Qu. 38. Whether tedious calculations in algebra and fluxions be the likeliest method to improve the mind? And whether men's being accustomed to reason altogether about mathematical signs and figures, doth not make them at a loss how to reason without them?

Qu. 39. Whether, whatever readiness analysts acquire in stating a problem, or finding apt expressions for mathematical quantities, the same doth necessarily infer a proportionable ability in conceiving and expressing other matters?

Qu. 40. Whether it be not a general case or rule, that one and the same coefficient dividing equal products gives equal quotients? And yet whether such coefficient can be interpreted by $o$ or nothing? Or whether any one will say, that if the equation $2 \times o = 5 \times o$, be divided by $o$, the quotient on both sides are equal? Whether therefore a case may not be general with respect to all quantities, and yet not extend to nothings, or include the case of nothing? And whether the bringing nothing under the notion of quantity may not have betrayed men into false reasoning?

Qu. 41. Whether, in the most general reasonings about equalities and proportions, men may not demonstrate as well as in geometry? Whether in such demonstrations they are not obliged to the same strict reasoning as in geometry? And whether such their reasonings are not deduced from the same axioms with those in geometry? Whether, therefore, algebra be not as truly a science as geometry?

Qu. 42. Whether men may not reason in species as well as in words? Whether the same rules of logic do not obtain in both cases? And whether we have not a right to expect and demand the same evidence in both?

Qu. 43. Whether an algebraist, fluxionist, geometrician, or demonstrator of any kind can expect indulgence for obscure principles or incorrect reasonings? And whether an algebraical note or species can, at the end of a process, be interpreted in a sense which could not have been substituted for it at the beginning? Or whether any particular supposition can come under a general case which doth not consist with the reasoning thereof?

Qu. 44. Whether the difference between a mere computer and a man of science be not, that the one computes on principles clearly conceived, and by rules evidently demonstrated, whereas the other doth not?

Qu. 45. Whether, although geometry be a science, and algebra allowed to be a science, and the analytical a most excellent method, in the application nevertheless of the analysis to geometry, men may not have admitted false principles and wrong methods of reasoning?

Qu. 46. Whether, although algebraical reasonings are admitted

to be ever so just, when confined to signs or species, as general representatives of quantity, you may not nevertheless fall into error, if, when you limit them to stand for particular things, you do not limit yourself to reason consistently with the nature of such particular things? And whether such error ought to be imputed to pure algebra?

Qu. 47. Whether the view of modern mathematicians doth not rather seem to be the coming at an expression by artifice, than the coming at science by demonstration?

Qu. 48. Whether there may not be sound metaphysics as well as unsound? Sound as well as unsound logic? And whether the modern analytics may not be brought under one of these denominations, and which?

Qu. 49. Whether there be not really a *philosophia prima*, a certain transcendental science superior to and more extensive than mathematics, which it might behove our modern analysts rather to learn than despise?

Qu. 50. Whether, ever since the recovery of mathematical learning, there have not been perpetual disputes and controversies among the mathematicians? And whether this doth not disparage the evidence of their methods?

Qu. 51. Whether any thing but metaphysics and logic can open the eyes of mathematicians, and extricate them out of their difficulties?

Qu. 52. Whether upon the received principles a quantity can, by any division or subdivision, though carried ever so far, be reduced to nothing?

Qu. 53. Whether, if the end of geometry be practice, and this practice be measuring, and we measure only assignable extensions, it will not follow that unlimited approximations completely answer the intention of geometry?

Qu. 54. Whether the same things which are now done by infinites may not be done by finite quantities? And whether this would not be a great relief to the imaginations and understandings of mathematical men?

Qu. 55. Whether those philomathematical physicians, anatomists, and dealers in the animal economy, who admit the doctrine of fluxions with an implicit faith, can with a good grace insult other men for believing what they do not comprehend?

Qu. 56. Whether the corpuscularian, experimental, and mathematical philosophy, so much cultivated in the last age, hath not too much engrossed men's attention; some part whereof it might have usefully employed?

Qu. 57. Whether from this, and other concurring causes, the minds of speculative men have not been borne downward, to the debasing and stupifying of the higher faculties? And whether we may not hence account for that prevailing narrowness and

bigotry among many who pass for men of science, their incapacity for things moral, intellectual, or theological, their proneness to measure all truths by sense and experience of animal life?

Qu. 58. Whether it be really an effect of thinking, that the same men admire the great author for his fluxions, and deride him for his religion?

Qu. 59. If certain philosophical *virtuosi* of the present age have no religion, whether it can be said to be want of faith?

Qu. 60. Whether it be not a juster way of reasoning, to recommend points of faith from their effects, than to demonstrate mathematical principles by their conclusions?

Qu. 61. Whether it be not less exceptionable to admit points above reason than contrary to reason?

Qu. 62. Whether mysteries may not with better right be allowed of in divine faith, than in human science?

Qu. 63. Whether such mathematicians as cry out against mysteries, have ever examined their own principles?

Qu. 64. Whether mathematicians, who are so delicate in religious points, are strictly scrupulous in their own science? Whether they do not submit to authority, take things upon trust, believe points inconceivable? Whether they have not their mysteries, and what is more, their repugnancies and contradictions?

Qu. 65. Whether it might not become men, who are puzzled and perplexed about their own principles, to judge warily, candidly, and modestly concerning other matters?

Qu. 66. Whether the modern analytics do not furnish a strong *argumentum ad hominem*, against the philomathematical infidels of these times?

Qu. 67. Whether it follows from the above-mentioned remarks, that accurate and just reasoning is the peculiar character of the present age? And whether the modern growth of infidelity can be ascribed to a distinction so truly valuable?

A

# DEFENCE OF FREE-THINKING

## IN MATHEMATICS.

IN ANSWER TO A PAMPHLET OF PHILALETHES CANTABRIGIENSIS, ENTITLED, GEOMETRY NO FRIEND TO INFIDELITY, OR A DEFENCE OF SIR ISAAC NEWTON AND THE BRITISH MATHEMATICIANS.

ALSO,

## AN APPENDIX,

CONCERNING MR. WALTON'S VINDICATION OF THE PRINCIPLES OF FLUXIONS AGAINST THE OBJECTIONS CONTAINED IN THE ANALYST.

Wherein it is attempted to put this controversy in such a light as that every reader may be able to judge thereof.

# A DEFENCE OF FREE-THINKING

## IN MATHEMATICS, &c.

I. WHEN I read your defence of the British mathematicians, I could not, Sir, but admire your courage in asserting with such undoubting assurance things so easily disproved. This to me seemed unaccountable, till I reflected on what you say (p. 32), when upon my having appealed to every thinking reader, whether it be possible to frame any clear conception of fluxions, you express yourself in the following manner, "Pray Sir, who are those thinking readers you appeal to? Are they geometricians or persons wholly ignorant of geometry? If the former, I leave it to them: if the latter, I ask how well are they qualified to judge of the method of fluxions?" It must be acknowledged you seem by this dilemma secure in the favour of one part of your readers, and the ignorance of the other. I am nevertheless persuaded there are fair and candid men among the mathematicians. And for those who are not mathematicians, I shall endeavour so to unveil this mystery, and put the controversy between us in such a light, as that every reader of ordinary sense and reflection may be a competent judge thereof.

II. You express an extreme surprise and concern, that I should take so much pains to depreciate one of the noblest sciences, to disparage and traduce a set of learned men whose labours so greatly conduce to the honour of this island (p. 5); to lessen the reputation and authority of Sir Isaac Newton and his followers, by showing that they are not such masters of reason as they are generally presumed to be; and to depreciate the science they profess, by demonstrating to the world, that it is not of that clearness and certainty as is commonly imagined. All which, you insist, appears very strange to you and the rest of that famous University, who plainly see of how great use mathematical learning is to mankind. Hence you take occasion to declaim on the usefulness of mathematics in the several branches, and then to redouble your surprise and amazement (p. 19, 20). To all which declamation I reply that it is quite beside the purpose. For I allow, and always have allowed, its full claim of merit to whatever is useful and true in the mathematics: but that which is not so, the less it employs men's time and thoughts,

the better. And after all you have said or can say, I believe the unprejudiced reader will think with me, that things obscure are not therefore sacred; and that it is no more a crime to canvass and detect unsound principles or false reasonings in mathematics, than in any other part of learning.

III. You are, it seems, much at a loss to understand the usefulness, or tendency, or prudence of my attempt. I thought I had sufficiently explained this in the Analyst. But for your further satisfaction shall here tell you, it is very well known, that several persons who deride faith and mysteries in religion, admit the doctrine of fluxions for true and certain. Now if it be shown that fluxions are really most incomprehensible mysteries, and that those, who believe them to be clear and scientific, do entertain an implicit faith in the author of that method; will not this furnish a fair *argumentum ad hominem* against men who reject that very thing in religion which they admit in human learning? And is it not a proper way to abate the pride and discredit the pretensions of those who insist upon clear ideas in points of faith, if it be shown that they do without them even in science?

IV. As to my timing this charge; why now and not before, since I had published hints thereof many years ago? Surely I am obliged to give no account of this: if what hath been said in the Analyst be not sufficient; suppose that I had not leisure, or that I did not think it expedient, or that I had no mind to it. When a man thinks fit to publish any thing, either in mathematics, or in any other part of learning; what avails it, or indeed what right hath any one to ask, why at this or that time; in this or that manner; upon this or that motive? Let the reader judge, if it suffice not that what I publish is true, and that I have a right to publish such truths when and how I please, in a free country.

V. I do not say, that mathematicians, as such, are infidels; or that geometry is a friend to infidelity, which you untruly insinuate, as you do many other things; whence you raise topics for invective: but I say there are certain mathematicians who are known to be so; and that there are others, who are not mathematicians, who are influenced by a regard for their authority. Some perhaps, who live in the university, may not be apprised of this; but the intelligent and observing reader, who lives in the world, and is acquainted with the humour of the times, and the characters of men, is well aware, there are too many that deride mysteries, and yet admire fluxions; who yield that faith to a mere mortal, which they deny to Jesus Christ, whose religion they make it their study and business to discredit. The owning this is not to own that men who reason well are enemies to religion, as you would represent it: on the contrary, I endeavour

to show, that such men are defective in point of reason and judgment, and that they do the very thing they would seem to despise.

