of the borrowers will be more eaſily ſupplied.

But, if the riſe in the prices of the ſtocks ſhall be occaſioned by an increaſe in the number of purchaſers who buy on *ſpeculation*, (not for the ſake of the intereſt or annuity, but rather) from the hopes of gain by a future ſale; it does not follow, that ſuch riſe in the prices of the ſtocks ſhall be attended with a decreaſe in the rate of intereſt for money.

Whether a riſe in the prices of the ſtocks, occaſioned by ſpeculative purchaſes, ſhall or ſhall not be attended with a *temporary decreaſe* in the rate of intereſt for money lent on *private* ſecurities, will depend on the degree to which ſuch ſpeculation ſhall or ſhall not be carried.

2 So

So far as ſuch riſe in the prices of the ſtocks ſhall induce Stock-holders (from the hope of a further and further riſe) to borrow money, rather than ſell out; ſo far it muſt evidently tend to produce an *increaſe* in the rate of intereſt for money, rather than a *decreaſe* *.

Should the ſpeculative purchaſes be carried to ſuch a degree, as that the riſe in the prices of the ſtocks ſhould intimidate the *more cautious* among the monied men, and induce them (from the danger of loſing by a future depreciation of the ſtocks) to prefer lending their money on *private* ſecurity; then indeed (but not till then) ſuch riſe in the prices of the ſtocks would be attended with a *temporary* decreaſe of the rate of intereſt on *private* ſecurities. This effect, however, would be only of a *temporary* nature; and, flowing (not from *permanent* cauſes, but) from the *danger* of a future *depreciation* of the ſtocks, it is an effect much more to be *feared* than *wiſhed*.

21. Let us next conſider how far a riſe in the prices of the ſtocks ſhall render *Public Loans* obtainable on more reaſonable terms.

The terms on which new loans are obtainable, are always dependant on the prices of the ſtocks. So far, therefore, as a riſe in the prices of the ſtocks ſhall be of a *permanent* nature, ſo far new loans will naturally be obtainable on better terms. This will naturally be the caſe ſo far forth as the riſe in the prices of the ſtocks ſhall be produced by actual redemptions diminiſhing the quantity of ſtock in the market, or by a permanent increaſe of wealth and of public revenue: becauſe, a riſe in the price of the ſtocks, ſo produced, will have a ſolid foundation.

It

* See the Note, page 23.

It may, however, be obſerved, that our debt is now ſo immenſely large, that a very conſiderable diminution of it, or a very conſiderable increaſe of the national wealth, would be required, to produce this effect in any very material degree.

But, a riſe in the prices of the ſtocks occaſioned by temporary purchaſes (which muſt be the natural conſequence of purchaſing up the ſtocks in the manner directed by the preſent Act of Parliament) ſo far from rendering new loans obtainable on eaſier terms, muſt, in reality, produce effects diametrically contrary. As ſoon as it becomes ſeriouſly apprehended that a war will break out, and new loans become wanted, the ſpeculative adventurers who had before flocked to market, as purchaſers, from the hope of *gaining* by the further *riſe* of the ſtocks, will naturally crowd to market as *ſellers*, partly to avoid the loſs on the expected *fall*, and partly to ſhare in the advantages of the new loans: And the additional quantity of ſtock thus brought into the market for ſale will naturally carry the prices of the ſtocks much *lower* than they would otherwiſe be, in the ſame manner as the ſpeculative purchaſes carry them *higher* than they would otherwiſe be. The truth of this obſervation is equally ſupported by practical experience as by theoretical conſiderations. Thoſe who have had much buſineſs in the ſtock-market, have noticed it, almoſt from the firſt commencement of the public debt: It is particularly taken notice of in a pamphlet, ſaid to be written by Sir Nathaniel Gould, one of the Directors of the Bank, publiſhed in the year 1726; and, I will venture to ſay, that there are very few, if any, who have attended the

the ſtock-market, that have not themſelves made the ſame obſervation.

It is well known, that the expectation of gain by a further and further riſe of the ſtocks at the concluſion of the peace in the beginning of the year 1783, created ſuch an avidity for purchaſing, that the *three per cents.* (which, in the beginning of the year 1782, ſold at about 54 *l.*) were raiſed *temporarily* to 72 *l.* but, when it appeared that a conſiderable outſtanding debt remained to be funded, the avidity for *purchaſing* ceaſed, and was changed into ſuch an avidity for *ſelling* as carried them down again to about 54 *l.* although in a time of *profound peace*. We may judge from this circumſtance, which we have all ſeen with our own eyes, whether a riſe in the prices of the ſtocks, occaſioned by temporary purchaſes, can tend towards enabling government to obtain new loans on reaſonable terms in the caſe of a *new war*.

This circumſtance (among innumerable others) ſufficiently evinces, that a riſe in the prices of the ſtocks, occaſioned by temporary purchaſes, is not of ſuch a nature as to render new loans obtainable on reaſonable terms. It muſt, on the contrary, in the preſent ſtate of the debt, be attended with a two-fold loſs and injury to the public. It muſt neceſſarily render the *redemptions* more expenſive, as has been already obſerved; and, when new loans become wanted, the avidity for *purchaſing* naturally becomes changed into an avidity for *ſelling*, which muſt naturally depreſs the value of the ſtocks, and thereby render the *terms of obtaining new loans* more expenſive.— The riſe in the prices of the ſtocks may, perhaps, for a time, dazzle the eyes of a ſuperficial obſerver,

observer, but those who examine things will see clearly that every step must naturally render the alleviation of the public burdens more and more difficult; and, that a practical perseverance in such a system of finance, must render a public bankruptcy equally certain and inevitable, as the bankruptcy of a commercial House, whose *buying price* shall be constantly higher than its *selling price*.

I have, I believe, pointed out, to the satisfaction of every attentive reader, that the system of redemption laid down in the present Act of Parliament, is exceedingly defective; and must, if persevered in, be productive of the most fatal consequences.

22. When we consider, that, in the making of our public loans, the *annuity only* was alienated; and that the quantity of *nominal capital* or *stock* thereunto annexed (no part thereof being ever demandable, but being left entirely to a *future* agreement with respect to the actual terms of redemption) was so little regarded, either by government or by the Stock-holders, that *an Hundred Pounds of nominal Capital* or *Stock* was sometimes given for less than 70 *l.* sometimes for less than 60 *l.* and sometimes for less than 55 *l.* in money, whereby the *nominal capital* of our debt exceeds the monies that have been actually received, by near *Sixty Millions*: When we consider how very extravagant and unjust it would be (even if the nation was ever so able) for the public to be burthened with taxes for the purpose of paying such immense sums that were never received, nor any the most distant promise ever given with respect to their being paid:—When we also consider, that the *intention* of

of government, as declared at the opening of the present business, in the House of Commons, was, to administer the public monies with the utmost possible *œconomy*, and to establish a system of redemption on such permanent principles as should secure the *invariable* application of a sinking fund to the redemption of the debt, as well during *war* as *peace*; on which *invariable* application of the sinking fund, it was declared, the future preservation of the public credit of the nation must entirely depend: And, finally, when we consider that the system of redemption laid down in the present Act of Parliament, neither secures the invariable application of the sinking fund to the redemption of the debt on the *one hand*, nor contains any provision for the avoidance of the abovementioned extravagance in the redemption on the *other*; but, on the contrary, if persevered in, must render that extravagance still greater, by purchasing up the stocks *above par*:—When, I say, we consider these things, even were we to consider nothing further, it would be altogether unreasonable, as well as disrespectful towards those who are entrusted with the management of the public affairs of the nation, to suppose that the present system of redemption could have been intended for any other purpose than that of engaging and securing the further attention of Parliament to a more full and perfect consideration of the subject. I shall therefore omit to make any further observations on the defects of the present system, and shall proceed to point out the means, whereby (agreeable to the original intention of Government) the sinking fund may be preserved in its proper line of service as well during *war* as *peace*;

peace; and whereby alſo, the abovementioned loſſes may be avoided, with a mutual advantage to the public and to the creditors.

SECTION II.

Of the Means of ſecuring the invariable Application of the Sinking Fund to the Redemption of the Debt, as well during WAR *as* PEACE.

1. IF we admit (and I believe it is *univerſally* admitted) that the nation is unable to bear ſuch an increaſe of taxes as would be required for the purpoſe of paying off during *peace*, the debts that will neceſſarily be incurred during *war*;—If, I ſay, this be admitted, it muſt be perfectly evident, that the application of a ſinking fund, to the redemption of the debt during *peace only*, can never prevent the further and further increaſe of our public incumbrances *ad infinitum*; and, it will neceſſarily follow, that no effectual check can be given to their further and further increaſe, unleſs a ſinking fund be applied to their redemption (not during *peace only*, but) during both *peace* and *war*. If, therefore, it be required to keep the debts and incumbrances within any finite bounds or limits, the *perpetual* application of a ſinking fund to the redemption of the debt, as well during *war* as *peace*, muſt never be loſt ſight of.

2. Again,—It has been demonſtrated in the 9th and 10th articles of the aforegoing ſection, (and indeed it would be ſufficiently evident from a ſimple *conſideration* only, without any trouble of *demonſtration*,) that, unleſs *each One Hundred Pounds of the Sinking Fund* be enabled to redeem a quantity of *ſtock* or of *annuity* equal to (or greater than) the quantity of *ſtock* or of *annuity* that ſhall be required to be granted for *each One Hundred Pounds of a Loan*, the ſinking fund cannot be ſo applied to the redemption; or, at leaſt, if it be ſo applied, it can only produce an *additional increaſe* of the debts and incumbrances, inſtead of keeping them within more reaſonable bounds.

Hence then, The only poſſible method of ſecuring the invariable application of a ſinking fund to the redemption, whereby to prevent the exceſſive increaſe of the debts and incumbrances, muſt be, to enable *each One Hundred Pounds of ſuch Sinking Fund* to redeem a quantity of *ſtock* or of *annuity* equal to (or greater than) the quantity of *ſtock* or of *annuity* that ſhall be required to be granted for *each One Hundred Pounds of a Loan*.

The circumſtance of ſecuring the invariable application of the Sinking Fund to the redemption of the debt, as well during *war* as *peace*, is of ſuch immenſe importance, that it is impoſſible to impreſs it too ſtrongly on the reader's mind. I will therefore beg leave to repeat, in order to impreſs it the more ſtrongly,

Firſt, That, unleſs the taxes be ſo increaſed as to pay off as much debt during *peace* as ſhall be incurred during *war*, (which, I believe, is univerſally admitted to be impracticable) the only *poſſible* method of preventing the further and further increaſe of our debts and incumbrances *ad infinitum*, muſt be, to apply a ſinking fund to the redemption (not during *peace only*, but) during both *peace* and *war*. And,

 Secondly,

Secondly, That the Sinking Fund *cannot* be fo applied, (or, at leaft, if it be fo applied, it can only produce an *additional increafe* of the debts and incumbrances, inftead of keeping them within more reafonable bounds) unlefs *each One Hundred Pounds of the faid Sinking Fund* be enabled to redeem a quantity of *ftock* or of *annuity* equal to (or greater than) the quantity of *ftock* or of *annuity* that fhall be required to be granted for *each One Hundred Pounds of a Loan.*

3. Again,—It is evidently impoffible for *each One Hundred Pounds of a Sinking Fund* to redeem a quantity of *ftock* or of *annuity* equal to (or greater than) the quantity of *ftock* or of *annuity* that fhall be required to be granted for *each One Hundred Pounds of a Loan*, unlefs the *value* or *price* at which fuch ftock or annuity fhall be taken for the loan, be equal to (or greater than) the *par* or price at which it fhall be redeemable.

In order, therefore, for the Sinking Fund to be preferved in its proper line of fervice, it is indifpenfably neceffary that the debt fo to be redeemed, fhould confift of redeemable ftocks, whofe market value fhall be conftantly as much (or more than as much) *above par*, as fhall be required to be allowed, by way of *premium*, for the advancement of new loans.

4. Further,—It is perfectly evident, that the market value of an annuity ftock cannot be *above par*, unlefs the rate of intereft (or annuity) thereunto annexed be higher than the market rate of intereft for money; neither can fuch value of the ftock *above par* be fecure, unlefs the intereft or

or annuity thereunto annexed be fufficiently fecured from reduction.

It is likewife evident, that the intereft or annuity annexed to the ftock cannot be fecured from reduction; and the ftock itfelf be at the fame time redeemable; unlefs the *tender* to be made for the redemption be *limited*; fo as not to exceed, periodically, a *certain proportion* of the capital.

Hence, then, in order to preferve the invariable application of a Sinking Fund to the redemption of a public debt, it is *abfolutely* and *indifpenfably* neceffary, that the debt fo to be redeemed fhould confift of ftocks, bearing an intereft higher than the market intereft for money; fubject to a *limited tender* for the periodical redemption of the capital.

The above arguments are fo perfectly clear and inconteftible, that I cannot entertain a doubt but every attentive reader (at leaft, every one who admits the neceffity of checking the further and further increafe of our debts and incumbrances, and the impracticability of increafing the taxes to fuch a degree as would be required for the purpofe of paying off as much debt during *peace*, as will neceffarily be incurred during *war)* will be fully fatisfied (not only of the inefficacy of the fyftem of redemption laid down in the aforementioned Act of Parliament, but alfo) of the *abfolute impoffibility* of accomplifhing the effects required; unlefs the Sinking Fund be rendered applicable to the redemption, as well during *war* as *peace*, by a *converfion of the debt* into ftocks bearing a *higher intereft* than that of the market, fubject to a *limited tender* for the periodical redemption of the capital.

5. It has been doubted, by ſome, whether a converſion of the debt, could, in actual practice, be effected, with any *real advantage*. But, if we ſeriouſly conſider the nature of the caſe, even for a ſingle moment, the doubt immediately vaniſhes. I have ſhewn above, that (unleſs the taxes ſhall be increaſed to ſuch a degree as to pay off as much debt during *peace* as ſhall be incurred during *war*; a thing which, I believe, every body admits to be impracticable) nothing but a converſion can, in poſſibility, prevent the further and further increaſe of the debts and incumbrances *ad infinitum*. If, then, it be *advantageous* to prevent ſuch continual increaſe of the debts and incumbrances, it muſt neceſſarily follow, that a converſion of the debt (whereby alone that increaſe can be prevented) muſt be advantageous alſo.

6. It may perhaps be objected, that, 'as the 'converſion of the debt cannot be effected but 'by the voluntary act or tranſcription of the 'creditors; it can by no means be ſuppoſed 'that they would ſubſcribe to the converſion, 'unleſs the terms offered were ſuch as ſhould 'afford them an actual advantage.' And hence, it may perhaps be aſked, 'How can the converſion be thus advantageous to the creditors, 'and be at the ſame time advantageous to the 'public?'

The anſwer is ſimply this: In the preſent ſtate of the debt, the *redeemable ſtocks* (being liable to an *unlimited* tender for their redemption at *par)* have no ſecure capacity for riſing in value *above par*; and, the *gain* which the creditors derive from the riſe in the prices of the ſtocks *below par*, is a *loſs* to the public in the redemption: but, by a converſion of the debt into ſtocks bearing a higher intereſt, ſubject to a *limited* tender for their redemption, the *new ſtocks* will have a more extenſive capacity for riſing in value, for the advantage of the creditors, than the *preſent ſtocks* have; and this riſe (being *above par*) will *not* be attended with loſs to the public in the redemption; but will, on the contrary, be attended with advantage to the public as well as to the creditors. Hence it is, that a converſion of the debt into ſtocks of this kind can always be effected with a mutual advantage to all parties. This will be more particularly explained in the following ſections, where I ſhall treat of the comparative values of annuity ſtocks bearing different rates of intereſt, ſubject to different tenders for their redemption; and of the advantages with which ſtocks, ſubject to *limited tenders* will naturally be attended.

SECTION III.

Of the comparative Values of Annuity Stocks bearing different Rates of Intereſt, and ſubject to different Tenders for their Redemption.

1. IN the ſecond ſection of my ſecond eſſay (and again at page 16 of the third eſſay) I demonſtrated the following propoſition, *viz.*

If any annuity ſtock bearing any rate of intereſt higher than that of the market, be ſubject to a limited tender in diſcharge of the capital, equal to the annuity or intereſt therefrom periodically flowing; the value thereof will be the ſame as if ſuch fuch annuity was perpetual, and the rate of intereft half-way between that of the market and that of the ftock *.

2. I did not extend my former effays to the doctrine of ftocks fubject to *different* tenders for their periodical redemption; partly becaufe the reader is often difcouraged on opening a *large* field of deduction, although he might be very willing to labour through a fmaller one; and, partly, becaufe ftocks, fubject to a *periodical tender* equal to the *annuity*, are the moft fimple (both in theory and practice) for a *general* or *univerfal* rule; neither would any *general* or *univerfal rule*, founded on any other *tender*, be equally advantageous to the public and to the creditors, taking all the fluctuations of the value of the ftocks into confideration together.

In fundry cafes, however, it might be convenient to vary from fuch general rule, either in a greater

* That is to fay,—

Let $a = C \times \overline{r-1}$ = the annuity or intereft flowing from any ftock or capital C bearing a rate of increafe r equal to the ordinary rate of intereft for money in the market;

$A = C \times \overline{R-1}$ = the annuity or intereft flowing from any ftock or capital C (equal in *nominal capital* to the former) bearing any rate R higher than the ordinary rate of intereft for money in the market:

V = the value of the annuity A, or, (which is the fame) the value of the ftock or capital C bearing the rate R;

Then,—If the ftock or capital C bearing the rate R fhall be fubject to a *limited tender* for its periodical redemption at par, equal to the *annuity A* therefrom periodically flowing;

we fhall have $$V = \frac{A}{\frac{r+R}{2} - 1}$$

greater or a leffer degree, according to the particular ftate and circumftances of particular nations, and their refpective public creditors.

A minute difcuffion of the particular variations that might, or might not, with propriety, be adopted in particular cafes, would require a large volume. I fhall therefore only obferve here, that a tender *greater* than the annuity would, in all cafes, be lefs advantageous to the creditors, than a tender *equal* to the annuity would be*: And, that the *lefs* the tender fhall be, the greater the public debt muft become, before its increafe can be checked.

In any nation, therefore, where it fhall be neceffary, for the mutual fecurity of the public and of the creditors, to check the increafe of the public debt *with all convenient fpeed*, it would not be confiftent with the interefts either of the public or of the creditors, to make ufe of ftocks fubject to a tender *lefs* than the annuity.

It may, however, be obferved, that the propriety or impropriety of making ufe of ftocks fubject to a tender *lefs* than the annuity, will depend on the *neceffity* which there may or may not be for checking the increafe of the debt *with all convenient fpeed*; and, on the danger that may or may not be apprehended with refpect to the confequent accumulation of debt.

If we admit (what I believe is univerfally admitted) that, in commercial nations, a public debt, to a reafonable amount, is attended with conveniency and advantage, rather than inconveniency or difadvantage: And, if we alfo admit (what I believe is likewife univerfally ad-

mitted)

* See the fecond fection of the fecond Effay.

mitted) that, in fome nations, a public debt may, without danger or inconveniency, be permitted to increafe to a greater degree, in proportion to their wealth, than in other nations: If, I fay, this be admitted, it will naturally follow, that (although a *tender* equal to the *annuity* or *intereft* fhall be more proper than any other *tender* confidered as a general or univerfal rule, yet) fome nations may, without danger or inconveniency, make ufe of ftocks fubject to a *lower tender* than might be proper for other nations to make ufe of: And, on this account, the doctrine of the comparative values of annuity ftocks, fubject to *different* tenders for their periodical redemption, is highly worthy of confideration.

3. The principal Theorem on which this part of the fubject depends, is this, viz.

> If any annuity ftock or capital bearing any rate of intereft higher than that of the market, be fubject to any limited tender *per centum* for its periodical redemption at par; the *value* of fuch ftock will bear the fame proportion to the *nominal capital*, as the fum of the *Tender* and *Intereft on the ftock*, fhall bear to the fum of the *Tender* and *Market-Intereft* *.

For example— Suppofe it were required to know the value of 100 *l.* of *five per cent. ftock*, fubject to

* That is,—

Let $T=$ the tender; and the other fymbols as before:

Then, I fay, As $T+a : T+A :: C : V$

or, (which is the fame) $V=\dfrac{T+A}{T+a}\times C$

DEMONSTRATION.

to a tender of *four per cent. per annum* for the periodical redemption of the capital; the market intereft for money being $3\frac{1}{2}$ per cent. per annum.

Say—As $7\frac{1}{2}$, the fum of the *tender* and *market intereft* :

is to 9, the fum of the *tender* and *intereft on the ftock* : :

So is 100, the nominal capital :

to 120 *l.*, the value required.

Again,—Suppofe it were required to know the value of 100 *l.* of *three per cent. ftock* fubject to a tender of *one per cent. per annum* for the periodical redemption of the capital; the market intereft for money being two per cent. per annum:

Say

DEMONSTRATION.

I. At the fifth ftep of the algebraic procefs contained in the fecond fection of my fecond Effay (and contained again at page 16, &c. of the third Effay) it is demonftrated, that, If any annuity ftock or capital (C), bearing any rate of intereft (R) higher than that of the market (r) be fubject to any periodical ratio ($\mathfrak{R}$) of redemption by par payment, the value thereof will be $V=\dfrac{a}{r-1}+\dfrac{\overline{A-a}\times\mathfrak{R}}{r\mathfrak{R}-1}$

II. Wherefore, putting the tender $=T$, as above, we fhall have $\dfrac{C}{\mathfrak{R}}=C-T$; and thence $\mathfrak{R}=\dfrac{C}{C-T}$

III. Whence (I and II.) $V=\dfrac{a}{r-1}+\dfrac{\overline{A-a}\times\dfrac{C}{C-T}}{\dfrac{rC}{C-T}-1}$

IV. Which (by reduction) is $V=\dfrac{a}{r-1}+\dfrac{\overline{A-a}\times C}{rC-C+T}$

V. But (per data, fee page 38) $a=C\times\overline{r-1}=rC-C$; whence $\dfrac{a}{r-1}=C$, and thence $V=C+\dfrac{\overline{A-a}\times C}{T+a}$

VI. Which (by reduction) is $V=\dfrac{T+A}{T+a}\times C$

WHICH WAS TO BE DEMONSTRATED.

Say—As 3, the ſum of the *tender* and *market intereſt* :
is to 4, the ſum of the *tender* and *intereſt on the ſtock* : :
So is 100, the nominal capital :
to $133\frac{1}{3}$ *l.* the value required.

And the like univerſally, where the intereſt on the ſtock ſhall be higher than the market intereſt for money *.

4. But, ſhould the market intereſt for money be higher than the intereſt on the ſtock, the value of the ſtock would then be proportionate to the *intereſt only*, without taking the *tender* into the computation; becauſe, in that caſe, no tender could be applicable to the redemption, otherwiſe than by actual purchaſe, at a price equal to (or higher than) the market price.

If, for example, it were required to know the value of 100 *l.* of *three per cent. ſtock* (whether ſubject to a tender of *one, two, or three per cent. per annum* for its periodical redemption), the market intereſt for money being four per cent. per annum; we ſhould ſay,

As 4, the market intereſt :
is to 3, the intereſt on the ſtock : :
So is 100, the nominal capital :
to 75 *l.* the value required.

5. It is neceſſary, however, to obſerve, that, as the market intereſt for money is liable to variation; and, as the variations thereof are attended with *different* degrees of variation in the value of different ſtocks, according to the terms of redemption to which ſuch ſtocks ſhall be reſpectively liable; ſome ſtocks will naturally be *preferred* in the market before other ſtocks, according as there ſhall be a greater or leſſer probability of an actual variation in the market intereſt for money; and according as the reſpective ſtocks ſhall have a greater or leſſer capacity for riſing or falling in value, in conjunction with that variation of the market intereſt for money: And, in conſequence of this preference, the *market value* or *price* of one ſtock (if there ſhould be more ſtocks than one) would naturally be carried a little higher or a little lower than its *computed value*, compared with that of a different ſtock.

* The reader will pleaſe to *remember* this rule, to prevent the neceſſity of repeating it, at large, at every computation.

In ſtocks, ſubject to limited tenders, not exceeding the annuity or intereſt, for their periodical redemption, the variation or difference between their *computed value* and their *market value* or *price* will, indeed, be ſmall. It may not, however, be amiſs, to ſay a word or two reſpecting it.

6. If there ſhould be ſundry ſtocks bearing different intereſts, all higher than the market intereſt for money for the time being, and each ſtock be ſubject to one and the ſame tender per centum for the periodical redemption of the capital, there will be a ſmall preference in favour of that ſtock which ſhall bear the higheſt intereſt; and its *market value* or *price*, in conſequence of ſuch preference, will be carried rather higher than its *computed value*, compared with the other ſtocks. Becauſe, in conjunction with a *decreaſe* of the market intereſt for money, the higher ſtock would *riſe* in value, in the ſame proportion as the lower ſtock would riſe; but, in conjunction with an *increaſe* of the market intereſt for money, the higher ſtock would not *fall* in value in ſo great

great a proportion (for a time) as the lower ſtock would fall.

For example— Suppoſe the market intereſt for money, for the time being, to be $3\frac{1}{2}$ per cent. per annum; and let there be two ſtocks, the one bearing *four per cent. per annum*, and the other bearing *five per cent. per annum*, each ſubject to a tender of *three per cent. per annum* for the periodical redemption of the capital.

In this caſe, the computed value of 100 *l.* of the *four per cent. ſtock* would be * $107\frac{9}{13}$ *l.* and the computed value of 100 *l.* of the *five per cent. ſtock* would be † $123\frac{1}{13}$ *l.* ſo that the computed value of 100 *l.* of the *four per cent. ſtock* and the computed value of $87\frac{1}{2}$ *l*, of the *five per cent. ſtock* would be equal to each other.

The computed values of the two ſtocks will likewiſe continue to hold this proportion, (that is to ſay, the computed value of 100 *l.* of the *four per cent. ſtock*, and the computed value of $87\frac{1}{2}$ *l.* of the *five per cent. ſtock*, will continue equal to each other) whatever variations may or may not take place in the market intereſt for money, ſo long as the ſaid market intereſt for money ſhall not exceed *four per cent. per annum*.

If, for inſtance, the market intereſt for money ſhould become 4 *per cent. per annum*, the computed value of each would be ‡ £. 100

If 3 *per cent. per annum* || $116\frac{2}{3}$

If 2 *per cent. per annum* § 140

If

* As $6\frac{1}{2}$: 7 : : 100 : $107\frac{9}{13}$. [Remember the Note, p. 42.]
† As $6\frac{1}{2}$: 8 : : 100 : $123\frac{1}{13}$.
‡ As 7 : 7 : : 100 : 100; And, As 7 : 8 : : $87\frac{1}{2}$: 100.
|| As 6 : 7 : : 100 : $116\frac{2}{3}$; And, As 6 : 8 : : $87\frac{1}{2}$: $116\frac{2}{3}$
§ As 5 : 7 : : 100 : 140 ; And, As 5 : 8 : : $87\frac{1}{2}$: 140

If 1 *per cent. per annum*, (which is lower than can ever be expected in actual practice) the computed value of each would be £. * 175

And hence, 100 *l.* of the *four per cent. ſtock* can never become worth *more* than $87\frac{1}{2}$ *l.* of the *five per cent. ſtock*, however low the market intereſt for money may fall.

But, ſhould the market intereſt for money become *higher* than four per cent. per annum, 100 *l.* of the *four per cent. ſtock* would be worth *leſs* than $87\frac{1}{2}$ *l.* of the *five per cent. ſtock*.

If, for inſtance, the market intereſt for money ſhould become $4\frac{1}{2}$ per cent. per annum, the computed value of $87\frac{1}{2}$ *l.* of the *five per cent. ſtock* would be † $93\frac{1}{3}$ *l.* but the computed value of 100 *l.* of the *four per cent. ſtock* would be only ‡ $88\frac{8}{9}$ *l.*

Should the market intereſt for money become *five per cent. per annum*, the computed value of $87\frac{1}{2}$ *l.* of the *five per cent. ſtock* would be || $87\frac{1}{2}$ *l.* but, the computed value of 100 *l.* of the *four per cent. ſtock* would be only § 80 *l.*

Now, ſeeing that 100 *l.* of the *four per cent. ſtock* cannot, in poſſibility, become worth *more* than $87\frac{1}{2}$ *l.* of the *five per cent. ſtock*, but may, in poſſibility, become worth *leſs*; there is no man that would give ſo much for 100 *l.* of the *four per cent. ſtock*, as he would give for $87\frac{1}{2}$ *l.* of the

five

* As 4 : 7 : : 100 : 175; And, As 4 : 8 : : $87\frac{1}{2}$: 175.
† As $7\frac{1}{2}$: 8 : : $87\frac{1}{2}$: $93\frac{1}{3}$.
‡ As $4\frac{1}{2}$: 4 : : 100 : $88\frac{8}{9}$.
|| The market intereſt for money being the ſame with the intereſt on the ſtock, the computed value of the ſtock will of courſe be *par*.
§ As 5 : 4 : : 100 : 80.

five per cent. ſtock, although their computed values, according to the market intereſt for money for the time being, ſhould be equal. When, therefore, ſtocks ſhall bear an intereſt higher than the market intereſt for money, each ſtock being ſubject to the ſame tender per centum for the periodical redemption of the capital, there will be a preference in the market in favour of the *higher* ſtock; and its *market value* or *price* (compared with that of the other ſtocks) will be carried rather higher than its *computed value*. Which was to be proved *.

7. Again,—If there ſhould be ſundry ſtocks bearing different intereſts, all lower than the market intereſt for money for the time being, and each ſtock be ſubject to the ſame tender per centum for the periodical redemption of the capital, there will be a ſmall preference in the market in favour of that ſtock which ſhall bear the loweſt intereſt; and its *market value* or *price* will thereby be carried rather higher than its *computed value*, compared with the other ſtocks. Becauſe, in conjunction with an *increaſe* of the market intereſt for money, the higher ſtock would *fall* in value, in the ſame proportion as the lower ſtock would fall; but, in conjunction with a *decreaſe* of the market intereſt for money, the higher ſtock would not *riſe* in value (for a time at leaſt) in ſo great a proportion as the lower ſtock would riſe.

* If the lower ſtock ſhould be ſubject to an *unlimited* tender for its redemption (as is the caſe with the preſent ſtocks of Great Britain), and the higher ſtock ſubject to a *limited* tender; the market preference in favour of the higher ſtock would be much greater than if both ſtocks were ſubject to a *limited* tender: becauſe, in that caſe, the ſtock ſubject to an *unlimited* tender would have no ſecure capacity for riſing in value above par: but, when above par, would be liable to a reduction of the intereſt.

For example—Let the market intereſt for money for the time being be $5\frac{1}{2}$ per cent. per annum; and let there be two ſtocks, the one bearing *four per cent. per annum*, and the other bearing *five per cent. per annum*, each ſubject to a tender of *three per cent. per annum* for the periodical redemption of the capital.

In this caſe the computed value of 100 *l.* of the *four per cent. ſtock* would be * $72\frac{8}{11}$ *l.* and the computed value of 100 *l.* of the *five per cent. ſtock* would be † $90\frac{10}{11}$ *l*, ſo that the computed value of 100 *l.* of the *four per cent. ſtock*, and the computed value of 80 *l.* of the five per cent. ſtock, would be equal to each other.

The computed values of the two ſtocks will likewiſe continue to hold this proportion (that is to ſay, the computed value of 100 *l.* of the *four per cent. ſtock*, and the computed value of 80 *l.* of the *five per cent. ſtock*, will continue equal to each other), whatever variations may or may not take place in the market intereſt for money, ſo long as the ſaid market intereſt for money ſhall not be leſs than 5 per cent. per annum.

If, for inſtance, the market intereſt for money ſhould become 5 *per cent. per annum*, the computed value of each would be ‡ £. 80
If 6 *per cent. per annum* ‖ $66\frac{2}{3}$
If 8 *per cent. per annum* § 50

If

* As $5\frac{1}{2}$: 4 : : 100 : $72\frac{8}{11}$.
† As $5\frac{1}{2}$: 5 : : 100 : $90\frac{10}{11}$.
‡ As 5 : 4 : : 100 : 80 ; And, as 5 : 5 : : 80 : 80.
‖ As 6 : 4 : : 100 : $66\frac{2}{3}$; And, as 6 : 5 : : 80 : $66\frac{2}{3}$.
§ As 8 : 4 : : 100 : 50 ; And, as 8 : 5 : : 80 : 50.

If 10 *per cent. per annum,* (which is higher than can be expected in actual practice, particularly in a commercial country) the computed value of each would be * £. 40

And hence, 80 *l.* of the *five per cent. ſtock* can never become worth *more* than 100 *l.* of the *four per cent. ſtock,* however high the market intereſt for money may riſe.

But, if the market intereſt for money ſhould become *lower* than 5 *per cent. per annum,* 80 *l.* of the *five per cent. ſtock* would be worth *leſs* than 100 *l.* of the *four per cent. ſtock.*

If, for inſtance, the market intereſt for money ſhould become $4\frac{1}{2}$ *per cent. per annum.* the computed value of 100 *l.* of the *four per cent. ſtock* would be † $88\frac{8}{9}$ *l.* but, the computed value of 80 *l.* of the *five per cent. ſtock* would be only ‡ $85\frac{1}{3}$ *l.*

Should the market intereſt for money become 4 *per cent. per annum,* the computed value of 100 *l.* of the *four per cent. ſtock* would be ‖ 100 *l.* but, the computed value of 80 *l.* of the *five per cent. ſtock* would be only § $91\frac{3}{7}$ *l.*

Now, ſeeing that 100 *l.* of the *four per cent. ſtock* cannot, in poſſibility, become worth *leſs* than 80 *l.* of the *five per cent. ſtock,* but may, in poſſibility, become worth *more*; there is no man but what would give more for 100 *l.* of the *four per cent. ſtock,* than he would give for 80 *l.* of the *five per cent. ſtock,* although their computed value, deduced according to the market intereſt for money,

* As 10 : 4 : : 100 : 40 ; And, as 10 : 5 : : 80 : 40.
† As $4\frac{1}{2}$: 4 : : 100 : $88\frac{8}{9}$.
‡ As $7\frac{1}{2}$: 8 : : 80 : $85\frac{1}{3}$.
‖ As 4 : 4 : : 100 : 100.
§ As 7 : 8 : : 80 : $91\frac{3}{7}$.

money, for the time being, ſhould be equal. When, therefore, ſtocks ſhall bear an intereſt *lower* than the market intereſt for money, each ſtock being ſubject to the ſame tender per centum for the periodical redemption of the capital, there will be a preference in the market, in favour of the lower ſtock, and the *market value* or *price* of ſuch lower ſtock will thereby be carried rather higher than its *computed value,* compared with the other ſtocks. Which was to be proved *.

8. We may, however, obſerve, that although, when there ſhall be different ſtocks, there will naturally (for the reaſons abovementioned) be a ſmall preference in the market, either in favour of the one ſtock or of the other, as the caſe may be; yet, when it is conſidered, that this preference relates only to the degree in which the one ſtock ſhall *riſe* or *fall* in value (in conjunction with a variation in the market intereſt for money) *faſter* or *ſlower* than the other ſtock: when it is alſo conſidered, that, amidſt the moſt extreme variations

* If the lower ſtock ſhall be ſubject to an *unlimited* tender for its redemption (as is the caſe with the preſent ſtocks of Great Britain), and the higher ſtock be ſubject to a *limited* tender; the market preference in favour of the lower ſtock will be much leſs than if both ſtocks were ſubject to a *limited* tender: becauſe, in that caſe, the lower ſtock would have, on the whole, a much leſs capacity for riſing in value than the higher ſtock would have. There may, indeed, be caſes, wherein 80 *l.* of five per cent. ſtock ſubject to a *limited tender* for its redemption will be worth conſiderably more than 100 *l.* of four per cent. ſtock ſubject to an *unlimited tender.* This, for inſtance, would be the caſe, if the market intereſt for money ſhould be as low or lower than *three* per cent. per annum; becauſe, in that caſe, the *four per cent. ſtock* (being ſubject to an unlimited tender for its redemption) would be liable to a reduction of the intereſt, which the *five per cent. ſtock* (by being ſubject only to a limited tender) would be ſecured from.

variations of the market intereſt for money, 100 *l.* of *four per cent. ſtock* (each ſtock being ſubject to the ſame tender of *three per cent. per annum* for the periodical redemption of the capital) can never be worth ſo little as 80 *l.* nor ſo much as 87½ *l.* of *five per cent. ſtock*: and, when it is further conſidered, that the variations which may or may not actually take place in the market intereſt for money, depend on circumſtances that are continually liable to be counteracted by intervening contingencies, which can never be foreſeen; and are, therefore, in their very nature, uncertain: when, I ſay, theſe things are conſidered, it will naturally follow that, whether the preference for the time being ſhall be in favour of the one ſtock or of the other, the *difference* thereby produced, between their reſpective *market prices*, and their *computed values*, deduced according to the market intereſt for money for the time being, muſt *commonly* be inſignificantly ſmall, and can *never* be ſo great as to create a difficulty, with reſpect to aſcertaining the allowance that ought in reaſon to be made.

Hence, likewiſe, it may be obſerved, that, in caſe a public debt ſhould at any time become ſo large as to require a more than uſual attention to its redemption; there can never be any difficulty in effecting a converſion of the debt from a *lower* ſtock to a *higher*, for the purpoſe of facilitating ſuch redemption, and for ſecuring the conſtant application of the ſinking fund to its proper line of ſervice.

Theſe obſervations naturally lead us to a more particular conſideration of the Public Debt of Great Britain; and of the means of effecting a converſion thereof, whereby *alone* (as was ſhewn in

in the ſecond ſection) the conſtant application of the ſinking fund to the redemption, can be ſecured; and from whence *alone* there can be any hope of preventing the further and further increaſe of the public debts and incumbrances, till the public credit ſhall become ſwallowed up in a public bankruptcy.

SECTION IV.

A brief View of the Riſe and Progreſs of the Public Debts of Great Britain;—the Miſtakes that have been made with reſpect to the Manner of conducting the Funding Syſtem; — the Eaſe with which thoſe Miſtakes might have been from time to time (and may ſtill *be) rectified, by a Converſion of the Debt;— and, the Benefits with which ſuch Converſion would be attended, as well to the Creditors as to the Public.*

1. IN taking a brief view of the riſe and progreſs of our Public Debts, it will be unneceſſary to go further back than the revolution. The trifling debts that were occaſionally incurred previous to that æra, were either ſhort anticipations of the revenue, or debts contracted by the crown without any regular fund, and which ſeldom amounted to half a million. The whole of the public incumbrances with which the nation was charged after the revolution, for debts contracted before that period, amounted only to between *Six* and *Seven Hundred Thouſand Pounds* *.

 2. The

* Sir John Sinclair's Hiſtory of the Revenue, Part II. chap. iii. page 46.

2. The revenue, in the reign of King James II. amounted to about *Two Millions* a year, which was then thought a good deal; and the friends of the Prince of Orange held forth the reduction of the revenue as a strong motive for a change in the government. When, therefore, the revolution was accomplished, the duty called Hearth-money (which produced about 245,000 *l.* per annum) was repealed, by way of gratifying the people. The remaining taxes (which before had yielded 1,755,000 *l.* clear of all expences) became so unproductive, in consequence of the wars and factions in which the nation was embroiled, that, in the year 1695 (the 7th year of King William) they yielded only * 811,949 *l.* which was less than the *one half* of their former produce: and the New Taxes that had been laid on were likewise so unproductive, that they did not amount to the One Half of what the Old Taxes had fell short.

To have burthened the nation with Additional Taxes, sufficient to defray, within the year, the annual expences of the war, after having held forth a Reduction of the taxes as a principal motive in favour of the revolution; would doubtless have endangered the new Government, even supposing the public had been ever so able to pay such Additional Taxes. Under these circumstances, therefore, the incurring of a public debt was certainly very *natural,* if we may not likewise say *unavoidable.*

3. The debts incurred during the reign of King William, and remaining undischarged at his death, amounted (funded and unfunded) to about Sixteen

* Sir John Sinclair's History of the Revenue, Part II. chap. iv. page 51.

Sixteen Millions and an Half; attended with an annual charge of about 1,320,000 *l.* It consisted, partly of money borrowed at 8 per cent. interest; partly of temporary annuities, some for Years, and some for Lives; and partly of unfunded debts: but it is not necessary at this time to enter into particulars with respect to the separate articles; especially as the following reign did not afford opportunity for diminishing them.

4. The wars in which the nation was engaged during the reign of Queen Anne, made an addition of about 37¾ millions to the public debt; so that, at the death of that Princess, the debt amounted to about 54¼ Millions.

5. The reign of George I. was, in the general, a period of tranquillity, and afforded a very favourable opportunity for putting the debts and finances into the most desirable state. It may not be amiss, therefore, to mention the principal heads of the public debt as it stood at this monarch's accession to the crown, and the steps that were taken during this reign, for putting it into a course of redemption.

A perfectly accurate statement of the public debts, as they then stood, can hardly be expected; I shall, therefore, omit entering into the niceties of odd pounds, shillings, and pence, and shall content myself with giving the heads of the several articles, in the nearest round numbers.

From the best accounts that can now be obtained, the public debts at the death of Queen Anne (or at the accession of the House of Brunswick) stood as follows, or thereabout, very nearly; *viz.*

 Capitals

	Principal.	Interest or Annuity.
Capitals bearing interest at 6 per cent.	£. 13,220,000	793,200
Ditto bearing interest at 5 per cent.	3,200,000	160,000
Ditto (for sundry Exchequer Bills) bearing interest at the rate of about $7\frac{1}{6}$ per cent.	4,680,000	335,400
	£. 21,100,000	1,288,600
Sundry Temporary Annuities for Lives and for Long and Short Terms of Years, worth about	28,100,000	1,861,400
Sundry unfunded Debts bearing interest (on an average) at 4 per cent. amounting to about	5,050,000	202,000
Total about	£. 54,250,000	3,352,000

Sir John Sinclair, in his History of the Revenue (Part II. page 91), states the debt at the death of Queen Anne, at 54,145,363 *l.* 11 *s.* 4*d.* bearing an interest of 3.351,358 *l.* 3 *s.* 3 *d.* In Postlethwayt's History of the Revenue, page 152, it is stated at 54,542,545*l.* 11 *s.* 1*d.* in the year 1716. We may, therefore, safely conclude, that the above statement of 54,250,000 *l.* cannot be very wide from the truth.

As every writer on the subject has complained of great mismanagement in the mode of contracting the above debt; it might perhaps appear singular in me to be entirely silent on it. It is, however, so remote, that I shall be very brief.

6. A very great part of the abovementioned six per cent. capital (to wit, about Nine Millions thereof) was composed of debts, tallies, and deficiencies, which (to the great injury of the original creditors) were suffered to remain unprovided for, till they fell to a discount of more than 40 per cent. and had nearly ruined the credit of the nation. They were at length funded at Par (to the great advantage of those who purchased them) and, with the addition of other monies advanced, formed the stock of the South Sea Company.

7. Another part of the abovementioned 6 per cents was composed of 1,200,000 *l.* which had been advanced by the bank in the reign of King William, at 8 per cent.; and 400,000 *l.* advanced by the bank in the reign of Queen Anne, without interest, in consideration of a prolongation of their charter. This 400,000 *l.* was generally considered to have been *given* by the bank for the prolongation of its charter; but it was nevertheless added to the former 1,200,000 *l.* lent at 8 per cent. and thereby formed a capital of 1,600,000 *l.* bearing 6 per cent.

8. The abovementioned five per cent. capital was composed of 2,000,000 *l.* advanced by the East India Company in the reign of King William, at 8 per cent.; and 1,200,000 *l.* advanced by the East India Company, without interest, in the reign of Queen Anne, in consideration of a prolongation of their charter. This 1,200,000 *l.* was also generally considered to have been *given* by the East India Company for the renewal of their charter; but it was nevertheless added to the former 2,000,000 *l.* lent at 8 per cent. thereby making a capital of 3,200,000*l.* bearing 5 per cent.

9. Sundry Exchequer Bills were iſſued, and the intereſt thereof charged on funds that ſtood previouſly mortgaged for four or five years; during which time, the intereſt and the premiums for circulating theſe bills were paid quarterly in freſh Exchequer Bills, which produced a quarterly accumulation of debt at compound intereſt.

10. The life annuities were granted without paying any regard, in the price, to the difference of the ages of the annuitants, and ſome of theſe annuities that were granted at Ten Years Purchaſe, in the reign of King William, remain ſtill a burthen on the public. The loſſes ſuſtained by the public from the other temporary annuities, have likewiſe been juſtly complained of.

11. Neither were theſe complaints confined to matters of mere Miſmanagement. The officers of government were ſaid to have been guilty of the moſt fraudulent practices; ſome of which were actually proved, but the offenders were ſuffered to go unpuniſhed.

Sir John Sinclair, in his Hiſtory of the Revenue, Part II. page 52, mentions one fraud of an enormous nature: I ſhall beg leave to tranſcribe the paſſage.

"Exchequer Bills, when firſt iſſued, were not "entitled to any intereſt; but when paid in, on "account of any tax, they received upon the "ſecond iſſue (if indorſed by the proper officer) "an intereſt of 5 *l.* 12 *s.* per annum. This en"couraged ſeveral of the officers of the Exciſe "and Cuſtoms to contrive together to get great "ſums of money by falſe indorſements, before "ſuch Exchequer Bills had been circulated. "Many officers had enriched themſelves by this "fraud; and Duncombe, Receiver General of "Exciſe, had amaſſed a fortune of 400,000 *l.* "A Bill paſſed the Houſe of Commons, fining "this flagrant offender in about one half of "that ſum; but it was rejected by the Lords, "in conſequence of the exertions of a noble "Duke, who was ſuſpected of having been gained "over by a golden ſacrifice. The other perſons "guilty alſo eſcaped."