VI. There are, I make no doubt, among the mathematicians many sincere believers in Jesus Christ; I know several such myself; but I addressed my Analyst to an infidel; and on very good grounds, I supposed that besides him there were other deriders of faith, who had nevertheless a profound veneration for fluxions; and I was willing to set forth the inconsistence of such men. If there be no such thing as infidels, who pretend to knowledge in the modern analysis, I own myself misinformed, and shall gladly be found in a mistake; but even in that case, my remarks upon fluxions are not the less true; nor will it follow, that I have no right to examine them on the foot of human science, even though religion were quite unconcerned, and though I had no end to serve but truth. But you are very angry (p. 13, 14) that I should enter the lists with reasoning infidels, and attack them upon their pretensions to science: and hence you take occasion to show your spleen against the clergy. I will not take upon me to say, that I know you to be a minute philosopher yourself: but I know, the minute philosophers make just such compliments as you do to our church, and are just as angry as you can be at any who undertake to defend religion by reason. If we resolve all into faith, they laugh at us and our faith: and if we attempt to reason, they are angry at us: they pretend we go out of our province, and they recommend to us a blind, implicit faith. Such is the inconsistence of our adversaries. But it is to be hoped, there will never be wanting men to deal with them at their own weapons; and to show, they are by no means those masters of reason, which they would fain pass for.

VII. I do not say, as you would represent me, that we have no better reason for our religion than you have for fluxions: but I say, that an infidel, who believes the doctrines of fluxions, acts a very inconsistent part, in pretending to reject the Christian religion, because he cannot believe what he doth not comprehend; or because he cannot assent without evidence; or because he cannot submit his faith to authority. Whether there are such infidels, I submit to the judgment of the reader; for my own part, I make no doubt of it, having seen some shrewd signs thereof myself, and having been very credibly informed thereof by others. Nor doth this charge seem the less credible, for your being so sensibly touched, and denying it with so much passion. You, indeed, do not stick to affirm, that the persons who informed me are "a pack of base, profligate, and impudent liars," p. 27. How far the reader will think fit to adopt your passions I cannot say; but I can truly say, the late celebrated Mr. Addison is one of the persons whom you are pleased to characterize in those

modest and mannerly terms. He assured me that the infidelity of a certain noted mathematician, still living, was one principal reason assigned by a witty man of those times for his being an infidel. Not that I imagine geometry disposeth men to infidelity: but that from other causes, such as presumption, ignorance, or vanity, like other men geometricians also become infidels, and that the supposed light and evidence of their science gains credit to their infidelity.

VIII. You reproach me with calumny, detraction, and artifice, p. 15; you "recommend such means as are innocent and just, rather than the criminal method of lessening or detracting from my opponents," ibid.; you accuse me of the *odium theologicum*, the intemperate zeal of divines, that I do *stare super vias antiquas*, p. 13; with much more to the same effect. For all which charge I depend on the reader's candour, that he will not take your word, but read and judge for himself. In which case he will be able to discern (though he should be no mathematician) how passionate and unjust your reproaches are, and how possible it is, for a man to cry out against calumny and practise it in the same breath. Considering how impatient all mankind are when their prejudices are looked into, I do not wonder to see you rail and rage at the rate you do. But if your own imagination be strongly shocked and moved, you cannot therefore conclude, that a sincere endeavour to free a science, so useful and ornamental to human life, from those subtleties, obscurities, and paradoxes which render it inaccessible to most men, will be thought a criminal undertaking by such as are in their right mind. Much less can you hope that an illustrious seminary of learned men, which hath produced so many free-spirited inquirers after truth, will at once enter into your passions and degenerate into a nest of bigots.

IX. I observe upon the inconsistency of certain infidel analysts. I remark some defects in the principles of the modern analysis. I take the liberty decently to dissent from Sir Isaac Newton. I propose some helps to abridge the trouble of mathematical studies and render them more useful. What is there in all this that should make you declaim on the usefulness of practical mathematics? that should move you to cry out "Spain, inquisition, *odium theologicum?*" By what figure of speech do you extend what is said of the modern analysis, to mathematics in general, or what is said of mathematical infidels to all mathematicians, or the confuting an error in science to burning or hanging the authors? But it is nothing new or strange, that men should choose to indulge their passions, rather than quit their opinions, how absurd soever. Hence the frightful visions and tragical uproars of bigoted men, be the subject of their bigotry what it will. A very remarkable instance of this you

give, p. 27, where, upon my having said that a deference to certain mathematical infidels, as I was credibly informed, had been one motive to infidelity, you ask with no small emotion, "For God's sake are we in England or in Spain? Is this the language of a familiar who is whispering an inquisitor?" &c. And the page before you exclaim in the following words: "Let us burn or hang up all the mathematicians in Great Britain, or halloo the mob upon them to tear them to pieces, every mother's son of them, *Tros Rutulusve fuat*, laymen or clergymen, &c. Let us dig up the bodies of Dr. Barrow and Sir Isaac Newton, and burn them under the gallows," &c.

X. The reader need not be a mathematician to see how vain all this tragedy of yours is. And if he be as thoroughly satisfied as I am, that the cause of fluxions cannot be defended by reason, he will be as little surprised as I am to see you betake yourself to the arts of all bigoted men, raising terror and calling in the passions to your assistance. Whether those rhetorical flourishes about the inquisition and the galleys are not quite ridiculous, I leave to be determined by the reader. Who will also judge (though he should not be skilled in geometry) whether I have given the least grounds for this and a world of such like declamation? And whether I have not constantly treated those celebrated writers with all proper respect, though I take the liberty in certain points to differ from them?

XI. As I heartily abhor an inquisition in faith, so I think you have no right to erect one in science. At the time of writing your defence you seem to have been overcome with passion: but now you may be supposed cool, I desire you to reflect whether it be not wrote in the true spirit of an inquisitor. Whether this becomes a person so exceedingly delicate himself upon that point? And whether your brethren the Analysts will think themselves honoured or obliged by you, for having defended their doctrine, in the same manner as any declaiming bigot would defend transubstantiation? The same false colours, the same intemperate sallies, and the same indignation against common sense!

XII. In a matter of mere science, where authority hath nothing to do, you constantly endeavour to overbear me with authorities, and load me with envy. If I see a sophism in the writings of a great author, and, in compliment to his understanding, suspect he could hardly be quite satisfied with his own demonstration: this sets you on declaiming for several pages. It is pompously set forth as a criminal method of detracting from great men, as a concerted project to lessen their reputation, as making them pass for impostors. If I publish my free thoughts, which I have as much right to publish as any other man, it is imputed to rashness and vanity and the love of opposition. Though perhaps my late publication, of what had been hinted twenty-five

years ago, may acquit me of this charge in the eyes of an impartial reader. But when I consider the perplexities that beset a man who undertakes to defend the doctrine of fluxions, I can easily forgive your anger.

XIII. Two sorts of learned men there are: one who candidly seek truth by rational means. These are never averse to have their principles looked into, and examined by the test of reason. Another sort there is who learn by rote a set of principles and a way of thinking which happen to be in vogue. These betray themselves by their anger and surprise whenever their principles are freely canvassed. But you must not expect that your reader will make himself a party to your passions or your prejudices. I freely own that Sir Isaac Newton hath shown himself an extraordinary mathematician, a profound naturalist, a person of the greatest abilities and erudition. Thus far I can readily go, but I cannot go to the lengths that you do. I shall never say of him as you do, *Vestigia pronus adoro* (p. 70). This same adoration that you pay to him I will pay only to truth.

XIV. You may indeed yourself be an idolater of whom you please: but then you have no right to insult and exclaim at other men because they do not adore your idol. Great as Sir Isaac Newton was, I think he hath, on more occasions than one, shown himself not to be infallible. Particularly his demonstration of the doctrine of fluxions I take to be defective, and I cannot help thinking that he was not quite pleased with it himself. And yet this doth not hinder but the method may be useful, considered as an art of invention. You, who are a mathematician, must acknowledge there have been divers such methods admitted in mathematics, which are not demonstrative. Such, for instance, are the inductions of Dr. Wallis in his Arithmetic of Infinites, and such, what Harriot and, after him, Descartes, have wrote concerning the roots of affected equations. It will not, nevertheless, thence follow that those methods are useless; but only, that they are not to be allowed of as premises in a strict demonstration.

XV. No great name upon earth shall ever make me accept things obscure for clear, or sophisms for demonstrations. Nor may you ever hope to deter me from freely speaking what I freely think, by those arguments *ab invidia* which at every turn you employ against me. You represent yourself (p. 52) as a man whose highest ambition is in the lowest degree to imitate Sir Isaac Newton. It might perhaps have suited better with your appellation of Philalethes, and been altogether as laudable, if your highest ambition had been to discover truth. Very consistently with the character you give of yourself, you speak of it as a sort of crime (p. 70) to think it possible you should ever see further, or go beyond Sir Isaac Newton. And I am persuaded

you speak the sentiments of many more besides yourself. But there are others who are not afraid to sift the principles of human science, who think it no honour to imitate the greatest man in his defects, who even think it no crime to desire to know, not only beyond Sir Isaac Newton, but beyond all mankind. And whoever thinks otherwise, I appeal to the reader whether he can properly be called a philosopher.

XVI. Because I am not guilty of your mean idolatry, you inveigh against me as a person conceited of my own abilities; not considering that a person of less abilities may know more on a certain point than one of greater; not considering that a purblind eye, in a close and narrow view, may discern more of a thing than a much better eye in a more extensive prospect; not considering that this is to fix a *ne plus ultra*, to put a stop to all future inquiries; lastly, not considering that this is in fact, so much as in you lies, converting the republic of letters into an absolute monarchy, that it is even introducing a kind of philosophic popery among a free people.

XVII. I have said (and I venture still to say) that a fluxion is incomprehensible: that second, third, and fourth fluxions are yet more incomprehensible: that it is not possible to conceive a simple infinitesimal, that it is yet less possible to conceive an infinitesimal of an infinitesimal, and so onward.* What have you to say in answer to this? Do you attempt to clear up the notion of a fluxion or a difference? Nothing like it; you only assure me (upon your bare word) from your own experience, and that of several others whom you could name, that "the doctrine of fluxions may be clearly conceived and distinctly comprehended; and that if I am puzzled about it and do not understand it, yet others do." But can you think, Sir, I shall take your word when I refuse to take your master's?

XVIII. Upon this point every reader of common sense may judge as well as the most profound mathematician. The simple apprehension of a thing defined is not made more perfect by any subsequent progress in mathematics. What any man evidently knows he knows as well as you or Sir Isaac Newton. And every one can know whether the object of this method be (as you would have us think) clearly conceivable. To judge of this no depth of science is requisite, but only a bare attention to what passes in his own mind. And the same is to be understood of all definitions in all sciences whatsoever. In none of which can it be supposed, that a man of sense and spirit will take any definition or principle upon trust, without sifting it to the bottom, and trying how far he can or he cannot conceive it. This is the course I have taken and shall take, however you and your bre-

* Analyst, sect. iv., v., vi., &c.

thren may declaim against it, and place it in the most invidious light.

XIX. It is usual with you to admonish me to look over a second time, to consult, examine, weigh the words of Sir Isaac. In answer to which I will venture to say that I have taken as much pains as (I sincerely believe) any man living, to understand that great author, and to make sense of his principles. No industry, nor caution, nor attention, I assure you, have been wanting on my part. So that, if I do not understand him, it is not my fault but my misfortune. Upon other subjects you are pleased to compliment me with depth of thought and uncommon abilities (p. 5 and 84). But I freely own I have no pretence to those things. The only advantage I pretend to is, that I have always thought and judged for myself. And, as I never had a master in mathematics, so I fairly followed the dictates of my own mind in examining and censuring the authors I read upon that subject with the same freedom that I used upon any other; taking nothing upon trust, and believing that no writer was infallible. And a man of moderate parts, who takes this painful course in studying the principles of any science, may be supposed to walk more surely than those of greater abilities, who set out with more speed and less care.

XX. What I insist on is, that the idea of a fluxion simply considered is not at all improved or amended by any progress, though ever so great, in the analysis: neither are the demonstrations of the general rules of that method at all cleared up by applying them. The reason of which is, because in operating or calculating, men do not return to contemplate the original principles of the method, which they constantly presuppose, but are employed in working, by notes and symbols, denoting the fluxions supposed to have been at first explained, and according to rules supposed to have been at first demonstrated. This I say to encourage those who are not far gone in these studies, to use intrepidly their own judgment, without a blind or a mean deference to the best of mathematicians, who are no more qualified than they are to judge of the simple apprehension, or the evidence of what is delivered in the first elements of the method; men by further and frequent use or exercise becoming only more accustomed to the symbols and rules, which doth not make either the foregoing notions more clear, or the foregoing proofs more perfect. Every reader of common sense, that will but use his faculties, knows as well as the most profound analyst what idea he frames or can frame of velocity without motion, or of motion without extension, of magnitude which is neither finite nor infinite, or of a quantity having no magnitude which is yet divisible, of a figure where there is no space, of proportion between nothings, or of a real product from nothing multiplied by something. He

need not be far gone in geometry to know, that obscure principles are not to be admitted in demonstration: that if a man destroys his own hypothesis, he at the same time destroys what was built upon it: that error in the premises, not rectified, must produce error in the conclusion.

XXI. In my opinion the greatest men have their prejudices. Men learn the elements of science from others: and every learner hath a deference more or less to authority, especially the young learners, few of that kind caring to dwell long upon principles, but inclining rather to take them upon trust: and things early admitted by repetition become familiar: and this familiarity at length passeth for evidence. Now to me it seems there are certain points tacitly admitted by mathematicians, which are neither evident nor true. And such points or principles ever mixing with their reasonings do lead them into paradoxes and perplexities. If the great author of the fluxionary method was early imbued with such notions, it would only show he was a man. And if by virtue of some latent error in his principles a man be drawn into fallacious reasonings, it is nothing strange that he should take them for true: and, nevertheless, if, when urged by perplexities and uncouth consequences, and driven to arts and shifts, he should entertain some doubt thereof, it is no more than one may naturally suppose might befall a great genius, grappling with an insuperable difficulty: which is the light in which I have placed Sir Isaac Newton.* Hereupon you are pleased to remark, that I represent the great author, not only as a weak, but an ill man, as a deceiver and an impostor. The reader will judge how justly.

XXII. As to the rest of your colourings and glosses, your reproaches, and insults, and outcries, I shall pass them over, only desiring the reader not to take your word, but read what I have written, and he will want no other answer. It hath been often observed, that the worst cause produceth the greatest clamour; and, indeed, you are so clamorous throughout your defence, that the reader, although he should be no mathematician, provided he understands common sense and hath observed the ways of men, will be apt to suspect that you are in the wrong. It should seem, therefore, that your brethren the analysts are but little obliged to you, for this new method of declaiming in mathematics. Whether they are more obliged by your reasoning I shall now examine.

XXIII. You ask me (p. 32) where I find Sir Isaac Newton using such expressions as the velocities of velocities, the second, third, and fourth velocities, &c. This you set forth as a pious fraud and unfair representation. I answer, that if, according to Sir Isaac Newton, a fluxion be the velocity of an increment,

* Analyst, sect. xviii.

then, according to him, I may call the fluxion of a fluxion the velocity of a velocity. But for the truth of the antecedent see his Introduction to the Quadrature of Curves, where his own words are, *Motuum vel incrementorum velocitates nominando fluxiones.* See also the second lemma of the second book of his Mathematical Principles of Natural Philosophy, where he expresseth himself in the following manner, *Velocitates incrementorum ac decrementorum quas etiam, motus, mutationes, et fluxiones quantitatum nominare licet.* And that he admits fluxions of fluxions, or second, third, fourth fluxions, &c.; see his Treatise of the Quadrature of Curves. I ask now, is it not plain, that if a fluxion be a velocity, then the fluxion of a fluxion may agreeably thereunto be called the velocity of a velocity? In like manner, if by a fluxion is meant a nascent augment, will it not then follow, that the fluxion of a fluxion, or second fluxion, is the nascent augment of a nascent augment? Can any thing be plainer. Let the reader now judge who is unfair.

XXIV. I had observed, that the great author had proceeded illegitimately, in obtaining the fluxion or moment of the rectangle of two flowing quantities; and that he did not fairly get rid of the rectangle of the moments. In answer to this you allege, that the error arising from the omission of such rectangle (allowing it to be an error) is so small that it is insignificant. This you dwell upon, and exemplify to no other purpose but to amuse your reader and mislead him from the question; which, in truth, is not concerning the accuracy of computing or measuring in practice, but concerning the accuracy of the reasoning in science. That this was really the case, and that the smallness of the practical error no wise concerns it, must be so plain to any one who reads the Analyst, that I wonder how you could be ignorant of it.

XXV. You would fain persuade your reader, that I make an absurd quarrel against errors of no significancy in practice, and represent mathematicians as proceeding blindfold in their approximations, in all which I cannot help thinking there is, on your part, either great ignorance or great disingenuity. If you mean to defend the reasonableness and use of approximations, or of the method of indivisibles, I have nothing to say. But then you must remember this is not the doctrine of fluxions: it is none of that analysis with which I am concerned. That I am far from quarrelling at approximations in geometry, is manifest from the thirty-third and fifty-third queries in the Analyst. And that the method of fluxions pretends to somewhat more than the method of indivisibles is plain; because Sir Isaac disclaims this method as not geometrical.* And that the method

* See the scholium at the end of the first section. Lib. i. Phil. Nat. Prin. Math.

of fluxions is supposed accurate in geometrical rigour is manifest, to whoever considers what the great author writes about it; especially in his introduction to the Quadrature of Curves, where he saith, "In rebus mathematicis errores quam minimi non sunt contemnendi." Which expression you have seen quoted in the Analyst, and yet you seem ignorant thereof, and, indeed, of the very end and design of the great author in this his invention of fluxions.

XXVI. As oft as you talk of finite quantities inconsiderable in practice, Sir Isaac disowns your apology. *Cave*, saith he, *intellexeris finitas*. And although quantities less than sensible may be of no account in practice, yet none of your masters, nor will even you yourself, venture to say, they are of no account in theory and in reasoning. The application in gross practice is not the point questioned, but the rigour and justness of the reasoning. And it is evident, that be the subject ever so little, or ever so inconsiderable, this doth not hinder but that a person treating thereof may commit very great errors in logic, which logical errors are in no wise to be measured by the sensible or practical inconveniences thence arising, which, perchance, may be none at all. It must be owned, that after you have misled and amused your less qualified reader (as you call him), you return to the real point in controversy, and set yourself to justify Sir Isaac's method of getting rid of the above-mentioned rectangle. And here I must entreat the reader to observe how fairly you proceed.

XXVII. First then you affirm (p. 44), "that, neither in the demonstration of the rule for finding the fluxion of the rectangle of two flowing quantities, nor in any thing preceding or following it, is any mention, so much as once, made of the increment of the rectangle of such flowing quantities." Now I affirm the direct contrary. For in the very passage by you quoted in this same page, from the first case of the second lemma of the second book of Sir Isaac's principles, beginning with "Rectangulum quodvis motu perpetuo auctum," and ending with "igitur laterum incrementis totis $a$ et $b$, generatur rectanguli incrementum $a$ B $x$ $b$ A. Q. E. D." In this very passage I say, is express mention made of the increment of such rectangle. As this is matter of fact, I refer it to the reader's own eyes. Of what rectangle have we here the increment? Is it not plainly of that whose sides have $a$ and $b$ for their *incrementa tota*, that is, of A B. Let any reader judge whether it be not plain from the words, the sense, and the context, that the great author in the end of his demonstration understands his *incrementum* as belonging to the *rectangulum quodvis* at the beginning. Is not the same also evident from the very lemma itself prefixed to the demonstration? The sense whereof is, (as the author there

explains it,) that if the moments of the flowing quantities A and B are called *a* and *b*, then the *momentum vel mutatio geniti rectanguli* A B will be *a* B x *b* A. Either therefore the conclusion of the demonstration is not the thing which was to be demonstrated, or the *rectanguli incrementum a* B x *b* A belongs to the rectangle A B.