12. It appears likewiſe to have been a common practice with thoſe who were in power, to put off the ſettling of a fund for any particular debt due by the public, until the ſhares of thoſe who were intereſted as creditors ſold at a very great loſs. Thoſe who were in the ſecret then bought them up, and the deficiency was immediately ſupplied.

Upon the whole it appears, that more than Ten Millions of the debt, as it ſtood at the acceſſion of the Houſe of Brunſwick, had been occaſioned by frauds; and by ſuch exorbitancies in the *diſcounts* and *premiums* as were produced by *actual* (though perhaps in ſome inſtances *not intentional) miſmanagement*.

Thoſe who would wiſh for more minute information, will pleaſe to conſult Sir John Sinclair's Hiſtory of the Revenue, and the other works therein referred to.

13. The reign of George I. was, in the general (as I obſerved before) a period of tranquillity; and ſeveral important financial operations took place in this reign.

The regular punctuality with which the public annuities were paid, and the eaſe with which they were transferable, rendered them a very convenient property for the employment of monies

monies that had uſed to lay from time to time unemployed and unproductive, in the coffers of the wealthy: and the additional ſums thus brought into circulation, naturally produced a decreaſe in the rate of intereſt.

In the year 1715, government found itſelf able to procure a loan at Five per Cent; and, as money was thus obtainable at Five per Cent. there could certainly be no reaſon why the public ſhould continue paying Six per Cent. for the monies that had been raiſed on redeemable capitals.

14. It was therefore propoſed to the creditors in the year 1716, either to accept of Five per Cent. intereſt, or to have their capitals paid to them. The creditors accepted of the intereſt offered, and thus the principal part * of the redeemable debt was converted into ſtocks bearing Five per Cent.

This reduction of the intereſt was not, at the time, unpopular, even among the creditors themſelves. The ſavings that were thereby produced being directed by Parliament to be applied as a ſinking fund towards the redemption of the principal; the creditors conſidered, that although their annual intereſt was leſſened, yet, their principal was rendered much more ſecure; which, at that time, was conſidered to be an object of much more importance than the intereſt.

15. The greater half of the Public Debt, at the acceſſion of the preſent Royal Family, conſiſted (ſee

* The 1,600,000 *l.* that had been advanced by the Bank (as mentioned in the aforegoing 7th Article) was not included.

(ſee the ſtatement, page 43) of temporary Annuities for Lives, and for Long and Short Terms of Years. The price of theſe Long and Short Annuities was continually increaſing, as the rate of intereſt decreaſed; ſo that no effectual meaſures could be taken for leſſening the Public Debts, while ſo large a proportion thereof remained in this irredeemable ſtate. The converting of theſe annuities into a Redeemable Stock, was therefore juſtly conſidered as an object of the utmoſt conſequence.

In order to put this part of the debt into a redeemable ſtate, the proprietors of the long and ſhort annuities, (or ſuch of the ſaid proprietors as ſhould think proper) were permitted, by Act of Parliament, to tranſcribe them into the capital of the South Sea Company, at the rate of 5 *l.* of the Long Annuity, or $7\frac{1}{7}$ *l.* of the Short Annuity, for 100 *l.* capital; the ſaid capital to bear 5 per cent. intereſt, till 1727, and afterwards 4 per cent. until redeemed *.

The chief part of theſe annuities were accordingly tranſcribed, to the great benefit of the public. It may not, however, be amiſs to obſerve, that although many of theſe annuities had already run more than twenty years, the converſion coſt government a capital of above *Three Millions* more than had been originally received for

* This converſion was effected about the latter end of the year 1719, or early in the year 1720. The falſe reports propagated ſhortly after this by the Directors of the South Sea Company, with reſpect to the profits of their commerce, and their pretended votes of large dividends thereon, which produced what is commonly called the *South Sea Bubble*, are not matters appertaining to the *Public* Debt, and do not therefore come within the limits of this ſummary.

for them. I mention this, as an inftance, to fhew the improvidence of this kind of annuities.

16. It was likewife further propofed to the proprietors of the other redeemable capitals in general, either to receive their Principal, or to fignify their acceptance of Four per Cent. Intereft, from and after the year 1727. The intereft propofed was generally accepted; and thus the chief part * of the debt became (in the year 1727) converted into capitals bearing four per cent.

This fecond reduction of the intereft was not fo well relifhed by the creditors at large as the firft had been; but, as government was able to borrow money at Four per Cent. it would be unreafonable to fuppofe that the public fhould be burthened with taxes for the purpofe of paying Five per Cent. on capitals that were redeemable at pleafure. It is, however, rather to be wondered at, that the creditors did not endeavour to obtain fuch ftipulations and conditions with refpect to the redemption of this Four per Cent. capital, as fhould fecure them againft *further* reductions of the intereft; nor can this be eafily accounted for, but from their not having ftudied the nature and principles of the fubject. Had the creditors ftipulated that this New Four per Cent. Stock fhould be fubject only to a *limited tender of fo much per centum* for the periodical redemption of the capital, with the privilege of fufpending the tender on certain fixed principles, in cafes where it fhould be inconvenient to receive it, after the manner mentioned in the third fection of my third effay, they would have

* The 1,600,000 *l.* formerly advanced by the Bank, (as mentioned in the aforegoing 7th Article) was not included.

have thereby fecured their intereft or annuity from being further reduced by the borrowing of money on new capitals, wherewith to difcharge the old ones; without any prejudice to the periodical diminution of the debt by a Sinking Fund: nor can it be doubted but fuch a ftipulation would have been readily acceded to by Government. But this (the fubject not having been inveftigated) did not occur.

The reduction of the intereft on the Public Debt to 4 per cent. which took place in 1727, produced an annual faving to the public of about 377,400 *l.*; which, together with the annual favings arifing from the reduction of the intereft in 1716; and, together alfo with the temporary annuities fallen in, and the furplufes of the funds called the *Aggregate*, the *South Sea*, and the *General* Funds, formed a clear Sinking Fund of about 1,000,000 *l.* (or rather more than 1,000,000 *l.*) per annum.

The principal of the debt underwent but little diminution during this reign. It was diminifhed only to about 52,000,000 *l.*

Such was the ftate of the Public Debt and Sinking Fund at the demife of King George the Firft, in the year 1727.

17. " If any one æra fince the revolution," as Sir John Sinclair very juftly obferves, " was to " be pointed out, in which our Minifters were " peculiarly culpable for neglecting to take folid " and fubftantial meafures to reftore good order " in our finances, it muft be that of the com" mencement of the reign of King George the " Second:" to wit, from his Majefty's acceffion in 1727, to the breaking out of the Spanifh war in 1739.

Further

Further reductions of the intereſt were held in contemplation. In the year 1737, a reduction of the intereſt on the Public Debt to Three per Cent. was agitated in Parliament; but the differences of opinion, with reſpect to the propriety or impropriety of carrying it into execution, were ſo exceedingly great, that no meaſures were adopted *.

With reſpect to the Practicability of the above reduction, there could be no kind of doubt: for, ſome Three per Cent. Stocks had been already granted (for monies raiſed by lotteries, &c.); and thoſe Three per Cent. Stocks then bore a premium in the market. And, it could not but appear perfectly unreaſonable, that the public ſhould be burthened with taxes for the purpoſe of paying Four per Cent. on a capital that was redeemable at pleaſure, when money could be obtained at Three per Cent. wherewith to diſcharge ſuch capital.

On the other hand, it is equally neceſſary to obſerve, that reductions of intereſt, if carried too far, are productive of very dangerous conſequences. If, for inſtance, the intereſt on any ſtock ſhall be reduced ſo low as to let the capital value thereof fall afterwards to a diſcount, the honeſt creditor is not only injured by the depreciation of the value of his capital, but government likewiſe becomes unable to raiſe new loans without granting an Additional Capital, over and above the

* It appears that theſe differences of opinion were very much increaſed by that unhappy ſpirit of party which but too often prevails in this country, to the great detriment of the Public Intereſt. The Miniſter, [Sir Robert Walpole] it is ſaid, exerted himſelf againſt the adoption of any meaſures, becauſe the propoſal was made by Sir John Barnard, who, on ſome other occaſions, had voted againſt the Miniſter. See Sir John Sinclair's Hiſtory, Part II. page 109.

the money actually received; or giving, in ſome way or other, a Premium equivalent (or more than equivalent) to ſuch Additional Capital. In this caſe, the Advantages gained by the reduction of the Intereſt, would become defeated, and turned into a Capital Loſs *. Hence, had the ſubject been regularly diſcuſſed, this important queſtion would naturally have ariſen,—to wit, What are the neceſſary meaſures whereby the propoſed advantages may be obtained, and theſe dangerous conſequences avoided?

18. Had the nature and principles of Public Credit been inveſtigated, the ſolution of this queſtion would have been exceedingly eaſy. It would have been ſimply this:—'If, inſtead of 'reducing the intereſt to Three per Cent. by 'granting 100 *l.* of Three per Cent. Stock, in 'lieu of each 100 *l.* of the Old Four per Cents.; '—if, I ſay, inſtead of granting ſuch 100 *l.* of 'Three per Cent. Stock, $87\frac{1}{2}$ *l.* of New Four per 'Cent. Stock were granted, ſubject to a Limited 'Tender of Four per Cent. per Annum, for the 'periodical redemption of the capital; equal 'advantages would be obtained, and the dangerous conſequences avoided: the creditors, 'likewiſe, would much rather accept of $87\frac{1}{2}$ *l.* 'of ſuch New Four per Cent. Stock † than have 'their intereſt reduced to Three per Cent.' Such would have been the anſwer to the queſtion;

* The Loans raiſed during the two laſt wars (of which I ſhall ſpeak in their turns) furniſh very melancholy proofs of the truth of this obſervation.

† It muſt be remembered, that when I ſpeak of ſtocks of this kind, I *always* mean, that, for the *conveniencies* of the creditors, the privilege of ſuſpending the tender on certain fixed principles (as mentioned in the third ſection of my third eſſay) ſhould be a part of the conſtitution of the ſtock.

tion; and ſuch was the meaſure that ought to have been adopted when the reduction of the intereſt was propoſed in 1737 *. But the nature and principles of the ſubject not having been inveſtigated, the differences of opinion with reſpect to the propriety or impropriety of further reductions of the intereſt (being heated too by *party* diſſentions) were ſo irreconcileable, that nothing was done, with reſpect to the finances, during this moſt valuable period of twelve years preceding the Spaniſh war, except the diſcharging of about *Five Millions* of the debt, by occaſional payments †.

19. At the breaking out of the Spaniſh war in 1739, the Public Debt ſtood as follows, or thereabout as nearly as can well be aſcertained; *viz.*

* This will be more fully explained when we come to ſpeak of the tranſactions of 1749; when the motion for a reduction of the intereſt was again put and carried.

† I ſay *occaſional payments* in contradiſtinction to *regular payments*; for, it muſt be noted, that the *Sinking Fund* was not regularly applied to the redemption of the debt according to the original intention, but was diverted to any other ſervice where money was required.

	Principal.	Intereſt or Annuity.
Viz.—Capitals bearing		
6 per cent. £.	1,600,000—	£. 96,000
4 per cent. (about)	38,250,000—	1,530,000
3½ per cent.	400,000—	14,000
3 per cent. (about)	2,750,000—	82,500
	43,000,000—	1,722,500
Sundry temporary Annuities for *Lives*, and for *different Terms of Years*, worth about	2,250,000 —	178,000
Sundry unfunded debts amounting to about	1,250,000—	37,500
Total about * £.	46,500,000—	£. 1,938,000

20. We may obſerve here, that during a period of 25 years, from the demiſe of Queen Anne, in 1714, to the breaking out of the war in 1739, (a period in which the public tranquillity was but little interrupted, and thoſe interruptions attended with but very little expence,) the capital or principal of the Public Debt was diminiſhed only about Seven Millions and Three Quarters; to wit, from about 54,250,000*l.* to about 46,500,000*l.* and,

* Sir John Sinclair, (in his Hiſtory of the Revenue, Part II. page 79) ſtates the principal at 46,954,623 *l.* and the intereſt or annuity at 1,964,025 *l.* Doctor Price (in his Additional Obſervations on Civil Liberty, page 144) ſtates the principal at 46,382,650 *l.* and the intereſt or annuity at 1,903,861 *l.* We may, therefore, conclude, that the above ſtatement cannot be very wide from the truth, although I cannot take upon myſelf to ſay which of the *three* may be the moſt perfect.

and, that during the same period, the interest or annuity thereon was diminished (partly by reductions of the interest, and partly by the falling in of the temporary annuities) from about 3,352,000*l.* to about 1,938,000 *l.* which of itself (exclusive of the *further* surpluses of the funds which formed the sinking fund) produced a saving of about 1,414,000 *l.* per annum; a sum amply sufficient, had it been properly applied, to have given all the check, to the future increase of the debt, that could have been necessary.

21. During the course of this war, the bank advanced 1,600,000 *l.* *without Interest*, in consideration of a prolongation of its charter: this sum was added to the 1,600,000 *l.* mentioned above, bearing 6 per cent. and thereby formed a capital of 3,200,000 *l.* bearing Three per Cent. The East India Company, likewise, in consideration of a prolongation of their charter, lent to government 1,000,000 *l.* at Three per Cent. when the market interest for money was higher. These bargains have been justly complained of as being very improvident. They create an *appearance* of obtaining a valuable consideration for the renewal of the charters; but, at the same time, convert the consideration money so received, into a debt. It must, however, be observed, that in a time of war, government being as it were in the power of the lenders, a favourable bargain on the part of the public cannot be expected to be made. The complaints, therefore, with respect to these bargains, ought, in justice, to extend no farther than this; to wit, that bargains of this kind (and indeed all other bargains which the exigencies of the state do not render *immediately necessary*) ought, as much as

possible, to be *avoided* in time of war, and made in time of peace, when government can treat with the creditors on fair and equal terms.

22. The further sums of 6,400,000 *l.* bearing 3 per cent. 1,000,000 *l.* bearing $3\frac{1}{2}$ per cent. and about 19,500,000 *l.* bearing 4 per cent. (together with other sums unfunded) were likewise added to the debt during the course of the war; and when the stocks were at a discount, the loans were made by giving Premiums (in Additional Capitals, Lottery Tickets, and Life Annuities) equal to the Discounts to which the stocks had fallen.

This method of making the loans has also been justly complained of, as being productive of great loss to the public in the redemption *. It must, however, be observed, that these losses can be avoided *only* by the use of stocks that shall have a free and secure capacity for rising in value *above par*, for the advantage of the creditors, without prejudice to the public with respect to the price to be paid for the periodical redemptions: for, when a man can lay out his money in any stock at a Discount, with the prospect of obtaining such or such an advantage from the future rise of the stock; he cannot, consistent with his own interest, advance it on any other stock without having *an equal* prospect of advantage. When, therefore, we complain of the improvidence of this method of making the loans, we ought not to lay actual blame on those who conducted

* The stocks on which the Loans were made during the course of this war, were, I believe, generally, above 90 *l.* so that these losses did not amount to any great sum, compared with those of the two latter wars, of which I shall speak in their turn. During this war from 1739 to 1748 these losses might perhaps amount to about *Two Millions.*

them: we ought, in juſtice, only to lament, that the nature and principles of the ſubject had not been inveſtigated, whereby to aſcertain the neceſſary properties of an annuity ſtock, that would ſecure to the creditors the *advantages of the riſe*, without ſaddling the public with *loſs* in the redemption. The ſtock neceſſary for this purpoſe is, 'A ſtock bearing a higher intereſt than the 'ordinary rate of the market, ſubject to a *limited* '*tender* for the periodical redemption of the 'capital.'

After the war was cloſed, and the expences arranged, our Public Debt ſtood as follows, or thereabout, very nearly, *viz.*

		Principal.	Intereſt or Annuity.
Capitals bearing			
4 per cent. (about)	£.	57,750,000—	2,310,000
$3\frac{1}{2}$ per cent.		1,400,000—	49,000
3 per cent. (about)		13,350,000—	400,500
	£.	72,500,000—	2,759,500
Sundry temporary Annuities for *Lives*, and different Terms of *Years*, worth about		3,000,000—	212,200
Sundry unfunded debts amounting to about		2,750,000—	82,500
Total * about	£.	78,250,000—	3,054,200

23. The

* Sir John Sinclair, (in his Hiſtory of the Revenue, Part II. page 85) ſtates the principal at 78,293,313 *l.* and the annuity or intereſt at 3,061,004 *l.* Doctor Price (in his Additional Obſervations on Civil Liberty, page 147) ſtates the principal

23. The war was no ſooner ended, and the expences thereof arranged, than the propoſal of Sir John Barnard, (which had been rejected in the year 1737) for reducing the intereſt on the Public Debt, was re-taken up; and Mr. Pelham, then Chancellor of the Exchequer, intimated publickly, during the Seſſion which began in November 1748, his intention of embracing the firſt favourable opportunity that ſhould offer for carrying it into effect.

In the next ſeſſion of Parliament, to wit, in November 1749, a Reſolution paſſed the Houſe of Commons (and was afterwards formed into an act), to this effect;—'That ſuch of the proprie-'tors of the Four per Cent. Capitals as ſhould, 'within three months from the date of the reſo-'lution, ſignify their acceptance, ſhould continue 'to receive Four per Cent. Intereſt until Decem-'ber 1750; Three and an Half per Cent. from 'thence until December 1757; and afterwards 'Three per Cent. until redeemed: And, that in 'caſe any of the ſaid proprietors ſhould not ſo ſig-'nify their acceptance of ſuch *Intereſt*, his Majeſty 'ſhould be enabled to borrow money wherewith to 'pay them their *Principal*.'

The meaſure met with little or no oppoſition in Parliament, but, when it was propoſed to the Creditors, the Eaſt-India Company were greatly

 diſſatisfied;

principal at 78,166,906*l.* and the intereſt or annuity at 2,765,608*l.* This difference in the annuity or intereſt ariſes thus:—Doctor Price ſtates the debt as it ſtood before the commencement of the next war in 1755, and adds the redemptions that had been made during the intermediate peace, calling *their ſum*, the debt as it ſtood at the end of the preceding war; ſo that the intereſt or annuity mentioned in the Doctor's ſtatement is that which remained after the Four per Cents. became reduced to $3\frac{1}{2}$ per Cent. at the end of the year 1750.

diſſatisfied; the Bank refuſed its conſent; and the propoſal was ſo generally reprobated and exclaimed againſt by the proprietors at large, and ſo very few of them had ſignified their acceptance of the propoſal when the period approached, that many people expected it to fail *. The Creditors, however, were too wiſe to their own intereſt, to continue in their refuſal, or to ſuffer the time wholly to elapſe, although they had delayed ſo long that the *whole* of them could not come in, under the firſt propoſal.

The Three per Cents. at the time we are ſpeaking of, were above *par* in the market:—It was evident therefore, that while this ſhould continue to be the caſe, Government could obtain money at Three per Cent. wherewith to pay off the Four per Cents. It was likewiſe evident that ſuch of the Creditors as had no other employment for their money, could not obtain even *ſo much* as Three per Cent. by laying it out in the ſtocks, in caſe their Principal ſhould be paid to them. Such of the Creditors, therefore, as had no other employment for their money, however diſpleaſed they might be at ſuch a reduction of their annual income, had only this choice,—to wit,—'either 'to accept of the *propoſed* reduction, or to ſuffer 'a *ſtill greater* one.' Their *pecuniary intereſt*, as would naturally be ſuppoſed, got the better of their *diſpleaſure*; and although very little had been ſubſcribed till within *three weeks* of the expiration of the time limited, forty millions (or thereabout) were ſubſcribed before the time expired.—The remainder (except about three millions and an half, which were paid off by loans at Three per Cent. and by the produce of the ſinking fund) was afterwards ſubſcribed on terms, leſs advantageous to the proprietors, than thoſe at firſt offered: the *ſecond* ſubſcribers were reduced from $3\frac{1}{2}$ to 3 per Cent. at Chriſtmas 1755: the *firſt* received $3\frac{1}{2}$ till Chriſtmas 1757.

* Sir John Sinclair's Hiſtory of the Revenue, Part II. pages 112, and 118.

Had the nature and principles of the ſubject been underſtood, the Creditors would never have left themſelves open to this reduction of the intereſt, when, during the preceding war, they had it ſo fully in their power to ſecure themſelves againſt it. Had they then ſtipulated that their capitals ſhould be liable only to a tender of *ſo much per centum* for their periodical redemption*, they would have ſecured themſelves againſt this reduction of the intereſt, without any prejudice to the neceſſary diminution of the debt by a ſinking fund. But (the ſubject not having been inveſtigated) this did not occur: and the tender for the redemption being *unlimited*, it was in vain to think of reſiſting the reduction of the intereſt, when money could be borrowed cheaper.

24. The above reduction of the intereſt has been very highly approved of by ſome, as a moſt judicious, and maſterly ſtroke of finance;—by others, again, it has been very highly diſapproved of, as a very injudicious meaſure, and pregnant with infinitely more evil than good.

To ſtate the arguments *for* and *againſt* the meaſure at length, would require a good deal of room. —The ſubject, however, is ſo very important; and this point, in particular, is ſo eſſentially neceſſary to be rightly underſtood; that I ſhould think myſelf unpardonable, if I did not repeat, here, ſo much,

* Remember the note, page 42.

much, at leaſt, as ſhould bring it to a proper deciſion.

25. It would evidently be very unreaſonable and unjuſt, that the public ſhould be loaded with taxes, for the purpoſe of paying Four per Cent. Intereſt, on capitals redeemable at pleaſure, when money could be borrowed at Three per Cent. wherewith to diſcharge ſuch capitals.—"Whenever (ſays Sir John Barnard, who originally propoſed this reduction of the intereſt) money can be borrowed cheaper than the intereſt paid by the public, it is incumbent on Parliament (with great deference be it ſpoken), and what the nation have a right to expect from them, to make uſe of the opportunity, in order to give the people in general all the eaſe in their power."—This argument in favour of reductions of intereſt, is ſo incontrovertibly evident, juſt, and forcible, (conſidered as a *general argument*) that it is unneceſſary to give any other.

But let us ſee what may be ſaid on the other ſide of the queſtion.