XXVIII. All this is so plain that nothing can be more so; and yet you would fain perplex this plain case by distinguishing between an increment and a moment. But it is evident to every one, who has any notion of demonstration, that the *incrementum* in the conclusion must be the *momentum* in the lemma; and to suppose it otherwise is no credit to the author. It is in effect supposing him to be one who did not know what he would demonstrate. But let us hear Sir Isaac's own words: *Earum (quantitatum scilicet fluentium) incrementa vel decrementa momentanea sub nomine momentorum intelligo.* And you observe yourself that he useth the word *moment* to signify either an increment or decrement. Hence with an intention to puzzle me, you propose the increment and decrement of A B, and ask which of these I would call the moment? The case, you say, is difficult. My answer is very plain and easy, to wit, either of them. You, indeed, make a different answer, and from the author's saying that by a moment he understands either the momentaneous increment or decrement of the flowing quantities, you would have us conclude, by a very wonderful inference, that his moment is neither the increment nor decrement thereof. Would it not be as good an inference, because a number is either odd or even, to conclude it is neither? Can any one make sense of this? Or can even yourself hope that this will go down with the reader, how little soever qualified? It must be owned, you endeavour to obtrude this inference on him, rather by mirth and humour than by reasoning. You are merry, I say, and (p. 46) represent the two mathematical quantities as pleading their rights, as tossing up cross and pile, as disputing amicably. You talk of their claiming preference, their agreeing, their boyishness, and their gravity. And after this ingenious digression you address me in the following words: "Believe me there is no remedy, you must acquiesce." But my answer is that I will neither believe you nor acquiesce; there is a plain remedy in common sense; and that to prevent surprise I desire the reader always to keep the controverted point in view, to examine your reasons, and be cautious how he takes your word, but most of all when you are positive, or eloquent, or merry.

XXIX. A page or two after, you very candidly represent your case to be that of an ass between two bottles of hay: it is your own expression. The cause of your perplexity is that you know not whether the velocity of A B increasing or of A B

decreasing is to be esteemed the fluxion, or proportional to the moment of the rectangle. My opinion, agreeably to what hath been premised, is that either may be deemed the fluxion. But you tell us (p. 49) "that you think, the venerable ghost of Sir Isaac Newton whispers you, the velocity you seek for is neither the one nor the other of these, but is the velocity which the flowing rectangle hath, not while it is greater or less than A B, but at that very instant of time that it is A B." For my part, in the rectangle A B considered simply in itself, without either increasing or diminishing, I can conceive no velocity at all. And if the reader is of my mind, he will not take either your word, or even the word of a ghost how venerable soever, for velocity without motion. You proceed and tell us that, in like manner, the moment of the rectangle is neither its increment or decrement. This you would have us believe on the authority of his ghost, in direct opposition to what Sir Isaac himself asserted when alive. *Incrementa* (saith he) *vel decrementa momentanea sub nomine momentorum intelligo: ita ut incrementa pro momentis additiis seu affirmativis, ac decrementa pro subductitiis seu negativis abeantur.** I will not, in your style, bid the reader believe me, but believe his eyes.

XXX. To me it verily seems, that you have undertaken the defence of what you do not understand. To mend the matter, you say, "you do not consider A B as lying at either extremity of the moment, but as extended to the middle of it; as having acquired the one half of the moment, as being about to acquire the other; or as having lost one half of it, and being about to lose the other." Now, in the name of truth, I entreat you to tell what this moment is, to the middle whereof the rectangle is extended? This moment, I say, which is acquired, which is lost, which is cut in two, or distinguished into halves? Is it a finite quantity, or an infinitesimal, or a mere limit, or nothing at all? Take it in what sense you will, I cannot make your defence either consistent or intelligible. For if you take it in either of the two former senses, you contradict Sir Isaac Newton. And if you take it in either of the latter, you contradict common sense; it being plain, that what hath no magnitude, or is no quantity, cannot be divided. And here I must entreat the reader to preserve his full freedom of mind entire, and not weakly suffer his judgment to be overborne by your imagination and your prejudices, by great names and authorities, by ghosts and visions, and above all by that extreme satisfaction and complacency with which you utter your strange conceits; if words without a meaning may be called so. After having given this unintelligible account, you ask with your accustomed air, "What say you, sir?

* Princip. Phil. Nat., lib. ii. lem. ii.

Is this a just and legitimate reason for Sir Isaac's proceeding as he did? I think you must acknowledge it to be so." But alas! I acknowledge no such thing. I find no sense or reason in what you say. Let the reader find it if he can.

XXXI. In the next place (p. 50) you charge me with want of caution. "Inasmuch (say you) as that quantity which Sir Isaac Newton, through his whole lemma, and all the several cases of it, constantly calls a *moment*, without confining it to be either an increment or decrement, is by you inconsiderately and arbitrarily, and without any shadow of reason given, supposed and determined to be an increment." To which charge I reply that it is as untrue as it is peremptory. For that, in the foregoing citation from the first case of Sir Isaac's lemma, he expressly determines it to be an increment. And as this particular instance or passage was that which I objected to, it was reasonable and proper for me to consider the moment in that same light. But take it increment or decrement as you will, the objections still lie, and the difficulties are equally insuperable. You then proceed to extol the great author of the fluxionary method, and to bestow some *brusqueries* upon those who unadvisedly dare to differ from him. To all which I shall give no answer.

XXXII. Afterwards to remove (as you say) all scruple and difficulty about this affair, you observe that the moment of the rectangle determined by Sir Isaac Newton, and the increment of the rectangle determined by me, are perfectly and exactly equal, supposing $a$ and $b$ to be diminished *ad infinitum*: and for proof of this, you refer to the first lemma of the first section of the first book of Sir Isaac's principles. I answer, that if $a$ and $b$ are real quantities, then $a\,b$ is something, and consequently makes a real difference: but if they are nothing, then the rectangles whereof they are coefficients become nothing likewise: and consequently the *momentum* or *incrementum*, whether Sir Isaac's or mine, are in that case nothing at all. As for the above-mentioned lemma, which you refer to, and which you wish I had consulted sooner, both for my own sake and for yours; I tell you I had long since consulted and considered it. But I very much doubt whether you have sufficiently considered that lemma, its demonstration and its consequences. For, however that way of reasoning may do in the method of exhaustions, where quantities less than assignable are regarded as nothing; yet for a fluxionist writing about momentums, to argue that quantities must be equal because they have no assignable difference, seems the most injudicious step that could be taken: it is directly demolishing the very doctrine you would defend. For it will thence follow, that all homogeneous momentums are equal, and consequently the velocities, mutations, or fluxions proportional thereto, are all likewise equal. There is, therefore, only one proportion of equality

throughout, which at once overthrows the whole system you undertake to defend. Your moments, I say, not being themselves assignable quantities, their differences cannot be assignable: and if this be true, by that way of reasoning it will follow, they are all equal, upon which supposition you cannot make one step in the method of fluxions. It appears from hence, how unjustly you blame me (p. 32) for omitting to give any account of that first section of the first book of the Principia, wherein (you say) the foundation of the method of fluxions is geometrically demonstrated and largely explained, and difficulties and objections against it are clearly solved. All which is so far from being true, that the very first and fundamental lemma of that section is incompatible with, and subversive of the doctrine of fluxions. And, indeed, who sees not that a demonstration *ad absurdum more veterum*, proceeding on a supposition that every difference must be some given quantity, cannot be admitted in, or consist with, a method wherein quantities, less than any given, are supposed really to exist, and be capable of division?

XXXIII. The next point you undertake to defend is that method for obtaining a rule to find the fluxion of any power of a flowing quantity, which is delivered in his introduction to the Quadratures, and considered in the Analyst.* And here the question between us is, whether I have rightly represented the sense of those words, *evanescant jam augmenta illa*, in rendering them, "let the increments vanish," i. e. let the increments be nothing, or let there be no increments. This you deny, but, as your manner is, instead of giving a reason you declaim. I, on the contrary, affirm, the increments must be understood to be quite gone and absolutely nothing at all. My reason is, because without that supposition you can never bring the quantity or expression $n\ x^{n-1} + \frac{nn-n}{2}\ o\ x^{n-2}$ + &c., down to $n\ x^{n-1}$, the very thing aimed at by supposing the evanescence. Say whether this be not the truth of the case? Whether the former expression is not to be reduced to the latter? And whether this can possibly be done so long as $o$ is supposed a real quantity? I cannot indeed say you are scrupulous about your affirmations, and yet I believe that even you will not affirm this; it being most evident, that the product of two real quantities is something real; and that nothing real can be rejected either according to the ἀκρίβεια of geometry, or according to Sir Isaac's own principles; for the truth of which I appeal to all who know any thing of these matters. Further, by *evanescant* must either be meant let them (the increments) vanish and become nothing, in the obvious sense, or else let them become infinitely small. But

* Sect. xiii. xiv., &c.

that this latter is not Sir Isaac's sense is evident from his own words in the very same page, that is, in the last of his introduction to the Quadratures, where he expressly saith, *Volui ostendere quod in methodo fluxionum non opus sit figuras infinite parvas in geometriam introducere.* Upon the whole, you seem to have considered this affair so very superficially, as greatly to confirm me in the opinion you are so angry with, to wit, that Sir Isaac's followers are much more eager in applying his method, than accurate in examining his principles. You raise a dust about evanescent augments which may perhaps amuse and amaze your reader, but I am much mistaken if it ever instructs or enlightens him. For, to come to the point, those evanescent augments either are real quantities, or they are not. If you say they are; I desire to know, how you get rid of the rejectaneous quantity? If you say they are not, you indeed get rid of those quantities in the composition whereof they are coefficients; but then you are of the same opinion with me, which opinion you are pleased to call (p. 58) a most palpable, inexcusable, and unpardonable blunder, although it be a truth most palpably evident.

XXXIV. Nothing, I say, can be plainer to any impartial reader, than that by the evanescence of augments, in the above cited passage, Sir Isaac means their being actually reduced to nothing. But to put it out of all doubt, that this is the truth, and to convince even you, who show so little disposition to be convinced, I desire you to look into his *Analysis per Æquationes Infinitas,* p. 20, where, in his preparation for demonstrating the first rule for the squaring of simple curves, you will find that on a parallel occasion, speaking of an augment which is supposed to vanish, he interprets the word *evanescere* by *esse nihil.* Nothing can be plainer than this, which at once destroys your defence. And yet, plain as it is, I despair of making you acknowledge it; though I am sure you feel it, and the reader, if he useth his eyes, must see it. The words *evanescere sive esse nihil* do (to use your own expression) stare us in the face. Lo! this is what you call (p. 56), "so great so unaccountable, so horrid, so truly Bœotian a blunder," that, according to you, it was not possible Sir Isaac Newton could be guilty of it. For the future, I advise you to be more sparing of hard words: since, as you incautiously deal them about, they may chance to light on your friends as well as your adversaries. As for my part, I shall not retaliate. It is sufficient to say you are mistaken. But I can easily pardon your mistakes. Though, indeed, you tell me on this very occasion, that I must expect no quarter from Sir Isaac's followers. And I tell you that I neither expect nor desire any. My aim is truth. My reasons I have given. Confute them, if you can. But think not to overbear me either with authorities or harsh words. The latter will recoil upon yourselves: the former, in a matter of science, are

of no weight with indifferent readers; and as for bigots, I am not concerned about what they say or think.