26. It muſt be evident to every body, who conſiders ever ſo little of the nature of the ſubject, that if the intereſt be reduced ſo low, as to let the value of the capital fall afterwards to a diſcount in the market, the honeſt creditor is not only injured by ſuch depreciation; but, Government likewiſe becomes thereby unable to raiſe new loans, without granting an *additional capital* (equal to ſuch *diſcount*), over and above the money actually received; or giving, in ſome way or other, a *premium* equivalent to ſuch additional capital.—For, when a man can lay out his money in any ſtock at a *diſcount*, with a proſpect of obtaining ſuch or ſuch an advantage from the future riſe of the

the ſtock; he cannot, conſiſtent with his *own intereſt* (which is always the *primum mobile* in all pecuniary conſiderations), advance it on any other terms but ſuch as ſhall afford him an *equal* (or a *greater)* proſpect of advantage. And hence, if reductions of intereſt are carried ſo far as to let the value of the capital fall afterwards to a *diſcount*, they are liable to be attended with much more evil than good.—This argument *againſt* reductions of intereſt, is equally juſt and incontrovertible, as the aforegoing argument *in favour* of them *.

27. The above arguments, *for* and *againſt* reductions of intereſt, being equally juſt and incontrovertible; it will neceſſarily follow that there muſt exiſt *in nature*, a PRINCIPLE of ſome kind or other, (however great the labour of aſcertaining ſuch principle may or may not be) on which thoſe arguments, ſo far at leaſt as ſhall relate to their *eſſence*, will become reconcileable the *one* with the *other:* for, it is morally impoſſible, and contrary to nature, that *one* juſt argument or poſition can be

* Doctor Price conſiders the arguments *againſt* reductions of intereſt to be *far more forcible* than the arguments *in favour* of them. At page 26 of his Statement of the Public Debts in January 1783, he ſays, "Reductions of intereſt are ſome of the moſt dangerous temporary expedients. They only poſtpone calamities by accumulating them and rendering them leſs poſſible to be avoided. To them we owe thoſe pernicious modes of borrowing, of which ſo much has been ſaid in theſe papers; and that vaſt weight of artificial debt, which, if our debts are ever redeemed, muſt be diſcharged with money, though no money has been received for it." I muſt, however, confeſs myſelf ſurpriſed that the Doctor ſhould conſider the arguments *in favour* of reductions of intereſt to be *leſs forcible* than thoſe *againſt* them: the *unreaſonableneſs* of paying Four per Cent. intereſt for capitals redeemable at pleaſure, when money can be borrowed at Three per Cent. is perfectly *ſelf-evident*.

be *inconsistent* with *another* argument or position that shall *also* be just.

28 Had the nature and principles of the subject been investigated, it would have been found, (and the attentive reader will *now* have no difficulty in perceiving) that the *essence* of *both* the above arguments would have been effectually preserved; the proposed advantages effectually obtained; and the dangerous consequences effectually avoided; if, instead of granting 100*l.* of Three per Cent. Stock, in exchange for 100*l.* of the old Four per Cents. and thereby reducing the interest to Three per Cent. there had been granted (in exchange for each 100l. of the said old Four per Cents.) 87½ of New Four per Cent. Stock, subject to a *limited* tender of Four per Cent. per annum, for the periodical redemption of the capital.* And, this measure would also have been much more acceptable to the Creditors, than the reduction of their interest to Three per Cent.

The reduction of the interest from Four per Cent. to Three per Cent. by granting 100*l.* of Three per Cent. Stock in exchange for 100*l.* of the Old Four per Cents. produced a saving of One Fourth Part of the annuity, and no Part of the capital: the above measure of granting 87½*l.* of New Four per Cent. Stock in exchange for 100*l.* of the Old Four per Cents, would have produced a saving of One Eighth Part of the annuity, and One Eighth Part of the capital; which said Two Eighths are equal to One Fourth:—Thus far, therefore, (taking the *interest* and the *redemptions* into consideration together) the advantages arising to the public would have been equal. But, by granting 87½*l.* of New Four per Cent Stock, instead of granting

* Remember the note, page 42.

ing 100*l.* of Three per Cent. Stock, the abovementioned *dangerous consequences*, to which reductions of interest are liable, would have been entirely avoided; because, the *ratio* or *proportion* (to wit, Four per Cent.) between the *annuity* and the *capital* would have remained unaltered.—By so much, therefore, as the *dangerous consequences* resulting from the reduction of the interest might amount to; by so much, the last-mentioned measure would have been preferable to the former.

The creditors would likewise have preferred the last-mentioned measure far before a reduction of their interest or annuity, in the common way, to Three per Cent. for two reasons,—to wit:—First,—Because 87½ *l.* of the New Four per Cent. Stock would be worth more than 100*l.* of the common Three per Cents. in all possible cases whatsoever; however *high*, or however *low* the market interest for money might or might not be.*—And secondly,—because the *limitation* of the tender to which the New Stock should be liable, for its periodical redemption, would have removed all apprehensions under which they might labour,

* If the market interest for money was a *stationary* or *invariable quantity*, there would then be *one* (and *only one*) possible case, in which the value of 100*l.* of the common Three per Cent. Stocks, would be *equal* to the value of 87½*l.* of the abovementioned New Four per Cents:—This would be the case, if the market interest for money was *stationary at* Three per Cent. But, the market interest for money not being *stationary*; and 87½*l.* of the New Four per Cent. Stock being worth *more* than 100*l.* of the common Three per Cents. whenever the market interest shall be either *higher* or *lower* than Three per Cent. there can be no *possible case* in which 100*l.* of the common Three per Cent. Stocks can be worth so much as 87½*l.* of the abovementioned New Four per Cents.—See the *principles* laid down and demonstrated in the aforegoing third section. See also the tables in the appendix.

labour, with respect to *further* reductions of the interest.

The above measure (of granting 87½*l.* of New Four per Cent. Stock, instead of reducing the interest by granting 100*l.* of Three per Cents.) would likewise have secured the constant application of the sinking fund to the redemption of the debt, and prevented it from being diverted to other services: because, the interest or annuity on the stock being *higher* than the market interest for money; the sinking fund would redeem a greater quantity of Stock or of Annuity, than would be required to be granted in order to obtain an equal sum of money in the market. And, this constant application of the sinking fund to the redemption of the debt, would naturally have supported the value of the stocks from depreciation, and prevented that immense load of artificial debt under which the nation now groans. It cannot, therefore, be too much lamented, that the nature and principles of this important subject had not been regularly investigated, previous to the abovementioned reduction of the interest in 1749.

29. The above reduction of the interest, produced an annual saving of near 570,000*l.* and was the only financial operation that requires to be particularly noticed, during the peace from 1748 to 1755. The diminution of the capital was but little attended to. Only a little more than three millions thereof were discharged, and part of the unfunded debts provided for; so that our Public Debt, at the breaking out of the next war in 1755, stood nearly as follows; viz.

Capitals

	Principal.	Interest or Annuity.
Capitals (bearing 3 per cent. from and after 1757, which being then so near at hand, I shall consider it as being accomplished) about —	£.70,800,000—	£.2,124,000
Sundry temporary annuities for lives, and different terms of years, worth about	2,900,000—	210,000
Sundry unfunded debts amounting to about	1,300,000—	39,000
Total about*	£.75,000,000—	£.2,373,000

30. During the war from 1755 to 1763, rather more than Seventy One Millions and an Half was added to the debt; which increased it to rather more than 146½ millions.

The dangerous consequences to which too great a reduction of interest is naturally liable (as mentioned in the aforegoing 26th article) became practically verified during the course of this war. The

* Sir John Sinclair (in his History of the Revenue, Part II. page 88) states the principal at 74,571,840*l.* and the interest or annuity at 2,416,717. Doctor Price (in his Additional Observations on Civil Liberty, page 147) states the principal at 75,077,264*l.* and the interest or annuity, previous to the reductions that fell in in 1755 and 1757, at 2,654,018*l.* from which last-mentioned sum, those reductions (amounting, according to the Doctor's note in page 140, to 290,381l.) being substracted, leaves 2,363,637*l.* for the interest or annuity. The above statement, being in the *midway* between these, may be considered sufficiently near the truth, whichever of the three may be the *nearest*.

The ſtocks fell to ſo great a diſcount, that it became neceſſary, in raiſing the loans, to grant *artificial capitals*, and temporary annuities, by way of *premiums*, in conſequence of ſuch diſcount, to the amount of about Twelve Millions and an Half, over and above the monies actually received for the public ſervice.*

This method of making the loans has been very juſtly complained of by almoſt every writer on the ſubject, as being highly improvident and injurious to the public; by requiring immenſe ſums to be paid for the redemption beyond what was ever received. It is neceſſary, however, to repeat here, what I obſerved in the aforegoing 22d article; to wit, that 'theſe loſſes can be avoided '*only* by the uſe of ſtocks that ſhall have a free and 'ſecure capacity for riſing in value *above par* for the 'advantage of the creditors, without prejudice to 'the public with reſpect to the price to be paid for 'the periodical redemptions:'—becauſe, as I have obſerved already, (and I ſhall beg leave to repeat it again and again), 'when a man can lay out his 'money in any ſtock at a *diſcount*, with a proſpect 'of obtaining ſuch or ſuch an advantage from the 'future *riſe* of the ſtock; his own intereſt will not 'ſuffer him to advance it on any other ſtock, without having *an equal* proſpect of advantage.' We ought not, therefore, in our complaints againſt theſe loans, to lay any blame on thoſe who conducted them: we ought, (as I ſaid before) only to lament, 'that the nature and principles of 'the ſubject had not been inveſtigated, whereby to 'aſcertain the neceſſary properties of an annuity 'ſtock, that would ſecure to the creditors the advantages on the riſe, without ſaddling the public 'with

* See Doctor Price's Additional Obſervations on Civil Liberty, Part II. ſection 3.

'with loſs in the redemption.' It may alſo be obſerved, that a time of war, when government is as it were in the power of the lenders, is not a time for making *favourable* bargains on the part of the public, either with reſpect to future terms of redemption, or any thing elſe.

Had the nature and principles of the ſubject been then known, the creditors would have required *higher* terms for the loans during the war, than they would have required for a converſion of the debt after the peace. During the war (had the nature and principles of the ſubject been underſtood) the creditors might have obtained $87\frac{1}{2}$ *l.* of New Four per Cent. Stock, ſubject to a tender of 4 per cent. per annum for the periodical redemption of the capital *, on their advancing in money towards the new loans, a ſum equal to what 100 *l.* of the Three per Cent. Stock was taken at. Nay, they might have done much more:—they might have brought about a converſion of the Three per Cents. into New Four per Cents. at the ſame rate; by requiring *twice* or *three times* $87\frac{1}{2}$ *l.* of the New Four per Cent. Stock, on their advancing the value of 100*l.* of Three per Cents. in money, and giving up therewith 100 *l.* or 200 *l.* of the Three per Cent. capital. By theſe means the creditors would have recovered a part of the loſſes they had before ſuſtained by the reduction of their intereſt.

Thoſe who view reductions of intereſt, and the granting of artificial capitals, in their worſt light, will probably obſerve, that, had the creditors actually made theſe demands, the public would have been leſs injured, on the whole, (taking

* Remember the Note, page 42.

(taking the redemptions of the loans into consideration) than by the granting of the artificial capitals. This observation would indeed be true, in case government were obliged to redeem without making any further agreement with the creditors with respect to the *terms* of redemption: but, it being at the option of government whether to redeem, or not, the conversion might have been effected on *much easier* terms after the peace took place. When government ceased to be, as it were, in the power of the lenders, there is no one but what would have been glad to have given up 100 *l.* of the Three per Cent. Stock for a *much less* quantity than $87\frac{1}{2}$ *l.* of such New Four per Cent. Stock *.

31. After the peace took place (in the year 1763) and the expences of the war were arranged, our Public Debt stood as follows, or thereabout, very nearly, *viz.*

	Principal.	Interest or Annuity.
Capitals bearing 3 per cent. (about)	£. 95,500,000	£. 2,865,000
Ditto bearing $3\frac{1}{2}$ per cent. till 1771	1,500,000—	52,500
Ditto bearing $3\frac{1}{2}$ per cent. till 1782, and afterwards 3 per cent.	4,500,000—	157,500
Ditto bearing 4 per cent. till redeemed, (about)	6,985,000—	279,400
Ditto bearing 4 per cent. till 1781, and afterwards 3 per cent.	20,240,000—	809,600
	128,725,000—	4,164,000

* $87\frac{1}{2}$ *l.* of the New Four per Cent. Stock would be worth

	Principal.	Interest or Annuity.
Sundry temporary annuities for lives and different terms of years, worth about	9,600,000—	468,000
Sundry unfunded debts (bearing different interests) amounting to about	8,300,000—	210,000
Total about *	£. 146,625,000—	4,842,000

32. The additions that were made to the Public Debt during the abovementioned war, gave it something of a formidable appearance. Previous to this (although indeed some people appeared to be alarmed), the public annuities were rather matters of general conveniency, for the employment of monies that would otherwise have lain from time to time out of circulation, than matters of actual burthen. The continual demand for the stocks, which had hitherto enabled government to reduce the interest thereon lower and lower, sufficiently evinces the truth of this observation.

33. The great increase of the Public Debts

During

worth more than 100 *l.* of the common Three per Cents. in all possible cases whatsoever, as has been already observed in the aforegoing 28th article, and its note, page 75.

* Sir John Sinclair (in his History of the Revenue, Part II. page 88) states the principal at 146,682,844 *l.* Doctor Price (in his Additional Observations on Civil Liberty, page 147) states it at 146,582,844 *l.* and the interest or annuity at 4,840,821 *l.* The above round numbers may, therefore, be reckoned near enough the truth.

during the abovementioned war, could not, however, but put an end to all further hopes of diminiſhing the *intereſt*, otherwiſe than by an actual diminution of the *principal*. Indeed, the additional capitals and premiums that were required to be granted for the loans during the war, (in conſequence of the depreciations which took place in the value of the ſtocks, from the want of their bearing a ſufficient annual intereſt) amounting, as was obſerved above [in Article 30] to *Twelve Millions and an half*, over and above the monies actually received, would have been ſufficient, had the nature and principles of the ſubject been conſidered, to have convinced the nation, not only that the *intereſt* had been already reduced too low; but alſo, that it was become highly neceſſary, both to *increaſe the intereſt*, and likewiſe to put the *principal* into a regular courſe of redemption, in order to check the increaſe of the debt, and the depreciation of the ſtocks; and thereby to prevent the neceſſity of granting ſuch exorbitant premiums, in future wars.

This might have been very eaſily effected by offering to the creditors (or ſuch of them as ſhould think proper to accept the ſame) a reaſonable quantity of new Four per Cent. Stock, ſubject to a *limited* tender for the periodical redemption of the capital, in exchange for the Three per Cents, and for any of the other annuities of which the debt was compoſed.

34. It is unneceſſary, at this late hour, to inquire very minutely, how much of the New Four per Cent. Stock would have been required to be granted, in order to have effected a converſion of the debt at the time we are ſpeaking of. I have

have already obſerved [in the aforegoing 28th Article] that $87\frac{1}{2}$ *l.* of New Four per Cent. Stock, ſubject to a limited tender of four per cent. per annum for the periodical redemption of the capital, would be worth more than 100 *l.* of the common Three per Cents, in all poſſible caſes whatſoever; although the three per cents. ſhould be *at* or *above par*: but during the peace we are ſpeaking of (from 1763 to 1775) the price of the three per cents. ſettled at about 12 per cent. *below par*. It will, therefore, neceſſarily follow, that a *much leſs* quantity than $87\frac{1}{2}$ *l.* of ſuch New Four per Cent. Stock would have been accepted by the creditors in exchange for 100 *l.* of the Three per Cents. I ſay a *much leſs* quantity than $87\frac{1}{2}$ *l.* of ſuch new four per cent. ſtock would have been accepted; but *how much leſs*, would depend on the manner in which the buſineſs might or might not be conducted:—If conducted on a principle of ſtrict-economy, the converſion might have been effected at the rate of $81\frac{1}{4}$ *l.* of New Four per Cents. for 100 *l.* of the Three per Cents. I muſt, however, confeſs, that (although I have as great an averſion to extravagance, either public or private, as any man can have) I ſhould not have been a friend to ſo *ſtrict* a line of economy, at the time we are ſpeaking of; eſpecially when it is conſidered how great a reduction the creditors had ſuſtained with reſpect to the intereſt or annuity on their former capitals. The public creditors ought (as Sir Nathaniel Gould obſerves) to be treated as perſons who deſerve well of the public. At the time we are ſpeaking of, any quantity between $81\frac{1}{4}$ *l.* and $84\frac{3}{8}$ *l.* of the abovementioned New Four per Cent. Stock might have been granted in exchange for

 100 *l.*

100 *l.* of the Three per Cents, without breaking through the bounds of what might be called *rational* (in contradiſtinction to *rigid) economy*: and the creditors would have ſubſcribed to ſuch an offer with the utmoſt readineſs and alacrity *.

This converſion would not only have cut off the whole of the *artificial* debts that had been accumulated during the two preceding wars, amounting to about *Fourteen Millions and an Half* †, but it would likewiſe have put the debt into ſuch a ſtate of redemption, as would (with proper attention) have ſecured the regular application of the Sinking Fund to its proper line of ſervice; and prevented that immenſe *additional* load of *artificial debt* which has ſince been accumulated.

But, the principles of the ſubject remaining unexplored, this valuable period of twelve years (from 1763 to 1775) unhappily paſſed away, without redeeming, even ſo much as the mere *premiums* and *additional capitals* (or *artificial debts)* that had been granted during the laſt preceding war, over and above the monies that were actually received for the public ſervice. ‡

35. At

* $84\frac{3}{8}$ *l.* of the New Four per Cents would have been worth more than 100 *l.* of the common Three per Cents, in all caſes, when the intereſt for money ſhould be either *higher* than $3\frac{1}{5}$ per cent. on the one hand, or *lower* than $2\frac{3}{[illegible]}$ per cent. on the other.

† That is to ſay, about *Two Millions* during the war from 1739 to 1748, and about *Twelve Millions and an Half* during the war from 1755 to 1763.

‡ See Doctor Price's Additional Obſervations on Civil Liberty, pages 104 and 105.

35. At the breaking out of the troubles in America, in the year 1775, which we may conſider as the commencement of the late war, our public debt ſtood as follows, or thereabout very nearly, viz.

	Principal.		Intereſt or Annuity.
Capitals bearing 3 per cent. about	£. 99,500,000		£. 2,985,000
Ditto bearing $3\frac{1}{2}$ per cent. till 1782, and then 3 per cent.	4,500,000	—	157,500
Ditto bearing 4 per cent. till 1781, and then 3 per cent. about, - -	19,000,000	—	760,000
	123,000,000	—	3,902,500
Sundry temporary annuities for lives and different terms of years, worth about	9,400,000	—	467,500
Sundry unfunded debts (ſuppoſed to bear about 2 per cent. intereſt on the average) amounting to about	3,600,000	—	72,000
Total about * — £.	136,000,000		£. 4,442,000

36. The war from 1775 to 1783 was not only attended

* Doctor Price (ibid. page 147) ſtates the principal at 135,943,051*l.* and the intereſt or annuity at 4,440,821*l.* The above round numbers may therefore be reckoned near enough the truth.

attended with a much greater expence than any of the preceding wars, but the Public Debt became likewiſe greatly increaſed by the additional capitals and temporary annuities that were required to be granted by way of premiums (over and above the monies actually received) for the loans, in conſequence of the diſcounts to which the ſtocks fell, from the want of their bearing a ſufficient intereſt or annuity.

The immenſe increaſe of artificial debt (by the *additional* capitals and temporary annuities ſo granted) over and above the monies actually received for the public ſervice, became even more alarming than the uncommon expences with which the fleets and armies were attended.* I muſt, however, repeat, that the loſſes attendant on this method of making the loans, however alarming and

* Doctor Price (in his Statement of the Public Debts in January, 1783, page 5, note *a)* ſays, that the monies that had been received for the funded debts created from 1775 to that time was $57\frac{1}{2}$ millions; and that the *additional* capitals and temporary annuities granted, exceeded the monies ſo received by	£. 28,500,000
Near Forty Millions of debt, (compoſed of Exchequer, Navy, and Ordnance bills, and outſtanding demands) remained unfunded: and the diſcounts to which theſe debentures fell were ſo great (ſee Doctor Price's Statement, page 19) as to produce a further artificial debt of more than - - -	5,000,000
And in the funding of theſe outſtanding debts, in the years 1783, 1784, and 1785, a further addition of artificial debt was created to the amount of about - - -	9,500,000
So that the laſt war was attended with an increaſe of debt, which exceeded the monies actually received for the public ſervice by about — — —	£. 43,000,000

and great, cannot in poſſibility be avoided, but by the uſe of ſtocks bearing a higher intereſt, ſubject to a *limited* tender for the periodical redemption of the capital; whereby the ſtock ſhall have a free and ſecure capacity for riſing in value *above par*, for the advantage of the creditors, without injury to the public with reſpect to the neceſſary periodical redemptions. Becauſe, as I have repeatedly obſerved already, when a man can lay out his money in any ſtock at a diſcount, with a proſpect of obtaining ſuch or ſuch an advantage from the future riſe of the ſtock, his own intereſt will not permit him to advance it on any terms but ſuch as ſhall afford him an *equal* (or a *greater)* proſpect of advantage. If, therefore, we would avoid the loſſes attendant on this method of making the loans, we muſt get rid of the *cauſe* from whence they flow; to wit, the *diſcount* on the ſtocks: and this can only be done by converting the debt into redeemable ſtocks, having a capacity for riſing in value for the advantage of the creditors, *above par*.

37. The immenſe loſſes attendant on the old method of making the loans, by granting additional capitals over and above the money received, were very much complained of, both in and out of parliament. The ſmall redemptional powers of a ſinking fund, if applied to ſtocks bearing a *low* intereſt, compared with its redemptional powers, when applied to ſtocks bearing a *high* intereſt, were likewiſe mentioned, as additional arguments, againſt the old methods of funding on low ſtocks:* and an attempt was accordingly made

* The annual revenue or intereſt that would be redeemed or releaſed in 40 years, by a ſinking fund of One Million a year

made in 1781, to raiſe the loan of that year, (or a part thereof) on a Five per Cent. Stock. The circumſtance of *limiting the tender* to which the capital ſhould be periodically liable for its redemption, (whereby alone the intereſt or annuity appertaining to the creditors could be ſecured from reduction, and the capital be at the ſame time redeemable) did not occur:—The lenders naturally ſuſpected, that in caſe the capital ſhould be redeemable, the intereſt thereon would be reduced whenever peace ſhould take place: they therefore refuſed to take the propoſed Five per Cent. Stock, unleſs the intereſt thereon ſhould be ſecured from reduction for Fifteen Years, by rendering the capital *irredeemable* during that term: and even on theſe conditions they would take it only at the rate of 82*l.* caſh for 100*l.* of the ſtock.

The ends propoſed to be obtained by the granting of a Five per Cent. Stock, were, *firſt*, to avoid the granting of great artificial capitals, over and above the monies actually received: and, ſecondly, to facilitate the future redemption, by giving the ſinking fund which might be applied, a *greater power* than it could have on *lower* ſtocks. But the granting of 100*l.* ſtock for every 82*l.* received, would by no means accompliſh the *firſt* of the ends propoſed; and the rendering of the capital irredeemable for fifteen years, would defeat the advantages of the *ſecond* propoſed end. The

year (or rather 500,000*l.* per half year) applied to the redemption of Stocks at par, would be as follows, viz,

If applied to the redemption of 3 per cent. ſtocks	£.2,283,072
of 4 per cents	3,875,460
of 5 per cents	6,209,100
of 6 per cents	9,640,844

The difference is, indeed, very great.

The Five per Cent. ſtock was therefore dropt and the experiment ſerved only to prove the truth of an *axiom*, which might have been ſeen as clearly *without* an experiment as *with it*,—to wit, 'That 'a time of war, when Government is as it were in 'the power of the lenders, is not a proper time 'for making a favourable bargain on the part of 'the public, with reſpect to future terms of re'demption.' The beſt that can be done for the public, in a time of war, when Government is as it were in the power of the lenders, is, to fund on that ſtock which has already the greateſt poſſeſſion of the market; and to leave the terms of redemption to be *afterwards* agreed on when Government ſhall become *freed* from the power of the lenders, and be thereby enabled to treat on equal terms. It cannot but ſtrike every man's own reaſon, that, while Government ſhall be as it were in the power of the lenders, ſo favourable a bargain cannot be made, either with reſpect to future terms of redemption, or any thing elſe, as may be made when Government ſhall ceaſe to be ſo in their power.

38. It would have been more unfortunate for the public than it now is, if the creditors had demanded ſuch terms for the loans during the late war, as would have *ſecured* the attention of Government to their redemption, without any *further* agreement.

During the war, the lenders had it in their power, (or rather, they would have had it in their power, had the nature and principles of the ſubject been then underſtood) to have obtained any quantity (almoſt at their own pleaſure) leſs than 80*l.* of New Five per Cent. Stock, ſubject to a tender of Five per Cent. per annum, for the periodical

riodical redemption of the capital (with the privilege likewiſe of ſuſpending the redemptions on the principles mentioned in the third ſection of my Third Eſſay), on their advancing towards the new loans a ſum in money, equal to the current value of 100*l.* of Three per Cent. Stock.*—They might likewiſe have brought about a converſion of a very great part of the debt on the ſame terms, by demanding *double* or *treble* ſuch quantity of the new Stock, on their advancing towards the new loans the current value of 100*l.* of the three per cent. ſtock in money, and giving up therewith 100*l.* or 200*l.* of the Three per Cent. Capital. And by this means they might have recovered the intereſt or annuity which they had formerly loſt by the reductions of intereſt that took place in the reigns of King George the Firſt and Second. Had theſe demands been made at the firſt commencement of the troubles (when the three per cent. ſtocks were above 80*l.*) they would indeed have *bordered* on extravagance, but they would not have been *exceſſively* extravagant; eſpecially when it is conſidered that the additional annuity that would have been ſo annexed to the ſtocks, would have checked their depreciation. But had theſe demands been made after the depreciation took place, they would have been extravagant in the higheſt degree. Extravagant, however, as theſe demands might have been, it would not have been an eaſy taſk to have reſiſted or counteracted them, had they been propoſed with judgment on the part

* 80*l.* of ſuch New Five per Cent. Stock would be worth more than 100*l.* of the common three per cents, in all poſſible caſes whatſoever; however *high* or however *low* the rate of intereſt for money might or might not be. See the principles demonſtrated in the aforegoing third ſection. See alſo the tables in the appendix.

part of the lenders, when Government was ſo much in their power; eſpecially too, as no baſis had been previouſly formed whereon to erect a proper ſyſtem for counteracting the extravagant degrees of ſuch demands*.

39. Although the attempt for raiſing the loan of 1781 on a Five per Cent. Stock, had failed, yet, the facility with which a five per cent. ſtock would be redeemed, compared with a *lower* ſtock †, determined Government to make another trial after the war was over. And accordingly, in the years 1784 and 1785, a five per cent. ſtock was propoſed for the funding of certain navy and victualling bills, which then remained outſtanding. This was effected on terms rather more favourable to the public than thoſe that had been talked of in 1781 ‡: but the circumſtance of limiting the tender to which the ſtock ſhould be periodically liable for its redemption, (whereby *alone* the intereſt or annuity appertaining to the creditors could be ſecured from reduction, and the capital be, at the ſame time, redeemable) did not occur. In order, therefore, to ſecure the intereſt or annuity from being reduced, the ſtock was rendered *irredeemable* until twenty-five millions of the other ſtocks ſhould be previouſly redeemed. This rendering of the ſtock *irredeemable* defeated the advantages

* The creditors might have obtained 70*l.* (or more than 70*l.*) of ſuch New Five per Cent. Stock in the ſtead of 100*l.* of Three per Cents, at any time during the war, in deſpite of any thing that could have been done to counteract it. After the peace took place, they would have been (and would ſtill be) glad to accept of much leſs than 70*l.* of ſuch Five per Cents, in exchange for 100*l.* of Three per Cents, for a converſion of the debt.

† See the Note, pages 87 and 88.

‡ In 1784 the five per cent. ſtock was taken at 93*l.* and in 1785 at 89¾*l.* for 100*l.* ſtock.

vantages that had been proposed, of *facilitating* the redemption, and rendered the bargain a very disadvantageous one for the public.

These measures finished (so far as was judged necessary) the arrangement of the debts that had been incurred during the late war. And this done, our public debt (at the end of the year 1785, stood as follows, or thereabout very nearly.

	Principal.	Interest or Annuity.
Viz.—Capitals bearing		
3 per cent. about*	£. 187,650,000	5,629,500
4 per cent.	32,750,000	1,310,000
5 per cent. about	17,900,000	895,000
Sundry temporary annuities for lives and different terms of years; worth (for even numbers) about †	21,700,000	1,325,500
Amount of the funded debts about	260,000,000	9,160,000
Sundry unfunded debts (part of which bear interest, and part not) amounting, for even numbers, to about ‡	10,000,000	340,000
Total about	£. 270,000,000	9,500,000

But

* I give these in the nearest round numbers, because the statements I have seen do not *exactly* agree.

† I give this article, to make even numbers, rather *lower* than the general market value of the annuities since the late rise in the prices of the stocks. N. B. 25,000 *l.* of these annuities expire in 1787, and 55,000 *l.* more in 1791.

‡ I have seen no regular statement of the unfunded debts, but

But it is necessary to observe, that the abovementioned interest or annuity of 9,500,000 *l.* is not the whole of the annual expence with which the public debts are actually attended. They are attended with a further expence for management, amounting (for even numbers) to about 120,000 *l.* per annum. The *whole annual expence* attendant on the public debts (funded and unfunded) is, therefore, *at present*, considerably more than the abovementioned 9,500,000 *l.* and, were the whole of the outstanding debts (including the compensations to be made to the American sufferers) to be immediately brought in, I am strongly of opinion, that the whole annual expence attendant on the debts, including *interest* and *management*,

but the following observations will shew, that the above is quite within the bounds of their reality.

The Act of Parliament, 26 Geo. III. chap. 61, for appropriating the supplies, recites Exchequer Bills then outstanding to the amount of 5,680,000 *l.* It likewise recites new Exchequer Bills and Tallies, issued, and to be issued, partly for discharging the former, and partly for other services, to the amount of 8,100,000 *l.* And the Select Committee, in their report on the public income and expenditure, state the navy debt at 2,537,764 *l.* and mention further demands, which are estimated by the board, to be somewhere between 1,200,000 *l.* and 1,600,000 *l.* If to these we add a reasonable allowance for the ordnance department, and for compensating the losses of the American Loyalists, we shall probably find the amount of the unfunded debts to be nearer *Fifteen Millions* than *Ten.* But, to counterbalance these, there are sundry balances remaining in the hands of Paymasters, &c. which, it is said, are soon expected to be paid in. These may perhaps reduce the outstanding debts to about the sum above stated. Part of the unfunded debts (as I observed above) bear no interest; but the above-mentioned 340,000 *l.* per annum will, I doubt not, be thought quite within bounds, when it is considered that the Select Committee, in their report on the public income and expenditure, estimate the future charge on the Exchequer Bills *alone* at 258,000 *l.* per annum.

nagement, would not be less than about *Nine Millions and three quarters* *. A part of these outstanding expences cannot, however, be brought in, for a considerable time; and a part of the floating expences of the navy department will always be without interest. The outstanding balances due to government will likewise be dropping in, as will also a part of the temporary annuities for lives and for short terms of years; so that, on the whole, I consider the aforegoing statement of the debt to be as near the truth as need either be expected or required; although I consider it to be rather *under* the mark than *over* it.

40. Hence, we may sum up the progress of the public debts as follows,—

	Principal.	Interest or Annuity.
Viz.—Public Debts (funded and unfunded) incurred by the long wars of King William and Queen Anne; being the amount of the public debts at the demise of the Queen in 1714; about	£. 54,250,000—	3,352,000
Diminished from the year 1714, to the breaking out of the Spanish war in 1739, about —	7,750,000—	1,414,000

Amount

* The Select Committee, in their report on the public income and expenditure, state the annual expences (including *interest* and *management*) of the Funded Debts and Exchequer Bills at 9,533,769 *l.* exclusive of what may be required for the other parts of the unfunded debt, when brought in.

	Principal.	Interest or Annuity.
Amount of the public debts at the commencement of the war in 1739, about £.	46,500,000—	1,938,000
Increased by the war from 1739 to 1748, about	31,750,000—	1,116,200
Amount of the debt at the close of the war in 1748, about	78,250,000—	3,054,200
Diminished by the peace from 1748 to 1755 (including the reduction of interest then agreed on, to take place in 1757, about	3,250,000—	681,200
Amount of the debt at the commencement of the war in 1755, about	75,000,000—	2,373,000
Increased by the war from 1755 to 1763, about —	71,625,000—	2,469,000
Amount of the debt at the end of the war, after funding the outstanding debts, about	146,625,000—	4,842,000
Diminished by the peace from 1763 to 1775, about	10,625,000—	400,000

2

Amount

	Principal.	Interest or Annuity.
Amount of the debt at the breaking out of the troubles in America in 1775, about	136,000,000	4,442,000
Increased by the war from 1775 to 1783, about	£. 134,000,000	£. 5,058,000
Amount of the debt (funded and unfunded) when the diminution thereof commenced in 1786, about	£. 270,000,000	9,500,000

41. So immense a debt as 270 millions of capital, bearing an interest or annuity of 9½ millions, cannot but be a little alarming; especially too, when we consider the rapidity of the increase of the debt in time of war, compared with the redemptions in time of peace. It must, however, be observed, that the *capital* is merely a *nominal* matter. A very large part of the amount of the *nominal capital* has never been received; nor has any the most distant promise been ever given, with respect to its being paid. It has been already observed that the increase which was made to the nominal capital of the debt during the last war, exceeded the monies and supplies that were actually received for the public service by 43 millions, or thereabout; and if we go back to the commencement of the debt, we shall find, that more than 60 millions of the *nominal* debt is of this *artificial* nature*. But, it must be remembered, that the creditors have no demand on the public for any part of the nominal capital; their demand extends only to the annuity or interest: so that the agreement between the public and the creditors is simply this: to wit,—that 'Government will continue 'to pay the *interest* or *annuity*, until a redemption thereof be made, on such terms as shall be 'hereafter agreed on.' And hence the amount of the losses with which the *artificial* debt will be attended, will depend, principally, on the *manner* of putting the debt into a course of redemption.

42. The act of Parliament of the last sessions, for appropriating a sinking fund to the purchasing up of the stocks in the market, has a natural tendency (if continued long in force) to render the terms of redemption much more unfavourable to the public, than would otherwise have been thought of. The purchasing up of the stocks in the market, has, in the first instance, a natural tendency to raise their price; and thereby to encourage people to purchase them on speculation, for the purpose of gaining by such rise, which naturally tends to raise them still higher: But, when a war becomes apprehended, the speculative adventurers, who had before flocked to market as *purchasers*, naturally crowd to market as *sellers*, and thereby depress the prices of the stocks *lower* than

* During the long wars of King William and Queen Anne Artificial Debts were incurred to the amount

of about	£. 10,000,000
During the war from 1739 to 1748, about	2,000,000
from 1755 to 1763, about	12,500,000
from 1775 to 1783, about	43,000,000
Total of Artificial Debt, about	£. 67,500,000

than they otherwiſe would be, in the ſame manner as the ſpeculative purchaſings carry them *higher* than they otherwiſe would be. It is perfectly evident to every body, that in the preſent ſtate of the debt, the *difference* between the prices at which the ſtocks ſhall be redeemed, or purchaſed up, in time of peace, and the prices at which they ſhall be granted in time of war, whatever that *difference* ſhall be, muſt be a *loſs* to the public: And, as the ſyſtem of redemption preſcribed by the act of parliament tends to render this *difference* in their prices greater than it otherwiſe would be; ſo, of courſe, it tends to increaſe thoſe loſſes, and to induce the creditors to demand higher terms for the redemption than would otherwiſe have been thought of.

43. When we conſider the immenſe additions made to the debt in time of war; and the immenſe *difference* between the prices of the ſtocks in time of war, and their prices in time of peace; we cannot but be convinced of the inefficacy of attempting to check the future increaſe of the debt by purchaſing up in the market, in time of peace, the ſtocks that ſhall have been granted for the loans in time of war. We cannot, indeed, on ſuch a plan of purchaſing, expect to redeem in time of peace, any thing near ſo much as the *mere artificial debts* that will be required to be granted (over and above the monies actually received) in time of war*.

We

* I have already obſerved that the *artificial debts* created during the laſt war, amount to forty three millions over and above the monies actually received. Can we expect, on the preſent plan, to purchaſe up any thing near that quantity during the peace? Neither can we expect, on the ſame plan, to do better in any future peace: for, while the debt remains in its preſent form, the *diſcount*, on the ſtocks in time of war, and therewith the *artificial debts*, muſt become greater and greater.

We can, therefore, by no means, expect that the lenders, in the caſe of a new war, will reſt themſelves contented with a ſuppoſition that the preſent act of parliament (which may at any time be repealed) ſhould actually be continued in force. We may, on the contrary, very naturally expect that the lenders will demand ſuch terms for the new loans as ſhall *ſecure* to themſelves the ſame profits, whether the act of parliament be or be not repealed, as the act itſelf would produce (by the future riſe of the ſtocks), in caſe it ſhould be continued in force. This they may obtain in any and every poſſible caſe whatever, by demanding (according to the nature of the caſe) ſome one or other of the following quantities of new ſtock, on their advancing towards the new loan, a ſum *in money*, equal to the current value (for the time being) of 100*l.* of three per cent. ſtock; viz.

Between £. $81\frac{1}{4}$	and £. $87\frac{1}{2}$	of *Four per Cent. Stock*, ſubject to a tender of four per cent. per annum for its redemption.
Between ..... $80\frac{5}{14}$	and ..... $85\frac{5}{7}$	of ditto, ſubject to a tender of three per cent. per annum.
Between ..... $79\frac{1}{6}$	and ..... $83\frac{1}{3}$	of ditto, ſubject to a tender of two per cent. per annum.
Between 70	and 80	of *Five per Cent. Stock*, ſubject to a tender of five per cent. per annum.

 Between

Between £. 68$\frac{8}{9}$	and £. 77$\frac{7}{9}$	of *Five per Cent. Stock*, ſubject to a tender of four per cent. per annum.
Between····67$\frac{1}{2}$	and····75	of ditto, ſubject to a tender of three per cent. per annum.
Between····66$\frac{2}{3}$	and····73$\frac{1}{3}$	of ditto, ſubject to a tender of 2$\frac{1}{2}$ per cent. per annum.
Between····62$\frac{1}{2}$	and····75	of *Six per Cent. Stock*, ſubject to a tender of ſix per cent. per annum.
Between····61$\frac{4}{11}$	and····72$\frac{8}{11}$	of ditto, ſubject to a tender of five per cent. per annum.
Between····60	and····70	of ditto, ſubject to a tender of four per cent. per annum.
Between····58$\frac{1}{3}$	and····66$\frac{2}{3}$	of ditto, ſubject to a tender of three per cent. per annum.
Between····53$\frac{1}{8}$	and····68$\frac{3}{4}$	of *Eight per Cent. Stock*, ſubject to a tender of eight per cent. per annum.
Between····47$\frac{11}{12}$	and····58$\frac{1}{3}$	of ditto, ſubject to a tender of four per cent. per annum.
Between····47$\frac{1}{2}$	and····65	of *Ten per Cent. Stock*, ſubject to a tender of ten per cent. per annum.

Between £. 41$\frac{2}{3}$	and £. 53$\frac{1}{3}$	of *Ten per Cent. Stock*, ſubject to a tender of five per cent. per annum.*

44. The creditors, as I have already obſerved, have it likewiſe in their power, in time of war, to obtain a converſion of a very great part of the debt, on the ſame terms as thoſe above-mentioned; by demanding *double* or *treble* ſuch quantity of New Stock on their advancing towards the new loans the value of 100*l.* of three per cent. ſtock in *money*, and giving up therewith 100*l.* or 200*l.* of three per cent. capital.

45. In a time of peace, the creditors would gladly accept of a *leſs* quantity of new ſtock for the converſion of the debt, than they would be able to obtain afterwards in the caſe of a new war: becauſe, a *ſmaller* profit in hand, is better than a *greater* profit at a future day. It would, for inſtance, be better for the creditors to accept of 67*l.* or 68*l.* of new Five per cent. ſtock, in exchange for 100*l.* of the three per cents now, than to wait ten or a dozen years, till a new war ſhould again put the power in their hands, and then obtain 70*l.* or 71*l.* of new five per cents, in exchange for 100*l.* of three per cents; becauſe, the additional annuity, in the intermediate time, would amount to more than the difference: And, what is ſtill of much more conſequence, the additional annuity would check that depreciation of the value of their capitals, which they muſt unavoidably ſuffer, in the caſe of a new war, if the debt ſhould remain till then unconverted.

* The reader may eaſily compute the preference between *one ſtock* and *another*, in any given caſe, from the principles demonſtrated in the aforegoing third ſection; or he may aſcertain the preference between Four, Five, and Six per cent. Stocks, in any given caſe, from the tables in the Appendix.

46. At this time, a five per cent. ſtock, ſubject to a tender of Five per cent. per annum, for the periodical redemption of the capital, would be the moſt proper ſtock to convert the debt into; and the quantity of ſuch five per cent. ſtock that would be required to be granted in exchange for 100*l.* of the preſent three per cents, would be ſomewhere between the extremes of 65*l.* and 70*l.* but whereabout, between theſe extremes, would depend on the *manner* in which the buſineſs might be conducted.* Some people may perhaps doubt whether the creditors, ſince the late riſe in the prices of the ſtocks, would ſubſcribe to the converſion at the rate of 70*l.* (or leſs than 70*l.*) of ſuch new Five per Cent. ſtock for 100*l.* of the three per cents; theſe doubts, however, would vaniſh in a moment.

The late riſe in the prices of the ſtocks is merely of a *temporary* nature; it has been produced by mere temporary purchaſes, and can continue no longer than thoſe temporary purchaſes ſhall continue. If government ſhould direct the ſinking-fund to be applied to the diſcharge of the unfunded debts, inſtead of purchaſing up the ſtocks, there would be ſufficient employment for the ſinking

* The debt might, at this time, be converted into a Four per Cent. Stock, ſubject to a tender of Four per Cent. per annum for its redemption, at ſomewhere been $76\frac{9}{16}$*l.* and $81\frac{1}{4}$*l.* of four per cents, for 100*l.* of three per cents. Such four per cent. ſtock might perhaps (with great exertions for its redemption) be made to anſwer the purpoſe of preventing a public bankruptcy, provided we could be ſure of a continuance of peace for twenty years, or more; but, as we can have no reaſon to expect ſuch a continuance of peace, there would be too much danger that a four per cent. ſtock would prove ineffectual; and in that caſe the expence of the converſion would be thrown away. A five per cent. ſtock is, therefore, the loweſt that can with propriety be adopted.

ing fund for many years to come; and the ſtock would then fall to what we may call their natural or proper value: and in proportion as this proper value ſhall be leſs than 80*l.* in that proportion the creditors will accept of leſs than 70*l.* of the abovementioned new five per cents, in exchange for 100*l.* of the three per cents: For, while 100*l.* of the three per cents ſhall be worth leſs than 80*l.* £.70 of the new Five per cents will be worth more than 100*l.* of three per cents.* There is no man, I believe, who entertains any the moſt diſtant hope of our three per cents being actually *ſupported* on the general average, ſo high as 75*l.* (or even ſo high as 70*l.*) in caſe the ſinking fund ſhould be withdrawn: and while they ſhall be worth leſs than 75*l.* £.$67\frac{1}{2}$ of the abovementioned new five per cents, will be worth more than 100*l.* of the three per cents. The creditors (ſuch of them at leaſt as ſhall hereafter be ſubſcribers to new loans) may indeed, in the caſe of a new war, obtain 70*l.* or rather more than 70*l.* of ſuch new five per cent. ſtock in exchange for 100*l.* of the three per cents, by making it a part of the conditions of the loans; but it would be more advantageous for them to accept of $67\frac{1}{2}$ *now*, (ſuppoſing the buſineſs to be properly conducted) than to obtain 70*l.* ten years hence. The additional intereſt in the intermediate time, amounts to more than the difference.

47. Were the converſion of the debt to be effected at the rate of $67\frac{1}{2}$ of new five per cents, for 100*l.* of three per cents, the advantages to the creditors would be theſe,----viz.----They would obtain an additional annuity or intereſt of *ſeven ſhillings and ſix-pence* on every three pounds (which is *two ſhillings and ſix-pence* on every pound) and their

* See the principles demonſtrated in the aforegoing third ſection. See alſo the tables in the Appendix.

their ſtock would not only have a free and ſecure capacity for riſing in value, but it would likewiſe be *more valuable* than the ſtock by them given up, whenever the three per cents ſhall be under 75*l.* And we may venture to ſay, that they would be very generally (if not univerſally) under 75*l.* provided the market was left to find its own level, without being interrupted by making *temporary purchaſes* with the ſinking fund; purchaſes which can only increaſe that unhappy ſpirit of gambling, which prevails in Exchange Alley; and thereby add to the public loſs, not only with reſpect to the redemption of the old ſtocks, but likewiſe with reſpect to the terms of obtaining new loans, when new loans ſhall become neceſſary.*

The advantages which the public would derive from ſuch converſion would be theſe,·····viz.····*Firſt*,·····The artificial capital, which has been the grand cauſe of all our financial calamities, (and which muſt unavoidably increaſe thoſe calamities more and more, ſo long as it ſhall continue to exiſt) will be entirely done away:·····*Secondly*,····· The ſinking fund will be rendered ſecure in its proper line of ſervice, as well during war as peace, by being enabled to redeem a *greater* quantity of ſtock or of annuity than will be required to be granted for obtaining an equal ſum of money in the market; and, this conſtant application of the ſinking fund to the redemption, will prevent the exceſſive accumulation of the debt in future; and preſerve the value of the ſtocks from thoſe depreciations to which they have hitherto been ſubject.