XXXV. In the next place you proceed to declaim upon the following passage taken from the seventeenth section of the Analyst. "Considering the various arts and devices used by the great author of the fluxionary method: in how many lights he placeth his fluxions: and in what different ways he attempts to demonstrate the same point: one would be inclined to think, he was himself suspicious of the justness of his own demonstrations." This passage you complain of as very hard usage of Sir Isaac Newton. You declaim copiously, and endeavour to show that placing the same point in various lights is of great use to explain it; which you illustrate with much rhetoric. But the fault of that passage is not the hard usage it contains: but on the contrary, that it is too modest, and not so full and expressive of my sense, as perhaps it should have been. Would you like it better if I should say, the various inconsistent accounts, which this great author gives of his momentums and his fluxions, may convince every intelligent reader that he had no clear and steady notions of them, without which there can be no demonstration? I own frankly that I see no clearness or consistence in them. You tell me indeed, in Miltonic verse, that the fault is in my own eyes,

> So thick a drop serene has quenched their orbs,
> Or dim suffusion veiled;

at the same time you acknowledge yourself obliged for those various lights, which have enabled you to understand his doctrine. But as for me, who do not understand it, you insult me, saying, "For God's sake what is it you are offended at, who do not still understand him?" May not I answer, that I am offended for this very reason; because I cannot understand him or make sense of what he says? You say to me, that I am all in the dark. I acknowledge it, and entreat you, who see so clearly, to help me out.

XXXVI. You, Sir, with the bright eyes, be pleased to tell me, whether Sir Isaac's momentum be a finite quantity, or an infinitesimal, or a mere limit? If you say a finite quantity: be pleased to reconcile this with what he saith in the scholium of the second lemma of the first section of the first book of his Principles; "Cave intelligas quantitates magnitudine determinatas, sed cogita semper diminuendas sine limite." If you say, an infinitesimal: reconcile this with what is said in his introduction to the Quadratures: "Volui ostendere quod in methodo fluxionum non opus sit figuras infinite parvas in geometriam inducere." If you should say, it is a mere limit, be pleased to reconcile this with what we find in the first case of the second lemma in the second book of his principles: "Ubi de lateribus A et B deerant momentorum

dimidia," &c., where the moments are supposed to be divided. I should be very glad, a person of such a luminous intellect would be so good as to explain, whether by fluxions we are to understand the nascent or evanescent quantities themselves, or their motions, or their velocities, or simply their proportions; and having interpreted them in what sense you will, that you would then condescend to explain the doctrine of second, third, and fourth fluxions, and show it to be consistent with common sense if you can. You seem to be very sanguine when you express yourself in the following terms. "I do assure you, Sir, from my own experience, and that of many others whom I could name, that the doctrine may be clearly conceived and distinctly comprehended," p. 31. And it may be uncivil not to believe what you so solemnly affirm, from your own experience. But I must needs own, I should be better satisfied of this, if, instead of entertaining us with your rhetoric, you would vouchsafe to reconcile those difficulties, and explain those obscure points above mentioned. If either you, or any one of those many whom you could name, will but explain to others what you so clearly conceive yourselves, I give you my word that several will be obliged to you, who, I may venture to say, understand those matters no more than myself. But, if I am not much mistaken, you and your friends will modestly decline this task.

XXXVII. I have long ago done what you so often exhort me to do, diligently read and considered the several accounts of this doctrine given by the great author in different parts of his writings: and upon the whole I could never make it out to be consistent and intelligible. I was even led to say, "that one would be inclined to think, he was himself suspicious of the justness of his own demonstrations: and that he was not enough pleased with any one notion steadily to adhere to it." After which I added, "Thus much is plain, that he owned himself satisfied concerning certain points, which nevertheless he could not undertake to demonstrate to others." See the seventeenth section of the Analyst. It is one thing when a doctrine is placed in various lights: and another, when the principles and notions are shifted. When new devices are introduced and substituted for others, a doctrine, instead of being illustrated, may be explained away. Whether there be not something of this in the present case I appeal to the writings of the great author. His *methodus rationum primarum et ultimarum*, his second lemma in the second book of his principles, his introduction and treatise of the quadrature of curves. In all which, it appears to me, there is not one uniform doctrine explained and carried throughout the whole, but rather sundry inconsistent accounts of this new method, which still grows more dark and confused the more it is handled: I could not help thinking, the greatest genius might lie

under the influence of false principles; and where the object and notions were exceeding obscure, he might possibly distrust even his own demonstrations. "At least thus much seemed plain, that Sir Isaac had sometime owned himself satisfied, where he could not demonstrate to others;" in proof whereof I mentioned his letter to Mr. Collins. Hereupon you tell me, "there is a great deal of difference between saying, I cannot undertake to prove a thing, and I will not undertake it." But in answer to this, I desire you will be pleased to consider, that I was not making a precise extract out of that letter, in which the very words of Sir Isaac should alone be inserted. But I made my own remark and inference, from what I remembered to have read in that letter; where, speaking of a certain mathematical matter, Sir Isaac expresseth himself in the following terms. "It is plain to me by the fountain I draw it from, though I will not undertake to prove it to others." Now whether my inference may not be fairly drawn from those words of Sir Isaac Newton; and whether the difference as to the sense be so great between *will* and *can* in that particular case, I leave to be determined by the reader.

XXXVIII. In the next paragraph you talk big but prove nothing. You speak of driving out of entrenchments, of sallying and attacking and carrying by assault; of slight and untenable works, of a new-raised and undisciplined militia, and of veteran regular troops. Need the reader be a mathematician to see the vanity of this paragraph? After this you employ (p. 65) your usual colouring, and represent the great author of the method of fluxions "as a good old gentleman fast asleep, and snoring in his easy chair; while dame Fortune is bringing him her apron full of beautiful theorems and problems, which he never knows or thinks of." This you would have pass for a consequence of my notions. But I appeal to all those who are ever so little knowing in such matters, whether there are not divers fountains of experiment, induction, and analogy, whence a man may derive and satisfy himself concerning the truth of many points in mathematics and mechanical philosophy, although the proofs thereof afforded by the modern analysis should not amount to demonstration? I further appeal to the conscience of all the most profound mathematicians, whether they can, with perfect acquiescence of mind, free from all scruple, apply any proposition merely upon the strength of a demonstration involving second or third fluxions, without the aid of any such experiment or analogy or collateral proof whatsoever? Lastly, I appeal to the reader's own heart, whether he cannot clearly conceive a medium between being fast asleep and demonstrating? But you will have it, that I represent Sir Isaac's conclusions as coming out right, because one error is compensated by another contrary and equal error, which perhaps he never knew himself nor thought of: that by a twofold

mistake he arrives, though not at science, yet at truth: that he proceeds blindfold, &c. All which is untruly said by you, who have misapplied to Sir Isaac what was intended for the Marquis de l'Hospital and his followers, for no other end (as I can see) but that you may have an opportunity to draw that ingenious portraiture of Sir Isaac Newton and dame Fortune, as will be manifest to whoever reads the Analyst.

XXXIX. You tell me, p. 70, if I think fit to persist in asserting, "that this affair of a double error is entirely a new discovery of my own, which Sir Isaac and his followers never knew nor thought of, that you have unquestionable evidence to convince me of the contrary, and that all his followers are already apprised, that this very objection of mine was long since foreseen, and clearly and fully removed by Sir Isaac Newton in the first section of the first book of his *Principia*." All which I do as strongly deny as you affirm. And I do aver, that this is an unquestionable proof of the matchless contempt which you, Philalethes, have for truth. And I do here publicly call upon you, to produce that evidence which you pretend to have, and to make good that fact which you so confidently affirm. And, at the same time, I do assure the reader that you never will, nor can.

XL. If you defend Sir Isaac's notions as delivered in his *Principia*, it must be on the rigorous foot of rejecting nothing, neither admitting nor casting away infinitely small quantities. If you defend the Marquis, whom you also style your master, it must be on the foot of admitting that there are infinitesimals, that they may be rejected, that they are nevertheless real quantities, and themselves infinitely subdivisible. But you seem to have grown giddy with passion, and in the heat of controversy to have mistaken and forgot your part. I beseech you, Sir, to consider, that the Marquis (whom alone, and not Sir Isaac, this double error in finding the subtangent doth concern) rejects indeed infinitesimals, but not on the foot that you do, to wit, their being inconsiderable in practical geometry or mixed mathematics. But he rejects them in the accuracy of speculative knowledge: in which respect there may be great logical errors, although there should be no sensible mistake in practice: which, it seems, is what you cannot comprehend. He rejects them likewise in virtue of a postulatum, which I venture to call rejecting them without ceremony. And though he inferreth a conclusion accurately true, yet he doth it, contrary to the rules of logic, from inaccurate and false premises. And how this comes about, I have at large explained in the Analyst, and shown, in that particular case of tangents, that the rejectaneous quantity might have been a finite quantity of any given magnitude, and yet the conclusion have come out exactly the same way; and consequently, that the truth of this method doth not depend on the reason assigned by the

Marquis, to wit, the postulatum for throwing away infinitesimals; and therefore that he and his followers acted blindfold, as not knowing the true reason for the conclusions coming out accurately right, which I show to have been the effect of a double error.

XLI. This is the truth of the matter, which you shamefully misrepresent and declaim upon, to no sort of purpose but to amuse and mislead your reader. For which conduct of yours throughout your remarks, you will pardon me if I cannot otherwise account, than from a secret hope, that the reader of your defence would never read the Analyst. If he doth, he cannot but see what an admirable method you take to defend your cause: how, instead of justifying the reasoning, the logic, or the theory of the case specified, which is the real point, you discourse of sensible and practical errors: and how all this is a manifest imposition upon the reader. He must needs see that I have expressly said, "I have no controversy except only about your logic and method: that I consider how you demonstrate; what objects you are conversant about; and whether you conceive them clearly? That I have often expressed myself to the same effect, desiring the reader to remember, that I am only concerned about the way of coming at your theorems, whether it be legitimate or illegitimate, clear or obscure, scientific or tentative: that I have on this very occasion, to prevent all possibility of mistake, repeated and insisted, that I consider the geometrical analyst as a logician, i. e. so far forth as he reasons and argues; and his mathematical conclusions, not in themselves, but in their premises; not as true or false, useful or insignificant, but as derived from such principles, and by such inferences."* You affirm (and indeed what can you not affirm?) that the difference between the true subtangent and that found without any compensation is absolutely nothing at all. I profess myself of a contrary opinion. My reason is, because nothing cannot be divided into parts. But this difference is capable of being divided into any, or into more than any given number of parts; for the truth of which consult the Marquis de l'Hospital. And, be the error in fact or in practice ever so small, it will not thence follow that the error in reasoning, which is what I am alone concerned about, is one whit the less, it being evident that a man may reason most absurdly about the minutest things.