It may likewiſe be obſerved, that (beſides cutting off the *artificial* debts, as mentioned above) the

* See the *firſt* ſection of this Eſſay, and the forty-ſecond article of this *fourth* ſection.

the additional annuity or intereſt which is thus granted for the converſion, likewiſe operates, *in effect*, as a ſinking fund, towards the redemption of the *new* capital.

For example,—The ſame cauſes that ſhall render it neceſſary, in a *time of peace*, to grant 67½*l.* of the abovementioned five per cent. ſtock, for 100*l.* of three per cents; thoſe ſame cauſes will render 100*l.* of five per cent. ſtock, worth about 111*l.* *caſh*, in the market, after the converſion is effected.* Government, therefore, even if there ſhall be no further ſurplus revenue or ſinking fund than is thus required to be granted for the converſion, may raiſe, in the market, at the rate of about 110*l.* caſh, for 100*l.* of the ſtock, the money required for the periodical tender; ſo that out of the *ſeven ſhillings and ſix-pence* additional annuity granted for the converſion, *ſix ſhillings* or thereabout operates in effect as a ſinking fund towards the redemption of the principal. And, univerſally, if the buſineſs be properly conducted in a time of peace, about *four-fifth parts* of the additional annuity that ſhall be required to be granted for converting Three per Cents into Five per Cents; or, about *three-fourth parts* of the additional annuity that ſhall be required to be granted for converting Three per Cents into Six per cents; will thus operate *in effect* as a ſinking fund, towards the redemption of the principal: † And theſe reſpective *four fifth parts*, or *three-fourth parts* of the ſaid additional annuity will be much more efficacious in the redemption of their reſpective Five per Cent. or Six per Cent. Stocks, than

* See the tables in the Appendix.
† See the Second Eſſay, pages 26 and 27.

than the whole of the ſaid additional annuity would be, in the redemption of Three per Cents.*

48. It is unneceſſary to ſay any thing further reſpecting the *practicability*, the *propriety*, and the *neceſſity* of a converſion of the debt into redeemable ſtocks, bearing a higher intereſt than that of the market, ſubject to a *limited tender* for their redemption; whereby *alone* the value of the ſtock or capital can be ſupported from depreciation, and the intereſt or annuity ſecured from reduction. The obſervations that have been made in the courſe of this ſection, ſufficiently evince:—*Firſt*, ‘ That had the nature and principles of the ſubject ‘ been inveſtigated, the creditors would always ‘ have *demanded* this kind of ſtock, when they ad‘ vanced their money: by this means they would ‘ have ſecured themſelves from the loſſes they ſuſ‘ tained by the reductions of their intereſt or an‘ nuity which took place in the reigns of King ‘ George the Firſt, and King George the Second; ‘ and the public would likewiſe have been free ‘ from that immenſe load of artificial debt which ‘ has ſince been accumulated:’

Secondly.—‘ That the *artificial debts* which have ‘ been ſo much complained of, are inſeparable ‘ conſequences of the *diſcount* on the ſtocks, which ‘ proceeds from the want of their bearing a ſuffi‘ cient intereſt or annuity: and, that the further ‘ and further increaſe of theſe artificial debts (un‘ til at length a public bankruptcy ſhall enſue) ‘ cannot *in poſſibility* be avoided, but by remov‘ ing the *cauſe* from whence they flow: to wit, by ‘ increaſing the *intereſt* or *annuity* on the ſtocks, ‘ and

* See the Third Eſſay, page 26, article 12, and its note.

‘ and thereby cutting off the *diſcount* *; and by ‘ *limiting the tender* to which the new ſtock ſhall ‘ be periodically liable for its redemption, whereby ‘ to give it a free and ſecure capacity for riſing in ‘ value *above par* for the advantage of the credi‘ tor, without injury to the public with reſpect ‘ to the periodical redemptions neceſſary to be ‘ made:—’

‘ *Laſtly.*—‘ That the neceſſary *addition* to the ‘ *intereſt or annuity* on the ſtocks may be made, and ‘ the *diſcount* cut-off, by a converſion of the debt, ‘ at any time whatever, (while the Public Credit ‘ and reſources ſhall remain unexhauſted,) whether ‘ during *peace* or *war*: with this difference,—*to* ‘ *wit*,—that, in a time of peace, procraſtination ‘ will be (at the very beſt) a waſte of time; and, ‘ in a time of war, the *diſcount on the ſtocks*, and the ‘ *additional intereſt* or *annuity* that will be required ‘ to be granted for cutting off that diſcount, will ‘ be *greater* than in a time of peace.’

It muſt alſo be remembered that in a time of war (ſhould the debt remain unconverted), the great ſtock-holders, who ſubſcribe largely towards the new loans, will have it in their power to bring about a converſion of a very great part of the debt, on extravagant terms, by making it a part of

* It is, however, a matter of much conſolation, to obſerve, that, if the buſineſs be undertaken in time, the *additional annuity* or *intereſt*, that will be required for this purpoſe, will be *leſs* than the annuity or intereſt heretofore *ſaved* to the public by the *reductions* of the intereſt. The *ſavings* to the public heretofore made by the ſeveral *reductions* of the intereſt, amount to about 1,266,000*l.* per annum: [See Sir John Sinclair's Hiſt. of the Revenue, part 2, page 114.] The intereſt now required *to be added*, in order to cut off the *diſcounts and artificial debts* that have *hitherto* ariſen in conſequence of thoſe reductions, will be leſs than *three-fourth parts* of thoſe ſavings.

of the conditions of the new loans. The only thing that could have prevented their doing this during the laſt and former wars was this: The nature and principles of the ſubject not being inveſtigated, they did not ſee the method of ſecuring a *high intereſt* from being reduced: but, the method of ſecuring the intereſt from reduction, being pointed out, it cannot be doubted but they will hereafter require a *high intereſt*, which ſhall be periodically demandable by them, in the ſtead of a *depreciated capital*, for which they can have no demand; a capital, which muſt, in its nature, (as experience has already evinced,) fall *lower* and *lower* at every ſucceeding war, until it finally falls to nought; whereby both *principal* and *intereſt* muſt become (for a time at leaſt) ſwallowed up in bankruptcy.

I ſhall therefore conclude by obſerving, that (unleſs the Public Credit and reſources of the nation ſhould fall, never to riſe again, a thing which cannot be expected, even in the direful caſe of a public bankruptcy itſelf), a converſion of the debt, into ſtocks bearing a *higher intereſt* than that of the market, ſubject to a *limited tender* for their redemption, muſt ſooner or later take place; however much, or however little, the *labourer*, who has been at the pains of inveſtigating the nature and principles of the ſubject, may or may not *himſelf* be benefited by his labours. If the converſion be not propoſed in a time of peace, when government, (by having it at its option whether to redeem or not) has it in its power to command reaſonable and equitable terms; it will naturally be demanded (in greater or leſſer proportions) by the lenders, in a time of war, as a part of the conditions of the new loans; and, Government being then as it were in the *power* of the lenders, the terms demanded will, of courſe, be more unfavourable to the public.

It cannot but be evident to every contemplative mind, that, in a time of war, the terms required by the lenders muſt naturally be more unfavourable for the public than in a time of peace: It may, however, be obſerved, that whether the converſion be made in a time of war, or in a time of peace, the terms that will *actually be required* will be *higher* or *lower* according to the *manner* in which the buſineſs may be conducted; whereby the operation of certain *collateral cauſes* may be turned into *advantage* on the one hand, or *diſadvantage* on the other. But as this part of the ſubject can be of no materialconſequence to the generality of the readers, I ſhall not trouble them with it.

APPENDIX.

A P P E N D I X.

CONTAINING

T A B L E S

Of the comparative Values of redeemable

ANNUITY STOCKS,

Bearing different Rates of Intereſt, ſubject to different Tenders, for the Periodical Redemption of the Capital.

WITH THEIR EXPLANATION AND USE.

TABLE of Four per Cent Stocks, subject to different Tenders for their Periodical Redemption.

Given val. of 100l. of 3 per cent. stocks redeemable at pleasure.	Corresponding Value of 100l. of Four per Cent. Stock, according to the Tender to which it shall be subject.												Given val. of 100l. of 3 per cent. stocks, redeemable at pleasure.
	Tender 4 per cent. per annum.			Tender 3 per cent. per annum.			Tender 2 per cent. per annum.			Tender 1 per cent. per annum.			
	Computed value.	Ratio of the correction.	Corrected value.	Computed value.	Ratio.	Corrected value.	Computed value.	Ratio.	Corrected value.	Computed value.	Ratio.	Corrected value.	
£.	£.		£.	£.		£.	£.		£.	£.		£.	£.
100	114.29	1.0250	117.15	116.67	1.0293	120.09	120.00	1.0354	124.25	125.00	1.0446	130.58	100
99	113.79	1.0233	116.44	116.08	1.0275	119.28	119.28	1.0335	123.28	124.06	1.0425	129.34	99
98	113.29	1.0216	115.74	115.49	1.0257	118.46	118.55	1.0316	122.30	123.12	1.0404	128.09	98
97	112.79	1.0199	115.03	114.89	1.0239	117.64	117.81	1.0297	121.31	122.17	1.0383	126.85	97
96	112.28	1.0182	114.32	114.29	1.0221	116.81	117.07	1.0278	120.32	121.21	1.0362	125.60	96
95	111.76	1.0165	113.61	113.68	1.0203	115.98	116.32	1.0259	119.33	120.25	1.0341	124.36	95
94	111.24	1.0148	112.89	113.06	1.0185	115.15	115.57	1.0240	118.34	119.29	1.0320	123.11	94
93	110.71	1.0131	112.17	112.44	1.0167	114.31	114.81	1.0221	117.35	118.32	1.0299	121.86	93
92	110.18	1.0114	111.44	111.81	1.0149	113.47	114.05	1.0202	116.35	117.35	1.0278	120.61	92
91	109.64	1.0097	110.70	111.17	1.0131	112.63	113.28	1.0183	115.35	116.37	1.0257	119.36	91
90	109.09	1.0080	109.96	110.53	1.0113	111.78	112.50	1.0164	114.34	115.38	1.0236	118.10	90
89	108.54	1.0063	109.22	109.88	1.0095	110.92	111.71	1.0145	113.33	114.39	1.0215	116.85	89
88	107.98	1.0046	108.48	109.22	1.0077	110.06	110.92	1.0126	112.32	113.40	1.0194	115.60	88
87	107.41	1.0029	107.73	108.56	1.0059	109.20	110.13	1.0107	111.30	112.40	1.0173	114.35	87
86	106.83	1.0012	106.97	107.89	1.0041	108.33	109.32	1.0088	110.28	111.40	1.0152	113.09	86
85	106.25	0.9995	106.20	107.21	1.0023	107.45	108.51	1.0069	109.26	110.39	1.0131	111.84	85
84	105.66	0.9978	105.43	106.52	1.0005	106.57	107.69	1.0050	108.23	109.38	1.0110	110.58	84
83	105.06	0.9961	104.65	105.83	0.9987	105.69	106.87	1.0031	107.20	108.36	1.0089	109.32	83
82	104.46	0.9944	103.87	105.13	0.9969	104.80	106.03	1.0012	106.16	107.33	1.0068	108.06	82
81	103.85	0.9927	103.09	104.42	0.9951	103.91	105.19	0.9993	105.12	106.30	1.0048	106.81	81
80	103.23	0.9910	102.30	103.70	0.9934	103.02	104.35	0.9974	104.08	105.26	1.0028	105.55	80
79	102.60	0.9893	101.50	102.98	0.9917	102.13	103.49	0.9955	103.03	104.22	1.0008	104.30	79
78	101.96	0.9876	100.70	102.25	0.9900	101.23	102.63	0.9936	101.98	103.17	0.9988	103.04	78
77	101.32	0.9859	99.89	101.51	0.9883	100.32	101.76	0.9918	100.93	102.12	0.9968	101.79	77
76	100.66	0.9842	99.07	100.76	0.9866	99.41	100.88	0.9900	99.87	101.06	0.9948	100.53	76
75	100.00	0.9825	98.25	100.00	0.9849	98.49	100.00	0.9882	98.82	100.00	0.9928	99.28	75

TABLE of Five per Cent. Stocks, subject to

Given value of 100l. 3 per cent. stock, redeemable at pleasure.	Corresponding Value of 100l. of Five per Cent. Stock, according								
	Tender 5 per ct. per an.			Tender 4 per ct. per an.			Tender 3 per ct. per an.		
	Computed value.	Ratio of the correc.	Corrected value.	Computed value.	Ratio.	Corrected value.	Computed value.	Ratio.	Corrected value.
£.	£.		£.	£.		£.	£.		£.
100	125.00	1.0250	128.12	128.57	1.0286	132.25	133.33	1.0336	137.81
99	124.53	1.0239	127.50	128.02	1.0274	131.53	132.66	1.0324	136.96
98	124.05	1.0228	126.88	127.46	1.0262	130.80	131.99	1.0312	136.10
97	123.57	1.0217	126.25	126.89	1.0251	130.08	131.30	1.0300	135.24
96	123.08	1.0206	125.62	126.32	1.0240	129.35	130.61	1.0288	134.37
95	122.58	1.0195	124.98	125.74	1.0229	128.62	129.91	1.0276	133.50
94	122.08	1.0184	124.33	125.15	1.0218	127.88	129.21	1.0264	132.62
93	121.57	1.0173	123.67	124.55	1.0207	127.13	128.50	1.0252	131.74
92	121.05	1.0162	123.01	123.95	1.0196	126.38	127.78	1.0240	130.85
91	120.53	1.0151	122.35	123.34	1.0185	125.63	127.05	1.0228	129.95
90	120.00	1.0140	121.68	122.73	1.0174	124.87	126.32	1.0216	129.05
89	119.46	1.0129	121.00	122.10	1.0163	124.10	125.57	1.0204	128.14
88	118.92	1.0118	120.32	121.47	1.0152	123.32	124.82	1.0192	127.22
87	118.37	1.0107	119.63	120.83	1.0141	122.54	124.06	1.0180	126.30
86	117.81	1.0096	118.94	120.19	1.0130	121.75	123.30	1.0168	125.37
85	117.24	1.0085	118.24	119.53	1.0119	120.95	122.52	1.0156	124.43
84	116.66	1.0074	117.53	118.87	1.0108	120.15	121.74	1.0144	123.49
83	116.08	1.0063	116.81	118.20	1.0097	119.34	120.95	1.0132	122.54
82	115.49	1.0052	116.09	117.52	1.0086	118.53	120.15	1.0120	121.59
81	114.89	1.0041	115.36	116.83	1.0075	117.71	119.34	1.0108	120.63
80	114.29	1.0030	114.63	116.13	1.0064	116.88	118.52	1.0096	119.66
79	113.67	1.0019	113.88	115.42	1.0053	116.04	117.69	1.0084	118.68
78	113.04	1.0008	113.13	114.71	1.0042	115.19	116.85	1.0072	117.69
77	112.41	0.9997	112.37	113.98	1.0031	114.33	116.01	1.0060	116.70
76	111.76	0.9986	111.60	113.24	1.0020	113.47	115.15	1.0048	115.70
75	111.11	0.9975	110.83	112.50	1.0009	112.60	114.29	1.0036	114.69
74	110.45	0.9965	110.06	111.74	0.9998	111.72	113.41	1.0024	113.68
73	109.77	0.9955	109.28	110.98	0.9987	110.83	112.52	1.0012	112.66
72	109.09	0.9945	108.49	110.20	0.9976	109.93	111.63	1.0000	111.63
71	108.40	0.9935	107.69	109.42	0.9965	109.03	110.72	0.9989	110.60
70	107.69	0.9925	106.88	108.62	0.9954	108.12	109.80	0.9978	109.56
69	106.98	0.9915	106.06	107.81	0.9943	107.20	108.88	0.9967	108.51
68	106.25	0.9905	105.24	106.99	0.9932	106.27	107.94	0.9956	107.46
67	105.51	0.9895	104.40	106.16	0.9921	105.32	106.99	0.9945	106.40
66	104.76	0.9885	103.55	105.32	0.9910	104.37	106.03	0.9934	105.33
65	104.[illegible]	0.9875	102.70	104.46	0.9899	103.41	105.05	0.9923	104.25
64	103.23	0.9865	101.84	103.60	0.9888	102.44	104.07	0.9912	103.16
63	102.44	0.9855	100.96	102.72	0.9877	101.45	103.07	0.9901	102.05
62	101.64	0.9845	100.06	101.82	0.9866	100.45	102.06	0.9890	100.94
61	100.83	0.9835	99.16	100.92	0.9855	99.45	101.04	0.9879	99.81
60	100.00	0.9825	98.25	100.00	0.9844	98.44	100.00	0.9868	98.68

different Tenders for their Periodical Redemption.

to the Tender to which it shall be subject for its Redemption.									Given value of 100l. of 3 perct. stock, redeemable at pleasure.
Tend. 2 perct. peran.			ender 2 perct. peran.			Tender 1 perct. peran.			
Computed value.	Ratio.	Corrected value.	Computed value.	Ratio.	Corrected value.	Computed value.	Ratio.	Corrected value.	
£.		£.	£.		£.	£.		£.	£.
136.36	1.0367	141.37	140.00	1.0406	145.68	150.00	1.0512	157.68	100
135.62	1.0354	140.42	139.16	1.0393	144.62	148.87	1.0497	156.27	99
134.86	1.0341	139.46	138.31	1.0380	143.56	147.74	1.0482	154.86	98
134.10	1.0328	138.50	137.45	1.0367	142.49	146.60	1.0467	153.45	97
133.33	1.0315	137.53	136.59	1.0354	141.42	145.45	1.0452	152.03	96
132.56	1.0302	136.57	135.71	1.0341	140.34	144.30	1.0437	150.61	95
131.78	1.0290	135.60	134.84	1.0328	139.26	143.15	1.0422	149.19	94
130.99	1.0278	134.63	133.95	1.0315	138.17	141.99	1.0407	147.77	93
130.19	1.0266	133.65	133.06	1.0302	137.08	140.82	1.0392	146.34	92
129.38	1.0254	132.67	132.16	1.0289	135.48	139.64	1,0377	144.91	91
128.57	1.0242	131.68	131.25	1.0276	134.87	138.46	1.0362	143.47	90
127.75	1.0230	130.69	130.33	1.0263	133.76	137.27	1.0347	142.03	89
126.92	1.0218	129.69	129.41	1.0250	132.64	136.08	1.0332	140.60	88
126.09	1.0206	128.68	128.48	1.0237	131.52	134.88	1.0318	139.17	87
125.24	1 0194	127.67	127.54	1.0224	130.40	133.68	1.0304	137.74	86
124.39	1.0182	126.65	126.60	1.0211	129.27	132.47	1.0290	136.31	85
123.53	1,0170	125.63	125.64	1.0198	128.13	131.25	1.0276	134.87	84
122.66	1.0158	124.60	124.68	1.0185	126.99	130.03	1.0262	133.43	83
121.78	1.0146	123.56	123.71	1.0172	125.84	128.80	1.0248	131.99	82
120.90	1.0134	122.51	122.73	1.0159	124.68	127.56	1.0234	130.55	81
120.00	1.0122	121.46	121.74	1.0146	123.52	126.32	1.0220	129.10	80
119.10	1.0110	120.40	120.74	1.0133	122.35	125.07	1.0206	127.65	79
118.18	1.0098	119.34	119.74	1.0120	121.18	123.81	1.0192	126.19	78
117.26	1.0086	118.27	118.72	1.0107	120.00	122.55	1.0178	124.73	77
116.33	1.0074	117.19	117.70	1.0094	118.81	121.28	1.0164	123.27	76
115.38	1.0062	116.10	116.67	1.0081	117.61	120.00	1.0150	121.80	75
114.43	1.0050	115.00	115.62	1.0068	116.41	118.72	1.0136	120.33	74
113.47	1.0038	113.90	114.57	1.0055	115.20	117.43	1.0122	118.86	73
112.50	1.0026	112.79	113.51	1.0042	113.99	116.13	1,0108	117.38	72
111.52	1.0014	111.67	112.44	1.0030	112.78	114.82	1.0094	115.90	71
110.53	1,0002	110.55	111.36	1.0018	111.56	113.51	1.0080	114.42	70
109.52	0.9990	109.41	110.27	1.0006	110.33	112.19	1.0066	112.94	69
108.51	0.9978	108.27	109.17	0.9994	109.10	110.87	1.0052	111.45	68
107.49	0.9966	107.12	108.06	0.9982	107.86	109.54	1.0038	109.96	67
106.45	0.9954	105.96	106.94	0.9970	106.62	108.20	1.0024	108.46	66
105.40	0.9942	104.79	105.81	0.9958	105.37	106.85	1.0010	106.96	65
104.35	0.9930	103.62	104.67	0.9946	104.11	105.50	0.9996	105.46	64
103.28	0.9918	102.43	103.52	0.9934	102.84	104.13	0.9982	103.95	63
102.20	0.9906	101.23	102.36	0.9922	101.56	102.76	0.9968	102.44	62
101,10	0.9894	100.03	101.18	0.9910	100.27	101.38	0.9954	100.92	61
100.00	0.9882	98.82	100.00	0.9898	98.98	100.00	0.9940	99.40	60

TABLE of Six per Cent. Stocks, ſubject to different Tenders for their Periodical Redemption.

Given val. of 100l. of 3 p. cent ſtock, redeemable at pleaſure.	Correſponding value of 100l. of ſix per cent. ſtock, according to the tender to which it ſhall be ſubject for its redemption.																		Given val. of 100l. of 3 p. cent ſtock, redeemable at pleaſure.
	Tender 6 per cent. per ann.			Tender 5 per cent. per ann.			Tender 4 per cent. per ann.			Tender 3 per cent. per ann.			Tender 2 per cent. per ann.			Tender 1 per cent. per ann.			
	Computed value.	Ratio of the correction.	Corrected value.	Computed value.	Ratio.	Corrected value.	Computed value.	Ratio.	Corrected value.	Computed value.	Ratio.	Corrected value.	Computed value.	Ratio.	Corrected value.	Computed value.	Ratio.	Corrected value.	
	£.		£.	£.		£.	£.		£.	£.		£.	£.		£.	£.		£.	
100	133.33	1.0250	136.66	137.50	1.0282	141.38	142.86	1.0323	147.48	150.00	1.0380	155.70	160.00	1.0459	167.35	175.00	1.0581	185.16	100
99	132.88	1.0241	136.08	136.98	1.0273	140.72	142.24	1.0313	146.70	149.25	1.0370	154.77	159.04	1.0448	166.16	173.68	1.0568	183.55	99
98	132.43	1.0232	135.50	136.46	1.0264	140.06	141.62	1.0303	145.91	148.48	1.0360	153.83	158.06	1.0437	164.97	172.36	1.0555	181.93	98
97	131.97	1.0223	134.91	135.92	1.0255	139.39	140.99	1.0293	145.12	147.72	1.0350	152.89	157.08	1.0426	163.78	171.03	1.0542	180.31	97
96	131.51	1.0214	134.32	135.38	1.0246	138.71	140.35	1.0283	144.32	146.94	1.0340	151.94	156.10	1.0415	162.58	169.70	1.0529	178.68	96
95	131.03	1.0205	133.72	134.84	1.0237	138.03	139.71	1.0273	143.52	146.15	1.0330	150.98	155.10	1.0404	161.37	168.35	1.0516	177.04	95
94	130.55	1.0196	133.11	134.29	1.0228	137.35	139.05	1.0263	142.71	145.36	1.0320	150.01	154.10	1.0393	160.16	167.00	1.0503	175.40	94
93	130.07	1.0187	132.50	133.73	1.0219	136.66	138.39	1.0253	141.89	144.56	1.0310	149.04	153.09	1.0382	158.94	165.65	1.0490	173.76	93
92	129.58	1.0178	131.88	133.16	1.0210	135.96	137.72	1.0243	141.07	143.75	1.0300	148.06	152.07	1.0371	157.71	164.29	1.0477	172.12	92
91	129.08	1.0169	131.26	132.58	1.0201	135.25	137.05	1.0233	140.24	142.93	1.0290	147.07	151.04	1.0360	156.48	162.92	1.0464	170.47	91
90	128.57	1.0160	130.63	132.00	1.0192	134.53	136.36	1.0223	139.40	142.10	1.0280	146.08	150 00	1.0349	155.24	161.54	1.0451	168.82	90
89	128.06	1.0151	129.99	131.41	1.0183	133.81	135.67	1.0213	138.56	141.27	1.0270	145.08	148.95	1.0338	153.99	160.15	1.0438	167.17	89
88	127.54	1.0142	129.35	130.81	1.0174	133.08	134.97	1.0203	137.71	140.43	1.0260	144.08	147.90	1.0327	152.74	158.76	1.0425	165.51	88
87	127.01	1.0133	128.70	130.20	1.0165	132.35	134.26	1.0193	136.85	139.57	1.0250	143.07	146.84	1.0316	151.48	157.36	1.0412	163.85	87
86	126.47	1.0124	128.04	129.59	1.0156	131.61	133.54	1.0183	135.99	138.71	1.0240	142.04	145.76	1.0305	150.21	155.96	1.0399	162.18	86
85	125.92	1.0115	127.37	128.97	1.0147	130.86	132.81	1.0174	135.13	137.84	1.0230	141.01	144.68	1.0294	148.93	154.55	1.0386	160.51	85
84	125.37	1.0106	126.70	128.33	1.0138	130.10	132.08	1.0165	134.26	136.96	1.0220	139.97	143.59	1.0283	147.65	153.13	1.0373	158.84	84
83	124.81	1.0097	126.02	127.69	1.0129	129.33	131.33	1.0156	133.38	136.07	1.0210	138.92	142.49	1.0272	146.36	151.70	1.0360	157.16	83
82	124.24	1.0088	125.33	127.04	1.0120	128.56	130.57	1.0147	132.49	135.16	1.0200	137.86	141.38	1.0261	145.07	150.26	1.0347	155.48	82
81	123.66	1.0079	124.64	126.38	1.0111	127.78	129.81	1.0138	131.59	134.25	1.0190	136.80	140.26	1.0250	143.77	148.82	1.0334	153.79	81
80	123.08	1.0070	123.94	125.71	1.0102	126.99	129.03	1.0129	130.69	133.33	1.0180	135.73	139.13	1.0239	142.46	147.37	1.0321	152.10	80
79	122.48	1.0061	123.23	125.04	1.0093	126.19	128.25	1.0120	129.78	132.40	1.0170	134.65	137.99	1.0228	141.14	145.91	1.0308	150.40	79
78	121.87	1.0052	122.51	124.35	1.0084	125.38	127.45	1.0111	128.86	131.46	1.0160	133.56	136.84	1.0217	139.81	144.44	1.0295	148.70	78
77	121.25	1.0043	121.78	123.65	1.0075	124.57	126.64	1.0102	127.93	130.51	1.0150	132.46	135.68	1.0206	138.47	142.97	1.0282	147.00	77
76	120.63	1.0034	121.04	122.94	1.0066	123.75	125.83	1.0093	127.00	129.55	1.0140	131.36	134.51	1.0195	137.13	141.49	1.0269	145.30	76
75	120.00	1.0025	120.30	122.22	1.0057	122.92	125.00	1.0084	126.05	128.57	1.0130	130.25	133.33	1.0184	135.78	140.00	1.0256	143.59	75
74	119.35	1.0017	119.55	121.49	1.0048	122.08	124.16	1.0075	125.09	127.59	1.0120	129.12	132.14	1.0173	134.43	138.50	1.0243	141.87	74
73	118.70	1.0009	118.80	120.75	1.0039	121.23	123.31	1.0066	124.12	126.59	1.0110	127.98	130.94	1.0162	133.07	137.00	1.0230	140.15	73
72	118.03	1.0001	118.04	120.00	1.0030	120.36	122.45	1.0057	123.15	125.58	1.0100	126.83	129.73	1.0151	131.69	135.48	1.0217	138.42	72
71	117.35	0.9993	117.27	119.23	1.0021	119.48	121.57	1.0048	122.16	124.56	1.0090	125.68	128.51	1.0140	130.80	133.96	1.0204	136.69	71

TABLE of Six per Cent. Stocks, continued.

Corresponding value of 100l. of 6 per cent. stock, according to the tender to which it shall be subject for its redemption.

Given val. of 100l. of 3 p. cent stock, redeemable at pleasure.	Tender 6 per cent. per ann.			Tender 5 per cent. per ann.			Tender 4 per cent. per ann.		
	Computed value.	Ratio of the correction.	Corrected value.	Computed value.	Ratio.	Corrected value.	Computed value.	Ratio.	Corrected value.
	£.		£.	£.		£.	£.		£.
70	116.66	0.9985	116.49	118.46	1.0012	118.60	120.69	1.0039	121.16
69	115.96	0.9977	115.69	117.67	1.0003	117.71	119.79	1.0030	120.15
68	115.25	0.9969	114.89	116.87	0.9994	116.80	118.88	1.0021	119.13
67	114.53	0.9961	114.07	116.06	0.9985	115.88	117.96	1.0012	118.10
66	113.79	0.9953	113.24	115.24	0.9976	114.96	117.02	1.0003	117.06
65	113.04	0.9945	112.40	114.40	0.9967	114.02	116.07	0.9994	116.01
64	112.28	0.9937	111.55	113.55	0.9958	113.07	115.11	0.9985	114.94
63	111.50	0.9929	110.69	112.68	0.9949	112.11	114.13	0.9976	113.86
62	110.71	0.9921	109.82	111.80	0.9940	111.13	113.14	0.9967	112.77
61	109.91	0.9913	108.94	110.91	0.9931	110.14	112.13	0.9958	111.66
60	109.09	0.9905	108.05	110.00	0.9922	109.14	111.11	0.9949	110.54
59	108.26	0.9897	107.14	109.08	0.9913	108.13	110.07	0.9940	109.41
58	107.41	0.9889	106.21	108.14	0.9905	107.11	109.02	0.9931	108.27
57	106.54	0.9881	105.27	107.18	0.9897	106.08	107.95	0.9922	107.12
56	105.66	0.9873	104.32	106.21	0.9889	105.03	106.87	0.9913	105.95
55	104.76	0.9865	103.35	105.22	0.9881	103.97	105.77	0.9904	104.76
54	103.84	0.9857	102.36	104.21	0.9873	102.89	104.65	0.9895	103.56
53	102.91	0.9849	101.36	103.19	0.9865	101.80	103.52	0.9886	102.34
52	101.96	0.9841	100.34	102.14	0.9857	100.69	102.36	0.9877	101.10
51	100.99	0.9833	99.30	101.08	0.9849	99.56	101.19	0.9868	99.85
50	100.00	0.9825	98.25	100.00	0.9841	98.41	100.00	0.9859	98.59

Tender 3 per cent. per ann.			Tender 2 per cent. per ann.			Tender 1 per cent. per ann.			Given val. of 100l. of 3 p. cent stock, redeemable at pleasure.
Computed value.	Ratio.	Corrected value.	Computed value.	Ratio.	Corrected value.	Computed value.	Ratio.	Corrected value.	
£.		£.	£.		£.	£.		£.	
123.53	1.0080	124.52	127.27	1.0129	128.91	132.43	1.0191	134.96	70
122.48	1.0070	123.35	126.03	1.0118	127.51	130.89	1.0178	133.22	69
121.43	1.0060	122.16	124.77	1.0107	126.10	129.35	1.0165	131.48	68
120.36	1.0050	120.96	123.50	1.0096	124.68	127.79	1.0152	129.74	67
119.28	1.0040	119.76	122.22	1.0085	123.26	126.23	1.0140	128.00	66
118.18	1.0030	118.54	120.93	1.0074	121.83	124.66	1.0128	126.26	65
117.07	1.0020	117.31	119.63	1.0063	120.38	123.08	1.0116	124.51	64
115.95	1.0010	116.07	118.31	1.0052	118.92	121.49	1.0104	122.75	63
114.81	1.0000	114.81	116.98	1.0041	117.46	119.89	1.0092	120.99	62
113.66	0.9990	113.54	115.64	1.0030	115.99	118.28	1.0030	119.22	61
112.50	0.9980	112.27	114.29	1.0019	114.51	116.66	1.0068	117.45	60
111.32	0.9970	110.99	112.92	1.0008	113.01	115.04	1.0056	115.68	59
110.13	0.9960	109.69	111.54	0.9997	111.50	113.41	1.0044	113.91	58
108.92	0.9950	108.37	110.14	0.9986	109.99	111.76	1.0032	112.12	57
107.69	0.9940	107.04	108.74	0.9975	108.47	110.11	1.0020	110.33	56
106.45	0.9930	105.70	107.32	0.9964	106.93	108.45	1.0008	108.54	55
105.19	0.9920	104.35	105.88	0.9953	105.38	106.78	0.9996	106.74	54
103.92	0.9910	102.98	104.43	0.9942	103.82	105.10	0.9984	104.93	53
102.63	0.9900	101.60	102.97	0.9931	102.26	103.41	0.9972	103.12	52
101.32	0.9891	100.21	101.49	0.9921	100.69	101.71	0.9960	101.30	51
100.00	0.9882	98.82	100.00	0.9911	99.11	100.00	0.9948	99.48	50

EXPLANATION and USE of the aforegoing TABLES.

1. THE COMPUTED VALUE of an annuity (or of an annuity ftock) is what the value of fuch annuity would be, if the given rate of intereft for money was a ftationary or invariable quantity: thefe are computed from the Theorem demonftrated in the aforegoing third fection; and are laid down in the aforegoing tables, in the columns denominated at the top, *Computed Value*. But the rate of intereft for money not being actually ftationary, and the variations thereof being (as I obferved in the aforegoing third fection) attended with *different degrees* of effect on the value of *different ftocks*, according to the terms of redemption to which fuch ftocks fhall be refpectively liable; it neceffarily follows, that, in forming a comparifon of the values of *different* annuities (or of *different* annuity ftocks) the *one* with the *other*, their refpective *computed values* will not be abfolutely their *comparative values* in the market; but will be a *general approximation* thereto, which will require to be corrected by one or more *further* approximations.

2. In all the treatifes, and tables, that I have feen on this fubject, the *further* approximations are either not mentioned at all, or left to be made according

according to the reader's difcretion, without giving him even general directions for exercifing his judgment. There is, however, a fecond approximating ftep, which may be confidered as an *univerfal* one: and which, (although gentlemen may indeed differ in a *fmall degree* with refpect to *precife quantity*) may be deduced fo very near the truth, as to be capable of being collected and formed into tables, and from this fecond approximation, the further approximations that may at any time be neceffary, in any given cafe, may be performed, fufficiently near the truth for all practical purpofes, by a fimple operation in the rule of proportion, commonly called the *Rule of Three*.

3. The fecond approximating ftep is formed, by confidering the given rate of intereft, not as a ftationary or invariable quantity; but by confidering it as a *mean rate*; and by confidering the probability of its remaining at the given rate, and the probability of its increafing or decreafing, to be each *equal* probabilities: And, by correcting the aforementioned *computed value*, according to the *different degrees* in which the different ftocks would refpectively *rife* or *fall*, in conjunction with fuch *variations* of the rate of intereft.

4. For example.—When a three per cent. ftock is worth 75*l*. the computed value of a four per cent. ftock (whether fubject to a tender of 4, 3, 2, or 1, per cent. per annum for its redemption) will be 100*l*. But it is evident (from a bare infpection of the table) that in cafe of a *decreafe* in the rate of intereft, the computed value of the four per cent. ftock will not rife in fo great a ratio as the three per cent. ftock; and it is likewife evident that in cafe of an *increafe* in the rate of intereft, the computed value of both ftocks would fall in an *equal* ratio.

ratio.....When, therefore, a man can buy a three per cent. ſtock at 75*l.* he cannot, conſiſtent with his own intereſt, give ſo much as 100*l.* for a four per cent. ſtock. The ſecond approximated value of the four per cent. ſtock, when a three per cent. ſtock is worth 75*l.* muſt therefore be *leſs* than 100*l.* but *how much leſs*, is a point in which gentlemen's private opinions might vary, until thoſe variations of opinion ſhould become reduced as it were to a common center, by the higgling of the market, if I may ſo call it. In the aforegoing tables I have ſtated this common center (under the denomination of *corrected value)* to be *one and three quarters per cent.* below the computed value †, when the *tender* to which the ſtock ſhall be ſubject for its periodical redemption ſhall be *equal* to the *annuity:* The common centers ſtated for the other tenders are determined from thence; and the *ratio* between the *computed values* and the ſaid *common centers*, or *corrected values*, as I have denominated them, I have placed in the middle column of the tables. It would be tedious to give *the whole* of the reaſons which induced me to lay down this common center at *one and three quarters per cent.* below the computed value, rather than at *one and half per cent.* on the one hand, or *two per cent.* on the other hand, below the ſaid computed value. I will, however, give the following reaſons, which will perhaps be as convincing to the readers in general as if I were to give ever ſo many more reaſons:—It is evident to every body that the corrected value muſt in this caſe be *ſomewhat below* the computed value; and in my converſa-

I 2 tions

† That is, in the ratio of 1 to 0,9825.

tions on the ſubject, I have heard different opinions, from *one per cent. at the leaſt*, to *two and an half per cent. at the moſt*; admitting (as is the *data* for this ſecond ſtep of the approximation) that the probability of an *increaſe* and the probability of a *decreaſe* in the rate of intereſt ſhall (ſo far at leaſt as may be viſible) be *equal* probabilities. The *one and three quarters per cent.* which I have aſſumed, is juſt *midway* between theſe different opinions. So much for the *lower* proportions between the computed and the corrected values, as laid down in the tables.

5. Again,.....When a three per cent. ſtock is worth 100*l.* the computed value of a four per cent. ſtock ſubject to a tender of four per cent. per annum for its redemption will be 114$\frac{2}{7}$*l.** (or 114,29*l.* nearly as mentioned in the table). But it is evident (from a bare inſpection of the table) that, in caſe of an *increaſe* in the rate of intereſt, the computed value of the four per cent. ſtock will not fall in ſo great a ratio as the three per cent. ſtock: and hence, the four per cent. ſtock would be worth more than its *computed value*, compared with the three per cent. ſtock, in caſe the two ſtocks were to have *equal* capacities for riſing in value. Moreover, the four per cent. ſtock has a free capacity for riſing higher and higher in caſe of a *decreaſe* in the rate of intereſt, but the three per cent. ſtock (being ſubject to an *unlimited* tender for its redemption) has not. If, for inſtance the rate of intereſt ſhould decreaſe to 2$\frac{3}{4}$*l.* per cent. per annum, the computed value of the four per cent. ſtock

* See the principles laid down and demonſtrated in the aforegoing Third Section.

I

ſtock would riſe to $118\frac{14}{27}$*l.* but the three per cent. ſtock would ſtill be payable *in toto* at 100*l.* and. would conſequently be liable to a reduction of the intereſt. Hence then, the ſecond approximated value (which I denominate the *corrected value*) muſt *exceed* the computed value in *this* caſe, in a greater proportion than it would *fall ſhort* of the ſaid computed value in the *former* caſe. Gentlemen may indeed here again differ in opinion with reſpect to the *preciſe proportion* in which this corrected value ſhall exceed the computed value; but it is perfectly evident that the ratio of the *exceſs*, in this caſe, muſt, at any rate, be greater than the ratio of the *defalcation* in the preceding caſe. I have heard different opinions from *two per cent. at the leaſt*, to *five per cent. at the moſt*; but theſe opinions have moſt generally been between Two per Cent. and Three per Cent; admitting (as is the *data* for this ſecond approximation) that the probability of an *increaſe* and the probability of a *decreaſe* in the rate of intereſt ſhall be (to all appearance) *equal* probabilities. In the aforegoing tables I have ſtated the ratio at $2\frac{1}{2}$ per Cent.* which is about the *midway* (or *common center*) between theſe different opinions; and I doubt not but it will be deemed ſufficiently near the truth for a ſecond approximating ſtep. The ratios for the other tenders are determined from thence.

6. Having thus fixed the ratio's between the computed values and the corrected values, at the *top* and *bottom* of the tables, the intermediate ratios between the top and bottom are ſupplied by the interpoſition of means proportional; and the

I 3

* That is, as 1 to 1,025.

the Corrected Values laid down in the third column, are, of courſe, determined, by multiplying the reſpective Computed Values by their correſponding Ratios. The tables of Five per Cent. and Six per Cent. ſtocks are compoſed in the ſame manner.

7. In a time of peace and tranquillity, when there ſhall be no appearance of an extraordinary demand for money on the one hand, nor of any additional or extraordinary influx of money into the market, on the other, the rate of intereſt for the time being may be conſidered as the *mean rate*; and the prices of the ſtocks for the time being may of courſe be conſidered as their *mean value*; and the probability of their *riſing a little higher*, or *falling a little lower*, may be conſidered as *equal* probabilities. The aforegoing tables, therefore, exhibit the comparative values of the reſpective ſtocks, in ſuch time of peace and tranquillity; the value of a Three per Cent. Stock being given.

For example, ſuppoſe the given (or mean) value of the Three per Cent. Stock, to be 88*l.* (which I think was pretty generally the caſe during the laſt peace), the correſponding value of a four per cent. ſtock will be as follows, according to the tender to which it ſhall be ſubject for its redemption; viz.

If ſubject to a tender of 4 per cent. per ann. 108.48
—— —— of 3 per cent. per ann. 110.06
—— —— of 2 per cent. per ann. 112.32
—— —— of 1 per cent. per ann. 115.60

So likewiſe, if the given (or mean) value of the three per cent. ſtock be 70*l.* the correſponding value of a five per cent. ſtock will be as follows; viz.

If

		£.
If subject to a tender	of 5 per cent. per ann.	106.88
—— ——	of 4 per cent. per ann.	108.12
—— ——	of 3 per cent. per ann.	109.56
—— ——	of $2\frac{1}{2}$ per cent. per ann.	110.55
—— ——	of 2 per cent. per ann.	111.56
—— ——	of 1 per cent. per ann.	114.42

If the given (or mean) value of the three per cent. stock be lower than is mentioned in the table; the comparative value of the proposed stock will be found (sufficiently near the truth) by the following rule;—viz.

As the *lowest value* of the Three per Cents mentioned in the table:

Is to the corresponding value of the proposed stock::

So is the *given value* of the three per cent. stock:

To the value of the proposed stock, required.—

For example.—Suppose it were required to know the value of a Four per Cent. Stock subject to a tender of four per cent. per annum for its redemption: the given (or mean) value of a three per cent stock being 70*l*.

Say, As	£.75.	the *lowest value* of the three per cents mentioned in the table:
is to	98.25	the corresponding value of the proposed Four per Cent. stock::
So is	70	the *given value* of the three per cent. stock:
to	91.7	the value of the Four per Cent. Stock, required.*

So

* Our present four per cent. stock is worth from about Two per Cent. to about Four per Cent. *less* than is here mentioned. The reason is this:—Our present four per cent. stock is subject to an *unlimited* tender for its redemption; and, consequently, becomes liable to a reduction of the interest whenever money can be borrowed cheaper: whereas, the *abovementioned* Four per Cent. Stock is secured from a reduction of the interest, by the limiting of the tender.

So much for the comparative values of the stocks in times of peace and tranquillity; when the *given value* or *price* for the time being, may be considered as the *mean value*.

8. When there shall be an extraordinary demand for money (as in time of war), the rate of interest for the time being will naturally be raised *higher* than the *mean rate*; and the *given prices* of the stocks for the time being will of course be depressed *below* their *mean value*: In this case, therefore, in order to ascertain the comparative values between different stocks, a *further* approximation becomes necessary.

The comparative values of different stocks are (properly speaking) such, that, whether a man shall take the *one* stock or the *other*, at those respective prices, the profits thereon attendant shall on the whole be *equal*, or, at least, as *nearly equal* as can be ascertained. When, therefore, the stocks are depressed for the time being, below their *mean value*, in consequence of an extraordinary demand for money (as in time of war), it becomes necessary to inquire what may be considered to be their *mean value*, or *point* to which they may be expected to rise when the extraordinary demand for money shall cease. For, it is this *mean value* (and not the temporary value or price for the time being) which governs the Comparative Values between different stocks: Because, as I repeatedly observed in the aforegoing fourth section,—When a man can lay out his money in *one* stock, with such or such a prospect of advantage from the future rise of that stock; his own interest will not suffer him to lay it out in any *other* stock, without having an *equal* prospect of advantage. But, it will naturally be asked, how are we to ascertain

tain this *mean value* or *point* to which the ſtocks may be expected to riſe, when the extraordinary demand for money ſhall ceaſe?

9. In the ſeventh ſection of my firſt Eſſay, I inveſtigated and laid down the *principles* by which the depreciations in the value of the ſtocks, and the *mean values* to which they ſhall afterwards recover, are naturally governed; ſo far forth as thoſe depreciations and recovered values depend on an extraordinary demand for money, and on a diſcontinuance of ſuch extraordinary demand, abſtracted from other cauſes. But I obſerved, likewiſe, that the depreciations, and the recovered values of the ſtocks, were *further* affected by other cauſes, (eſpecially by the locking up of money on ſpeculation in time of war; and by the flowing out of that money in ſpeculative purchaſes, in times of peace) which lay out of the reach of arithmetical computation; and can therefore be meaſured, or rather judged of, with reſpect to *quantity*, from actual experience only.* It may alſo be obſerved, that the *riſe* in the prices of the ſtocks occaſioned by the application of a ſinking fund to their redemption, although perfectly evident as a *natural conſequence*, is not mathematically commenſurate, with reſpect to *quantity*. It will be neceſſary, therefore, in this third approximating ſtep,

* The doctrines laid down in the abovementioned ſeventh ſection of the firſt Eſſay, and the depreciations and recovered values which have actually taken place in our ſtocks, correſpond with each other much beyond my moſt ſanguine expectations. See the tables of depreciation and recovery, in the 125th and 126th pages of the firſt Eſſay; and compare them with the general depreciation and recovery of the ſtocks, in the two laſt wars, and in the laſt and preſent peace.