XLII. Pray answer me fairly, once for all, whether it be your opinion, that whatsoever is little and inconsiderable enough to be rejected without inconvenience in practice, the same may, in like manner, be safely rejected and overlooked in theory and demonstration. If you say no, it will then follow, that all you have been saying here and elsewhere, about yards, and inches,

* Analyst, sect. xx.

and decimal fractions, setting forth and insisting on the extreme smallness of the rejectaneous quantity, is quite foreign to the argument, and only a piece of skill to impose upon your reader. If you say yes, it follows that you then give up at once all the orders of fluxions and infinitesimal differences; and so most imprudently turn all your sallies, and attacks, and veterans, to your own overthrow. If the reader is of my mind, he will despair of ever seeing you get clear of this dilemma. The points in controversy have been so often and so distinctly noted in the Analyst, that I very much wonder how you could mistake if you had no mind to mistake. It is very plain, if you are in earnest, that you neither understand me nor your masters. And what shall we think of other ordinary analysts, when it shall be found that even you, who, like a champion, step forth to defend their principles, have not considered them.

XLIII. The impartial reader is entreated to remark, throughout your whole performance, how confident you are in asserting, and withal how modest in proving or explaining: how frequent it is with you to employ figures and tropes instead of reasons: how many difficulties proposed in the Analyst are discreetly overlooked by you, and what strange work you make with the rest; how grossly you mistake and misrepresent, and how little you practise the advice which you so liberally bestow. Believe me, sir, I had long and maturely considered the principles of the modern analysis, before I ventured to publish my thoughts thereupon in the Analyst. And since the publication thereof, I have myself freely conversed with mathematicians of all ranks, and some of the ablest professors, as well as made it my business to be informed of the opinions of others, being very desirous to hear what could be said towards clearing my difficulties or answering my objections. But though you are not afraid or ashamed to represent the analysts as very clear and uniform in their conception of these matters, yet I do solemnly affirm (and several of themselves know it to be true), that I found no harmony or agreement among them, but the reverse thereof, the greatest dissonance and even contrariety of opinions, employed to explain what, after all, seemed inexplicable.

XLIV. Some fly to proportions between nothings. Some reject quantities because infinitesimal. Others allow only finite quantities, and reject them because inconsiderable. Others place the method of fluxions on a foot with that of exhaustions, and admit nothing new therein. Some maintain the clear conception of fluxions. Others hold they can demonstrate about things incomprehensible. Some would prove the algorism of fluxions by *reductio ad absurdum;* others *à priori.* Some hold the evanescent increments to be real quantities, some to be nothings, some to be limits. As many men, so many minds:

each differing one from another, and all from Sir Isaac Newton. Some plead inaccurate expressions in the great author, whereby they would draw him to speak their sense, not considering that if he meant as they do, he could not want words to express his meaning. Others are magisterial and positive, say they are satisfied, and that is all, not considering that we, who deny Sir Isaac Newton's authority, shall not submit to that of his disciples. Some insist that the conclusions are true, and therefore the principles, not considering what hath been largely said in the Analyst * on that head. Lastly, several (and those none of the meanest) frankly owned the objections to be unanswerable. All which I mention by way of antidote to your false colours: and that the unprejudiced inquirer after truth may see, it is not without foundation, that I call on the celebrated mathematicians of the present age to clear up these obscure analytics, and concur in giving to the public some consistent and intelligible account of the principles of their great master: which, if they do not, I believe the world will take it for granted that they cannot.

XLV. Having gone through your defence of the British mathematicians, I find in the next place, that you attack me on a point of metaphysics, with what success the reader will determine. I had upon another occasion, many years ago, wrote against abstract general ideas.† In opposition to which, you declare yourself to adhere to the vulgar opinion, that neither geometry, nor any other general science, can subsist without general ideas (p. 74). This implies that I hold there are no general ideas. But I hold the direct contrary, that there are indeed general ideas, but not formed by abstraction in the manner set forth by Mr. Locke. To me it is plain, there is no consistent idea, the likeness whereof may not really exist: whatsoever therefore is said to be somewhat which cannot exist, the idea thereof must be inconsistent. Mr. Locke acknowledgeth it doth require pains and skill to form his general idea of a triangle. He further expressly saith, it must be neither oblique nor rectangular, neither equilateral, equicrural, nor scalenum; but all and none of these at once. He also saith, it is an idea wherein some parts of several different and inconsistent ideas are put together.‡ All this looks very like a contradiction. But to put the matter past dispute, it must be noted, that he affirms it to be somewhat imperfect that cannot exist; consequently the idea thereof is impossible or inconsistent.

XLVI. I desire to know, whether it is not possible for any thing to exist, which doth not include a contradiction: and if it is, whether we may not infer, that what cannot possibly exist,

* Sect. xix., xx., &c.

† Introduction to the Treatise concerning the Principles of Human Knowledge.

‡ Essay on Human Understanding, b. iv. c. vii. sect. 9.

the same doth include a contradiction: I further desire to know, whether the reader can frame a distinct idea of any thing that includes a contradiction? For my part, I cannot, nor consequently of the above-mentioned triangle; though you (who, it seems, know better than myself what I can do) are pleased to assure me of the contrary. Again, I ask whether that, which it is above the power of man to form a complete idea of, may not be called incomprehensible? And whether the reader can frame a complete idea of this imperfect impossible triangle? And if not, whether it doth not follow that it is incomprehensible? It should seem, that a distinct aggregate of a few consistent parts was nothing so difficult to conceive or impossible to exist; and that, therefore, your comment must be wide of the author's meaning. You give me to understand (p. 82) that this account of a general triangle was a trap which Mr. Locke set to catch fools. Who is caught therein let the reader judge.

XLVII. It is Mr. Locke's opinion, that every general name stands for a general abstract idea, which prescinds from the species or individuals comprehended under it. Thus, for example, according to him, the general name *colour* stands for an idea, which is neither blue, red, green, nor any other particular colour, but somewhat distinct and abstracted from them all. To me it seems, the word *colour* is only a more general name applicable to all and each of the particular colours; while the other specific names, as blue, red, green, and the like, are each restrained to a more limited signification. The same may be said of the word triangle. Let the reader judge whether this be not the case; and whether he can distinctly frame such an idea of colour as shall prescind from all the species thereof, or of a triangle which shall answer Mr. Locke's account, prescinding and abstracting from all the particular sorts of triangles, in the manner aforesaid.

XLVIII. I entreat my reader to think. For if he doth not, he may be under some influence from your confident and positive way of talking. But any one who thinks may, if I mistake not, plainly perceive that you are deluded, as it often happens, by mistaking the terms for ideas. Nothing is easier, than to define in terms or words that which is incomprehensible in idea, forasmuch as any words can be either separated or joined as you please, but ideas always cannot. It is as easy to say a round square as an oblong square, though the former be inconceivable. If the reader will but take a little care to distinguish between the definition and the idea, between words or expressions and the conceptions of the mind, he will judge of the truth of what I now advance, and clearly perceive how far you are mistaken, in attempting to illustrate Mr. Locke's doctrine, and where your mistake lies. Or, if the reader is minded to make a short work, he needs only at once to try whether, laying aside the words, he

can frame in his mind the idea of an impossible triangle; upon which trial the issue of this dispute may be fairly put. This doctrine of abstract general ideas seemed to me a capital error, productive of numberless difficulties and disputes, that runs not only throughout Mr. Locke's book, but through most parts of learning. Consequently, my animadversions thereupon were not an effect of being inclined to carp or cavil at a single passage, as you would wrongfully insinuate, but proceeded from a love of truth, and a desire to banish, so far as in me lay, false principles and wrong ways of thinking, without respect of persons. And indeed, though you and other party men are violently attached to your respective masters, yet I, who profess myself only attached to truth, see no reason why I may not as freely animadvert on Mr. Locke or Sir Isaac Newton, as they would on Aristotle or Descartes. Certainly the more extensive the influence of any error, and the greater the authority which supports it, the more it deserves to be considered and detected by sincere inquirers after knowledge.

XLIX. In the close of your performance, you let me understand, that your zeal for truth and the reputation of your masters hath occasioned your reprehending me with the utmost freedom. And it must be owned you have shown a singular talent therein. But I am comforted under the severity of your reprehensions, when I consider the weakness of your arguments, which, were they as strong as your reproofs, could leave no doubt in the mind of the reader concerning the matters in dispute between us. As it is, I leave him to reflect and examine by your light, how clearly he is enabled to conceive a fluxion, or the fluxion of a fluxion, a part infinitely small subdivided into an infinity of parts, a nascent or evanescent increment, that which is neither something nor nothing, a triangle formed in a point, velocity without motion, and the rest of those *arcana* of the modern analysis. To conclude, I had some thoughts of advising you how to conduct yourself for the future, in return for the advice you have so freely imparted to me: but, as you think it becomes me rather to inform myself than instruct others, I shall, for my further information, take leave to propose a few queries to those learned gentlemen of Cambridge whom you associate with yourself, and represent as being equally surprised at the tendency of my Analyst.

L. I desire to know, whether those who can neither demonstrate nor conceive the principles of the modern analysis, and yet give in to it, may not be justly said to have faith, and be styled believers of mysteries? Whether it is impossible to find among the physicians, mechanical philosophers, mathematicians, and philomathematicians of the present age, some such believers, who yet deride Christians for their belief of mysteries? Whether with such men it is not a fair, reasonable, and legitimate

method to use the *argumentum ad hominem?* And being so, whether it ought to surprise either Christians or scholars? Whether in an age wherein so many pretenders to science attack the Christian religion, we may not be allowed to make reprisals, in order to show that the irreligion of those men is not to be presumed an effect of deep and just thinking? Whether an attempt to detect false reasonings, and remedy defects in mathematics, ought to be ill received by mathematicians? Whether the introducing more easy methods and more intelligible principles in any science should be discountenanced? Whether there may not be fair objections as well as cavils? And whether to inquire diligently into the meaning of terms and the proof of propositions, not excepting against any thing without assigning a reason, nor affecting to mistake the signification of words, or stick at an expression where the sense was clear, but considering the subject in all lights, sincerely endeavouring to find out any sense or meaning whatsoever, candidly setting forth what seems obscure and what fallacious, and calling upon those who profess the knowledge of such matters to explain them; whether, I say, such a proceeding can be justly called cavilling? Whether there be an *ipse dixit* erected? And if so, when, where, by whom, and upon what authority? Whether even where authority was to take place, one might not hope the mathematics, at least, would be excepted? Whether the chief end, in making mathematics so considerable a part of academical education, be not to form in the minds of young students habits of just and exact reasoning? And whether the study of abstruse and subtile matters can conduce to this end, unless they are well understood, examined, and sifted to the bottom? Whether, therefore, the bringing geometrical demonstrations to the severest test of reason should be reckoned a discouragement to the studies of any learned society? Whether to separate the clear parts of things from the obscure, to distinguish the real principles whereon truths rest, and whence they are derived, and to proportion the just measures of assent according to the various degrees of evidence, be a useless or unworthy undertaking? Whether the making more of an argument than it will bear, and placing it in an undue rank of evidence, be not the likely way to disparage it? Whether it may not be of some use, to provoke and stir up the learned professors to explain a part of mathematical learning which is acknowledged to be most profound, difficult, and obscure, and at the same time set forth by Philalethes and many others, as the greatest instance that has ever been given of the extent of human abilities? Whether for the sake of a great man's discoveries, we must adopt his errors? Lastly, whether in an age wherein all other principles are canvassed with the utmost freedom, the principles of fluxions are to be alone excepted?

# AN APPENDIX

CONCERNING MR. WALTON'S VINDICATION OF SIR ISAAC NEWTON'S PRINCIPLES OF FLUXIONS.

I. I HAD no sooner considered the performance of Philalethes, but Mr. Walton's Vindication of Fluxions was put into my hands. As this Dublin professor gleans after the Cantabrigian, only endeavouring to translate a few passages from Sir Isaac Newton's Principia, and enlarge on a hint or two of Philalethes, he deserves no particular notice. It may suffice to advertise the reader, that the foregoing defence contains a full and explicit answer to Mr. Walton, as he will find if he thinks it worth his pains to read what this gentleman hath written, and compare it therewith. Particularly with Sect. 18, 20, 30, 32—36, 43. It is not, I am sure, worth mine to repeat the same things, or confute the same notions twice over, in mere regard to a writer who hath copied even the manners of Philalethes, and whom in answering the other I have, if I am not much mistaken, sufficiently answered.

II. Mr. Walton touches on the same points that the other had touched upon before him. He pursues a hint which the other had given * about Sir Isaac's first section concerning the *rationes primæ et ultimæ*. He discreetly avoids, like the other, to say one syllable of second, third, or fourth fluxions, and of divers other points mentioned in the Analyst, about all which I observe in him a most prudent and profound silence. And yet he very modestly gives his reader to understand, that he is able to clear up all difficulties and objections, that have ever been made (p. 5). Mr. Walton in the beginning, like Philalethes, from a particular case makes a general inference, supposing that infidelity to be imputed to mathematicians in general, which I suppose only in the person to whom the Analyst was addressed, and certain other persons of the same mind with him. Whether this extraordinary way of reasoning be the cause or effect of his passion I know not: but before I had got to the end of his Vindication I ceased to be surprised at his logic and his temper in the beginning. The double error, which, in the Analyst, was plainly meant to belong to others, he with Philalethes (whose very oversights he adopts) supposeth to have been ascribed to Sir Isaac Newton (p. 36). And this writer also, as well as the Cantabrigian, must needs take upon him to explain the motive of my

* Philalethes, p. 32.

writing against fluxions: which he gives out, with great assurance, to have been because Sir Isaac Newton had presumed to interpose in prophecies and revelations, and to decide in religious affairs (p. 4); which is so far from being true, that, on the contrary, I have a high value for those learned remains of that great man, whose original and free genius is an eternal reproach to that tribe of followers, who are always imitating, but never resemble him. This specimen of Mr. Walton's truth will be a warning to the reader to use his own eyes, and in obscure points never to trust the gentleman's candour, who dares to misrepresent the plainest.

III. I was thinking to have said no more concerning this author's performance, but, lest he should imagine himself too much neglected, I entreat the reader to have the patience to peruse it; and if he finds any one point of the doctrine of fluxions cleared up, or any one objection in the Analyst answered, or so much as fairly stated, let him then make his compliments to the author. But if he can no more make sense of what this gentleman has written than I can, he will need no answer to it. Nothing is easier than for a man to translate, or copy, or compose a plausible discourse of some pages in technical terms, whereby he shall make a show of saying somewhat, although neither the reader nor himself understand one tittle of it. Whether this be the case of Mr. Walton, and whether he understands either Sir Isaac Newton, or me, or himself, whatever I may think, I shall not take upon me to say. But one thing I know, that many an unmeaning speech passeth for significant by the mere assurance of the speaker, till he cometh to be catechised upon it; and then the truth showeth itself. This vindicator, indeed, by his dissembling nine parts in ten of the difficulties proposed in the Analyst, showeth no inclination to be catechised by me. But his scholars have a right to be informed. I therefore recommend it to them not to be imposed on by hard words and magisterial assertions, but carefully to pry into his sense, and sift his meaning, and particularly to insist on a distinct answer to the following questions.

IV. Let them ask him whether he can conceive velocity without motion, or motion without extension, or extension without magnitude? If he answers that he can, let him teach them to do the same. If he cannot, let him be asked how he reconciles the idea of a fluxion which he gives (p. 13) with common sense? Again, let him be asked whether nothing be not the product of nothing multiplied by something? And if so, when the difference between the gnomon and the sum of the rectangles* vanisheth, whether the rectangles themselves do not also vanish?

* See Vindication, p. 17.

i. e. when $ab$ is nothing, whether $A\dot{b} + B\dot{a}$ be not also nothing? i. e. whether the momentum of AB be not nothing? Let him then be asked what his momentums are good for, when they are thus brought to nothing? Again, I wish he were asked to explain the difference between a magnitude infinitely small and a magnitude infinitely diminished. If he saith there is no difference, then let him be further asked, how he dares to explain the method of fluxions by the ratio of magnitudes infinitely diminished (p. 9), when Sir Isaac Newton hath expressly excluded all consideration of quantities infinitely small?* If this able vindicator should say that quantities infinitely diminished are nothing at all, and consequently that, according to him, the first and last ratios are proportions between nothings, let him be desired to make sense of this or explain what he means by proportion between nothings. If he should say, the ultimate proportions are the ratios of mere limits, then let him be asked how the limits of lines can be proportioned or divided? After all, who knows but this gentleman, who hath already complained of me for an uncommon way of treating mathematics and mathematicians (p. 5), may (as well as the Cantabrigian) cry out, "Spain and the inquisition!" when he finds himself thus closely pursued and beset with interrogatories? That we may not, therefore, seem too hard on an innocent man, who probably meant nothing, but was betrayed by following another into difficulties and straits that he was not aware of, I shall propose one single expedient by which his disciples (whom it most concerns) may soon satisfy themselves whether this vindicator really understands what he takes upon him to vindicate. It is in short that they would ask him to explain the second, third, or fourth fluxions upon his principles. Be this the touchstone of his vindication. If he can do it, I shall own myself much mistaken: if he cannot, it will be evident that he was much mistaken in himself when he presumed to defend fluxions without so much as knowing what they are. So, having put the merits of the cause on this issue, I leave him to be tried by his scholars.

* See his Introduction to the Quadratures.

# REASONS FOR NOT REPLYING

TO

# MR. WALTON'S FULL ANSWER.

## IN A LETTER TO P. T. P.

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I. THERE are some men that can neither give nor take an answer, but, writing merely for the sake of writing, multiply words to no purpose. There are also certain careless writers, that in defiance of common sense publish such things as, though they are not ashamed to utter, yet other men may well be ashamed to answer. Whether there be any thing in Mr. Walton's method of vindicating fluxions, that might justify my taking no futher notice of him on the above-mentioned considerations, I leave you and every other reader to judge. But those, sir, are not the reasons I shall assign for not replying to Mr. Walton's full answer. The true reason is, that he seems at bottom a facetious man, who, under the colour of an opponent, writes on my side of the question, and really believes no more than I do of Sir Isaac Newton's doctrine about fluxions, which he exposes, contradicts, and confutes, with great skill and humour, under the mask of a grave vindication.

II. At first I considered him in another light, as one who had good reason for keeping to the beaten track, who had been used to dictate, who had terms of art at will, but was, indeed, at small trouble about putting them together, and perfectly easy about his reader's understanding them. It must be owned, in an age of so much ludicrous humour, it is not every one can, at first sight, discern a writer's real design. But, be a man's assertions ever so strong in favour of a doctrine, yet if his reasonings are directly levelled against it, whatever question there may be about the matter in dispute, there can be none about the intention of the writer. Should a person, so knowing and discreet as Mr. Walton, thwart and contradict Sir Isaac Newton under pretence of defending his fluxions, and should he at every turn say such uncouth things of these same fluxions, and place them in such odd lights, as must set all men in their wits against them, could I hope for a better second in this cause? Or could there remain any doubt of his being a disguised free-thinker in mathematics, who defended fluxions just as a certain free-thinker in religion did the rights of the Christian church.

III. Mr. Walton indeed, after his free manner, calls my Analyst a libel.* But this ingenious gentleman well knows, a bad vindication is the bitterest libel. Had you a mind, sir, to betray and ridicule any cause under the notion of vindicating it, would you not think it the right way to be very strong and dogmatical in the affirmative, and very weak and puzzled in the argumentative parts of your performance? To utter contradictions and paradoxes without remorse, and to be at no pains about reconciling or explaining them? And with great good humour, to be at perpetual variance with yourself and the author you pretend to vindicate? How successfully Mr. Walton hath practised these arts, and how much to the honour of the great client he would seem to take under his protection, I shall particularly examine throughout every article of his full answer.