ſtep, to call paſt experience to our aid, in order to aſcertain, with a greater degree of exactneſs, the comparative values of the different ſtocks in times of war.

The circumſtance of our calling paſt experience to our aid, in the preſent inſtance, will not, it is imagined, be, in any the ſmalleſt degree, objected to; becauſe, in the *practical world*, experience joined to the moſt plain and ſimple kinds of reaſoning, is generally eſteemed to be *equal* (if not *ſuperior*) to ſcientific demonſtration.

10. In contemplating, in time of war, the probable riſe which may be expected to take place in the prices of the ſtocks, at the diſcontinuance of the extraordinary demand for money; the practical money lender will naturally inquire,—'What 'degree of riſe has been found *by experience* to take 'place on the like occaſions heretofore?' And this (without caring how far it ſhall proceed from *ſimple*, or how far it ſhall proceed from *compound cauſes*) he will naturally conſider to be the meaſure of the riſe which may be expected to take place hereafter. While the ſtocks ſhall remain as high or higher than they were during the laſt preceding war, the money lender will naturally expect them to riſe to what they were during the laſt preceding peace: and ſhould they be lower than they were during the laſt preceding war, he will naturally expect that the riſe will be at leaſt *proportionate* to what has been experienced on the like occaſions.

Now, whatever might or might not be the *natural* point of recovery to which the three per cents would riſe, in conſequence *ſimply* of the diſcontinuance of the extraordinary demand for money, abſtracted from the further effects produced by the throwing of an additional proportion of money into the market for purchaſe or redemption:

Whatever, I ſay, ſuch *natural* point of recovery might or might not be; experience evinces, that, after the extraordinary demand for money ceaſes, the making of a very ſmall attempt to purchaſe up the ſtocks for redemption, does actually raiſe the prices of the three per cents to about *half way* between the *loweſt prices* to which they have been depreſſed by the extraordinary demand for money during war, and *par*.* And, it is perfectly evident to every body, that a continuance of thoſe purchaſes (if any *effectual* ſinking fund ſhould be ſo applied) muſt raiſe them higher and higher.

Hence then, in a time of war, the practical money lenders, who (as men of buſineſs) will naturally govern themſelves by *experience*, in preference to any other kind of reaſoning, will determine the comparative values of the different ſtocks according to the following *general* approximating rule; and, if they ſhould judge it neceſſary to apply any further correction, they may eaſily do it by requiring a *premium* (or *bonus* † as it is commonly called) a little *greater* or a little *leſſer* accordingly, viz.

General RULE *in Time of War.*

Firſt.—If the *given market price* of the three per cents for the time being, ſhall not be

* During the war from 1755 to 1763 the loweſt prices of the three per cents were about 69 or 70*l.* and the *half way*, between 70*l.* and 100*l.* (or *par*) is 85*l.* The general prices of the three per cents during the peace from 1763 to 1775 was about 88*l.* which is *higher* than the abovementioned half ſum. Again.—The loweſt prices of the three per cents during the laſt war, from 1775 to 1783 were about 54*l.* The *half way* between this and *par* is 77*l.* The firſt purchaſes that were made for their redemption in July and Auguſt 1786, carried them to about 78*l.*

† BONUS is a Parliamentary term, which ſignifies the *premium* neceſſary to be given for the advancement of the loan; over and above what the lenders might make by laying out their money in the ſtocks.

ſo much below their *general* or *average price* during the preceding peace, as that general or average price was *below par*; then, let the ſaid *general* or *average price* of the three per cents during the preceding peace, be conſidered, as their *mean value*:

But if the *given market price* of the three per cents for the time being, ſhall be more than as much below their *general* or *average price* during the preceding peace, as that general or average price was *below par*; then, let the *half ſum* of the *given price* and *par* (i. e. the half ſum of the given price and 100*l.*) be conſidered as their *mean value*: *—

Secondly.—Enter the tables with this *mean value* of the three per cents, and take the value (meaning the *corrected value*, ſo denominated in the tables) of the *propoſed* ſtock, correſponding to ſuch *mean value* of the three per cents:

Thirdly.—Then ſay,

As the abovementioned *mean value* of the three per cents:
is to the correſponding value of the propoſed ſtock:
So is the *given market price* of the three per cents for the time being:
To the value of the *propoſed ſtock* for the time being.

* It would be more conſiſtent with the *elemental* principles of the ſubject, to conſider the *half ſum* of their *given price* in time of war and their *general price* during the preceding peace, as being their *mean value*; but as this would not be ſo conſiſtent with the intereſts of the lenders, it would be in vain to urge ſuch an argument in a time of war, when Government is as it were in the *power* of the lenders.

11. For example:—Suppoſe it were required to know the value of a four per cent. ſtock ſubject to a tender of four per cent. per annum, for its redemption, in the month of October 1777; taking the given value of the three per cents for the time being at $77\frac{1}{2}$ *l.** and taking their general or average value during the preceding peace at 88*l.*?†

First.—In this caſe the given value of the three per cents for the time being [$77\frac{1}{2}$ *l.*] is not ſo much below [88*l.*] their general or average price during the preceding peace, as that general or average price [88*l.*] is below par:—wherefore 88*l.* may be conſidered as the *mean value* to which the dealers in ſtocks might (from *experience*) expect them to riſe on the diſcontinuance of the extraordinary demand for money.

Secondly.—The correſponding value of the propoſed four per cent. ſtock, when the three per cents are at 88*l.* is by the table £. 108.48

Thirdly.

* I give this for an example, becauſe, I have now before me a Weſtminſter Magazine for October, 1777; in which the prices of the reduced three per cents (the dividend on which was juſt paid) are ſtated at $77\frac{1}{2}$*l.*

† I ſtate the general or average value of the three per cents during the laſt peace at 88*l.* becauſe I lately ſaw ſome Magazines of 1774 and 1775, which mention them at that price. The *general average* might perhaps have been a *little higher* or a *little lower*; but the difference could not be ſo great as to produce any material difference in the comparative (or *proportionate*) values of the two ſtocks.

Thirdly.—Then ſay

As £.88	the *mean value* of the three per cents:
is to 108.48	the correſponding value of the propoſed four per cent. ſtock::
So is 77.5	the given value of the three per cents for the time being:
to 95.54	the value of the propoſed four per cent. ſtock for the time being.*

12. Again—Suppoſe it were required to know the value of a four per cent. ſtock ſubject to a tender of four per cent. per annum for its periodical redemption at the time of the loan of 1781: taking the value of the three per cents for the time being (as they were then actually taken) at 58*l.* and taking (as in the laſt example) their

 general

* The Weſtminſter Magazine for October 1777, now before me, mentions the market price of the new four per cent. ſtock which was created that year (the dividend on which was juſt paid) to be $90\frac{1}{4}$*l.* The *abovementioned* four per cent. ſtock would indeed have been worth *ſomething more* in the market than the four per cent. ſtock which was then created, on account of its being ſecured from a reduction of the intereſt by the limiting of the tender; but as the four per cent. ſtock then created was (by agreement) ſecured from a reduction of intereſt for *ten years*, we cannot reaſonably ſuppoſe that the preference due to the *abovementioned* four per cent. ſtock would have amounted to *more* than the above rule gives. And the concluſion which will by and by follow, will be, that the ſtock dealers, and not the public, will derive advantage from the eſtabliſhment of New Stocks in time of war, bearing a *higher intereſt* than the Old Stocks: and, that a time of peace and tranquillity, when the *mean values* of the public annuities ſhall be viſible to every body, is the only time in which any New Stock will bring its *real comparative value*: becauſe while the *real comparative value* of the New Stock ſhall be in any material degree *doubtful*, the man of buſineſs who gives his *money* for it, will naturally (and very juſtly) turn the *doubtful point* to his own advantage.

general or average value during the preceding peace at 88*l*?

First.—In this caſe the given value of the three per cents for the time being [58*l*.] is *more* than as much below [88*l*] their general or average value during the preceding peace, as that general average value [88*l*.] is *below par*: wherefore, the *half ſum* of their given value [58*l*.] and *par* [100*l*.] which ſaid half ſum is 79*l*. may be conſidered as their *mean value*:

Secondly.—The value of the propoſed four per cent. ſtock, correſponding to this *mean value* of the three per cents, is, by the table, 101.50

Thirdly.—Then ſay

As £.79	the *mean value* of the three per cents:
is to 101.50	the correſponding value of the propoſed four per cent. ſtock::
So is 58	the given value of the three per cents for the time being:
to 74.52	the value of the propoſed four per cent. ſtock for the time being.*

13. Another example.—Suppoſe it were required to know the value of a five per cent. ſtock, ſubject to a tender of five per cent. per annum

* A part of the loan of this year [1781] was made on a four per cent. ſtock, and the four per cent. ſtock was taken at 70*l*. The abovementioned four per cent. ſtock would (as I obſerved in the laſt note) have been worth *ſomething more* in the market than the four per cent. ſtock which was then created, on account of its being ſecured from a reduction of the intereſt by the limiting of the tender: but we cannot reaſonably ſuppoſe that the lenders would have made *more* difference than the above rule gives.

annum for its periodical redemption, at the time of the loan of 1781: taking the value of the three per cents for the time being (as they were then actually taken) at 58*l*. and taking their general or average value during the preceding peace at 88*l*. as before?

First.—The *mean value* of the three per cents will be the ſame as in the laſt example,—to wit 79*l*.

Secondly.—The value of the propoſed five per cent. ſtock, correſponding to ſuch mean value (ſee the table) is 113.88*l*.

Thirdly.—Then

As £.79	the *mean value* of the three per cents:
is to 113.88	the correſponding value of the propoſed five per cent. ſtock::
ſo is 58	the given value of the three per cents for the time being:
to 83.61	the value of the propoſed five per cent. ſtock for the time being.*

 14. We

* I obſerved in the aforegoing fourth ſection, page 88, that a five per cent ſtock was propoſed (though it did not take place) for a part of the loan of this year [1781]; but the limiting of the tender to which it ſhould be periodically liable for its redemption (whereby *alone* the intereſt or annuity could be ſecured from reduction, and the ſtock be at the ſame time redeemable) did not occur: It was therefore propoſed on the part of the lenders to have the intereſt ſecured from reduction for *fifteen years*, by rendering the ſtock irredeemable during that term; and, on thoſe conditions, the higheſt offer that was made for it (at leaſt, I have been ſo informed, in a way that I cannot doubt the truth of it) was 82l.—The *abovementioned* five per cent. ſtock would have been worth but a very little more than a five per cent. ſtock, irreducible for fifteen years.—We cannot therefore ſuppoſe that if the abovementioned ſtock had been propoſed, it would have been taken at a *higher* rate than the above rule gives.

14. We may obſerve from theſe examples and from the obſervations contained in the *notes* at the bottom, as well as from the obſervations and arguments laid down in the foregoing fourth ſection, that, in the preſent ſtate of the debt, the granting of *artificial capitals* over and above the monies actually received cannot be avoided, with any advantage to the public, by the eſtabliſhment of New Stocks, in time of war, bearing a higher intereſt than the *old ſtocks*. The riſe which ſhall have been found by *experience* to take place in the price of the Old Stock, after the extraordinary demand for money ceaſes, will always be the guide by which men of buſineſs will govern themſelves in determining the value of any New Stock: and while this expected riſe ſhall be in any material degree *doubtful*, men of buſineſs, who advance their money, will always calculate the *doubtful part* (as indeed they ought) to their own advantage.

It would be in vain in time of war to tell the practical money lender, that he ought not in his calculation to make ſo great an allowance for the expected riſe of the Stocks on the diſcontinuance of the extraordinary demand for money:—he would at once reply, in anſwer,—Experience juſtifies the making of ſuch allowance: The rule is founded on *actual experience*, by which men of buſineſs muſt always be governed. It would be equally in vain to tell him 'that a conſiderable part of the riſe which had been heretofore experienced, was occaſioned by throwing a ſinking fund into the market; and that, as government was under no engagement to redeem, ſuch riſe was not to be expected in future': It would be in vain, I ſay, to urge this argument in a time of war:—The practical

practical money lender (ſhould he have ſtudied the nature and principles of the ſubject) would immediately reply,—'I cannot, indeed, expect a ſinking fund to be thrown into the market for the redemption of a ſtock bearing a *low intereſt*; becauſe, experience ſufficiently evinces that the depreciations to which ſuch ſtocks are liable in time of war, from the want of their bearing a ſufficient intereſt or annuity, are ſuch, that near Fifty per Cent more muſt be required to be paid for their redemption, than can be obtained for them when created for a loan; and, was ſuch a ſyſtem of practice to be perſevered in, they might require even *double* (or *more than double*) as much to be paid for their redemption as could be obtained for them at the time of a loan: which, by repeated accumulations of debt, muſt *finally* produce a public bankruptcy *in any nation under heaven*. This being the caſe, I will not advance my money but on ſuch a ſtock as government may *ſafely* be expected to employ a ſinking fund in: I will not advance my money but on a ſtock bearing ſuch an intereſt as that it ſhall be for the *advantage* of government to apply a ſinking fund for its redemption; and then I ſhall have *no doubt* of its being applied: I will alſo have the ſtock liable *only* to ſuch a tender for its periodical redemption, as ſhall ſecure to me the advantages of the *riſe* of the ſtock, which the application of the ſinking fund muſt neceſſarily produce.' If, for inſtance, this argument had been urged at the time of the loan of 1781, (ſuppoſing the nature and principles of the ſubject to have been previouſly inveſtigated and underſtood) the practical money lender would have ſaid—'If I may not expect a ſinking fund to be employed in the redemption of a Three

'Three per cent. a Four per cent. or a Five per 'cent. stock; I shall still entertain no doubt but go-'vernment will exert itself to redeem a stock bear-'ing so high an interest as Six per Cent: and I 'will not advance my money without having 60*l.* '*(more* or *less)* of Six per Cent. Stock, liable to a 'tender of *only* Three per Cent. per Annum for 'the periodical redemption of the capital, in the 'stead of 100*l.* of Three per Cents,* on my ad-'vancing *in money*, towards the loan, [58*l.* †] the 'present value of the Three per Cent. Stock.' The lender (supposing the great monied men who subscribe towards the new loans to be likewise proprietors of old stock, which I am informed is the case to a very considerable amount) might have said much more:—He might have said—'If I 'may not expect a sinking fund to be applied to 'the redemption of stocks bearing a *low* interest; 'I will not advance any more money without se-'curing the attention of government to a sinking 'fund, with respect to my *old stock* likewise: I will 'not

* £60 of such Six per Cent. Stock would be worth more than 100l. of Three per Cent. Stock, while the Three per Cents should be under 80l. £.66$\frac{2}{3}$ of such Six per Cent. Stock would be worth more than 100l. of the Three per Cents, *in all possible cases whatsoever*. £.62$\frac{1}{2}$ of Six per Cent. Stock, subject to a tender of Two per Cent. per Annum, or 57$\frac{1}{7}$l. of ditto, subject to a tender of One per Cent. per Annum, would likewise, either of them, be worth more than 100l. of Three per Cent. Stock, in all possible cases whatsoever. But it would not be consistent with the interests of the creditors, to stipulate for so *low* a tender as should be insufficient to check the increase of the debt within a reasonable time; because, without that, a public bankruptcy must unavoidably ensue.

† £58 was the rate at which the Three per Cents were then actually taken.

'not advance any more money without hav-'ing *twice* or *three times* 60*l.* *(more* or *less)* of New 'Six per Cent. Stock, liable only to a tender of 'Three per Cent. per annum for its redemption, 'on my advancing the present value of 100*l.* of 'Three per Cent. stock *in money*, and giving up 'therewith 100*l.* or 200*l.* of my present Three per 'Cent. capital.'

Such would have been the arguments used at the time of the loan of 1781, had the nature and principles of the subject been previously investigated and understood.

15. In a time of peace and tranquillity the case is different. Were we not to interrupt the stock market by the sinking fund, it would quickly find its own level: the *mean value* of the three per cents (which, in the present state of the debt, will naturally be the *governing* stocks) would then be no longer a *doubtful* point, but would be evident to every body; and there would then be no difficulty in ascertaining the comparative value of any New Stock, so as to afford equal advantages to the Stock-holder, and be at the same time redeemable, consistently with the true principles of Finance: the essence of which, is, that 'the re-'deemable stock shall have a free and secure ca-'pacity for rising in value for the advantage of 'creditors, without injury to the public with re-'spect to the price to be paid for the periodical 'redemptions that shall be necessary to be made, 'in order to prevent the excessive increase of the 'debt.'

A conversion of the debt into stocks of this kind can always be effected, in time of peace, on very *reasonable* terms: because, according to the constitution of the stocks, it is entirely at the option

option of government whether to redeem or not; and, without a redemption, the value of the ſtocks cannot be ſupported: every ſtockholder knows this to be the caſe.—Their own intereſt, therefore, will lead them to ſubſcribe to the converſion on reaſonable terms, were it only to avoid the loſs which they muſt neceſſarily ſuſtain from the *fall* of the ſtocks, in caſe government ſhould *refuſe* to redeem: By ſubſcribing to the converſion they will not only avoid theſe loſſes, but will likewiſe ſecure to themſelves the advantages of a *riſe* in the value of the New Stock, in conſequence of the redemptions that will naturally be made, after the converſion ſhall be effected.

16. I have already ſwelled this Eſſay much beyond the ſize which I at firſt intended: I cannot, however, omit making one more obſervation, to prove (from *experience*, founded on ſuch actual facts as every man *has* or *might have* ſeen with his own eyes) that a time of war is not a time for eſtabliſhing New Stocks with any advantage to the *public*: and that it muſt, on the contrary, be much more diſadvantageous to the *public* to eſtabliſh New Stocks in time of war, bearing a higher intereſt than the old ſtocks, which have the chief poſſeſſion of the market, than it would be to fund on the Old Stocks in time of war, and afterwards to convert them into the *higher ſtock* in time of peace. The reaſon is this: the comparative value of any new ſtock will always be determined in the market, according to the *mean value* of that ſtock which ſhall have the chief poſſeſſion of the market: But, in a time of war, this *mean value* (or price to which the old ſtock may be expected to riſe when the extraordinary demand for money ſhall ceaſe) is not *preciſely aſcertainable*; but is,

at

at leaſt in *ſome degree, doubtful*: and the old ſtock, by having the greateſt poſſeſſion of the market, naturally carries the greateſt part of the *doubtful degree* in its own favour: ſo that in a time of war, a *greater quantity* of any New Stock will be required, in order to be equivalent *in value* in the market to any given quantity of the Old Stock, than will be equivalent thereto in time of peace, when the *mean value* of the old ſtock ſhall ceaſe to be doubtful.

The truth of this obſervation will be ſufficiently evinced by the following facts:

I have before me (as I obſerved a few pages back) a Weſtminſter Magazine for October 1777, which mentions the then market price of the Three per Cents to have been $77\frac{1}{2}$*l.* and that of the four per cents $90\frac{1}{4}$*l.* the dividend on each having been juſt then diſcharged:—In this ſtate of the market, rather more than $85\frac{3}{4}$*l.* of the four per cent. ſtock was required, in order to be equivalent *in value* to 100*l.* of the three per cent. ſtock: and although the *ratio* of the depreciation of the Four per Cent. Stock, was rather *leſs* than that of the Three per Cents; yet, during the whole courſe of the war, their comparative values in the market were ſuch, that about 83*l.* (generally *more* than 83*l.*) of the four per cent. ſtock was required, in order to be equivalent in value to 100*l.* of the three per cents. But, ſince the peace, their comparative values in the market have been ſuch, that about 80*l.* (or, I believe, without a ſingle exception, rather *leſs* than 80*l.*) of the four per cent. ſtock has been equivalent in value to 100*l.* of the three per cents. On the 14th of October, 1786, for example, the Three per Cents were at $76\frac{1}{4}$*l.* and the Four per Cents at $95\frac{3}{4}$*l.* excluſive of the dividends then on

each

each payable: In this ſtate of the market, rather leſs than $79\frac{3}{4}$*l.* of the four per cents was required, in order to be equivalent in value to 100*l.* of the three per cents. Theſe *facts* are ſo viſible to every body, and they ſupport the truth of the above obſervation ſo *effectually*, that I can entertain no doubt of their carrying the fulleſt conviction to the reader's mind.

I ſhall therefore conclude, by repeating, in ſubſtance, the obſervation I made at the end of the aforegoing fourth ſection—to wit,—'That, unleſs 'the Public Credit of the nation ſhould by ſome 'unhappy means become ſo *totally deſtroyed* as 'never to revive again (a thing which cannot be 'expected, even in the direful caſe of a public 'bankruptcy itſelf) a converſion of the debt, 'into ſtocks bearing a higher intereſt than that 'of the market, ſubject to a *limited tender* for 'the periodical redemption of the capital, muſt, 'ſooner or later, take place. If ſuch con'verſion be not propoſed in a time of Peace, 'when Government (by having it at its op'tion whether to redeem or not) has it in its 'power to make a reaſonable and equitable bar'gain; it will be demanded by the lenders (in 'greater or leſſer proportions) in a time of war, 'as a part of the conditions of new loans; and, 'Government being then as it were in the power 'of the Lenders, the terms demanded will, of 'courſe, be more unfavourable to the Public.'

F I N I S.

Advertiſement.

THE variations neceſſary to be allowed, as part of the conſtitutional properties of the New Stock, in order to provide for the reſpective *Conveniencies* of the different claſſes and denominations of the Public Creditors, are laid down in the Third Section of the Third Eſſay.

E R R A T A.

P. 8,	l.	17,	*for* 'muſt be', *read* 'would be'
	—	21,	*for* 'be ſo applied', *read* 'were to be ſo applied';—and *for* 'can only produce', *read* 'could only produce.'
20,	—	5,	of the note, *for* £. 187.750,000 *read* £. 187,650,000
	—	7,	of the note, *for* 18,000,000 *read* 17,900,000
	—	10,	of the note, *for* 21,500,000 *read* 21,700,000
	—	13,	of the note, *for* 9,300,000 *read* 9,280,000
21	—	13,	*for* 'near', *read* 'above.'
30	—	26,	*for* 'near' *read* 'above.'
41	—	9,	of the note, *for* 'Wherefore', *read* 'And
71	———		in the note, *for* 'page 42,' *read* 'page 63.'
74	———		in the note, *for* 'page 42,' *read* 'page 63.'
79	———		in the note, *for* 'page 42,' *read* 'page 63.'