IV. First, then, saith Mr. Walton, "I am to be asked, whether I can conceive velocity without motion, or motion without extension, or extension without magnitude?" To which he answereth in positive terms, that he can conceive velocity and motion in a point (p. 7). And to make out this, he undertakes to demonstrate, "that if a thing be moved by an agent, operating continually with the same force, the velocity will not be the same in any two different points of the described space. But that it must vary upon the least change of space." Now admitting thus much to be demonstrated, yet I am still at a loss to perceive how Mr. Walton's conclusion will follow, to wit, "that I am greatly mistaken in imagining there can be no motion, no velocity in a point of space," p. 10. Pray, sir, consider his reasoning. The same velocity cannot be in two points of space; therefore velocity can be in a point of space. Would it not be just as good reasoning to say, the same man cannot be in two nutshells; therefore a man can be in a nutshell? Again, velocity must vary upon the least change of space; therefore there may be velocity without space. Make sense of this if you can. What have these consequences to do with their premises? Who but Mr. Walton could have inferred them? Or how could even he have inferred them, had it not been in jest.

V. Suppose the centre of a falling body to describe a line, divide the time of its fall into equal parts, for instance into minutes. The spaces described in those equal parts of time will be unequal. That is, from whatsoever points of the described line you measure a minute's descent, you will still find it a different space. This is true. But how or why from this plain truth a man should infer, that motion can be conceived in a point, is to me as obscure as any the most obscure mysteries that occur in this profound author. Let the reader make the

* Vindication, p. 1.

best of it. For my part, I can as easily conceive Mr. Walton should walk without stirring, as I can his idea of motion without space. After all, the question was not whether motion could be proved to exist in a point, but only whether it could be conceived in a point. For, as to the proof of things impossible, some men have a way of proving that may equally prove any thing. But I much question, whether any reader of common sense will undertake to conceive what this pleasant man at inference undertakes to prove.

VI. If Mr. Walton really meant to defend the author of the fluxionary method, would he not have done it in a way consistent with this illustrious author's own principles? Let us now see what may be Sir Isaac's notion about this matter. He distinguisheth two sorts of motion, absolute and relative. The former he defineth to be a translation from absolute place to absolute place, the latter from one relative place to another.* Mr. Walton's is plainly neither of these sorts of motion, but some third kind, which, what it is, I am at a loss to comprehend. But I can clearly comprehend that, if we admit motion without space, then Sir Isaac Newton's account of it must be wrong: for place, by which he defines motion, is, according to him, a part of space. And if so, then this notable defender hath cut out new work for himself to defend and explain. But about this, if I mistake not, he will be very easy. For, as I said before, he seems at bottom a back friend to that great man; which opinion you will see further confirmed in the sequel.

VII. I shall no more ask Mr. Walton to explain any thing. For I can honestly say, the more he explains the more I am puzzled. But I will ask his readers to explain, by what art a man may conceive motion without space. And supposing this to be done, in the second place to explain, how it consists with Sir Isaac Newton's account of motion. Is it not evident, that Mr. Walton hath deserted from his old master, and been at some pains to expose him, while he defends one part of his principles by overturning another? Let any reader tell me what Mr. Walton means by motion, or if he can guess what this third kind is, which is neither absolute nor relative, which exists in a point, which may be conceived without space. This learned professor saith, "I have no clear conception of the principles of motion," p. 24. And in another place, p. 7, he saith, "I might have conceived velocity in a point, if I had understood and considered the nature of motion." I believe I am not alone in not understanding his principles. For myself, I freely confess the case to be desperate. I neither understand them, nor have any hopes of being ever able to understand them.

* See Schol. def. viii. Philos. Nat. Princip. Math.

VIII. Being now satisfied, that Mr Walton's aim is not to clear up or defend Sir Isaac's principles, but rather to contradict and expose them, you will not, I suppose, think it strange, if instead of putting questions to this intrepid answerer, who is never at a loss, how often soever his readers may, I entreat you, or any other man of plain sense, to read the following passage cited from the thirty-first section of the Analyst, and then try to apply Mr. Walton's answer to it: whereby you will clearly perceive what a vein of raillery that gentleman is master of. "Velocity necessarily implies both time and space, and cannot be conceived without them. And if the velocities of nascent and evanescent quantities, i. e. abstracted from time and space, may not be comprehended, how can we comprehend and demonstrate their proportions, or consider their *rationes primæ et ultimæ?* For to consider the proportion or ratio of things implieth that such things have magnitude: that such their magnitudes may be measured, and their relations to each other known. But as there is no measure of velocity except time and space, the proportion of velocities being only compounded of the direct proportion of the spaces and the reciprocal proportion of the times; doth it not follow, that to talk of investigating, obtaining, and considering the proportions of velocities, exclusively of time and space, is to talk unintelligibly?" Apply now, as I said, Mr. Walton's full answer, and you will soon find how fully you are enlightened about the nature of fluxions.

IX. In the following article of Mr. Walton's full answer, he saith divers curious things, which, being derived from this same principle, that motion may be conceived in a point, are altogether as incomprehensible as the origin from whence they flow. It is obvious and natural to suppose A $\dot{b}$ and B $a$* to be rectangles produced from finite lines multiplied by increments. Mr. Walton indeed supposeth that when the increments vanish or become nothing, the velocities remain, which being multiplied by finite lines produce those rectangles (p. 13). But admitting the velocities to remain, yet how can any one conceive a rectangular surface to be produced from a line multiplied by velocity, otherwise than by supposing such line multiplied by a line or increment, which shall be exponent of or proportional to such velocity? You may try to conceive it otherwise. I must own I cannot. Is not the increment of a rectangle itself a rectangle? Must not then A $\dot{b}$ and B $\dot{a}$ be rectangles? And must not the coefficients or sides of rectangles be lines? Consequently are not $\dot{b}$ and $\dot{a}$ lines or (which is the same thing) increments of lines? These increments may indeed be considered as proportional to and exponents of velocity. But exclusive of such exponents, to talk of rectangles under lines and velocities is, I conceive, to talk unintelligibly. And yet this is what Mr.

* See Nat. Phil. Princip. Math. lib. ii. lem. 2.

Walton doth, when he maketh $b$ and $a$, in the rectangles $A\,b$ and $B\,a$, to denote mere velocities.

As to the question, whether nothing be not the product of nothing multiplied by something, Mr. Walton is pleased to answer in the affirmative. And nevertheless when $a\,b$ is nothing, that is, when $a$ and $b$ are nothing, he denies that $A\,b + B\,a$ is nothing. This is one of those many inconsistencies which I leave the reader to reconcile. But, saith Mr. Walton, the sides of the given rectangle still remain, which two sides, according to him, must form the increment of the flowing rectangle. But in this he directly contradicts Sir Isaac Newton, who asserts that $A\,b + B\,a$, and not $A + B$, is the increment of the rectangle $A\,B$. And, indeed, how is it possible a line should be the increment of a surface? "Laterum incrementis totis $a$ et $b$ generatur rectanguli incrementum $A\,b + B\,a$," are the words of Sir Isaac,* which words seem utterly inconsistent with Mr. Walton's doctrine. But no wonder that gentleman should not agree with Sir Isaac, since he cannot agree even with himself; but contradicts what he saith elsewhere, as the reader may see, even before he gets to the end of that same section, wherein he hath told us that "the gnomon and the sum of the two rectangles are turned into those two sides by a retroverted motion" (p. 11, 12). Which proposition if you or any other person shall try to make sense of, you may possibly be convinced, that this profound author is as much at variance with common sense, as he is with himself and Sir Isaac Newton.

XI. Mr. Walton, in the ninth page of his Vindication, in order to explain the nature of fluxions, saith that "to obtain the last ratio of synchronal increments, the magnitude of those increments must be infinitely diminished." Notwithstanding which, in the twenty-third page of his full answer, he chargeth me as greatly mistaken, in supposing that he explained the doctrine of fluxions by the ratio of magnitudes infinitely diminished. It is an easy matter for any author to write so as to betray his readers into mistakes about his meaning. But then it is not easy to conceive, what right he hath to upbraid them with such their mistakes. If I have mistaken his sense, let any one judge if he did not fairly lead me into the mistake. When a man puzzleth his reader, saith and unsaith, useth ambiguous terms and obscure terms, and putteth them together in so perverse a manner, that it is odds you can make out no sense at all, or if any, a wrong sense, pray who is in fault but the writer himself? Let any one consider Mr. Walton's own words, and then say whether I am not justified in making this remark.

XII. In the twentieth page of his full answer Mr. Walton tells us, that "fluxions are measured by the first or last proportions of isochronal increments generated or destroyed by motion." A little after he saith these ratios subsist when the isochronal

* Nat. Phil. Princip. Math. lib. ii. lem. 2.

increments have no magnitude. Now, I would fain know whether the isochronal increments themselves subsist when they have no magnitude? Whether by isochronal increments we are not to understand increments generated in equal times? Whether there can be an increment where there is no increase, or increase where there is no magnitude? Whether if magnitudes are not generated in those equal times, what else is generated therein, or what else is it that Mr. Walton calls isochronal? I ask the reader these questions. I dare not ask Mr. Walton. For, as I hinted before, the subject grows still more obscure in proportion as this able writer attempts to illustrate it.

XIII. We are told, p. 22, "that the first or last ratio of the isochronal spaces hath a real existence, forasmuch as it is equal to the ratio of the two motions of two points; which motions, subsisting when the isochronal spaces are nothing, preserve the existence of the first or last ratio of these spaces, or keep it from being a ratio of nothings." In order to assist your understanding, it must not be omitted that the said two points are supposed to exist at the same time in one point, and to be moved different ways without stirring from that point. Mr. Walton hath the conscience to call this riddle a full and clear answer: to make sense of which you must suppose it one of his ironies. In the next and last article of his performance, you still find him proceed in the same vein of raillery upon fluxions.

XIV. It will be allowed, that whoever seriously undertook to explain the second, third, and fourth fluxions of Sir Isaac Newton, would have done it in a way agreeable to that great man's own doctrine. What Sir Isaac's precise notion is I will not pretend to say. And yet I will venture to say, it is something that cannot be explained by the three dimensions of a cube. I frankly own, I do not understand Sir Isaac's doctrine so far as to frame a positive idea of his fluxions. I have, nevertheless, a negative conception thereof, so far as to see that Mr. Walton is in jest, or (if in earnest) that he understands it no more than I do.

XV. Sir Isaac tells us that he considers indeterminate quantities as flowing, or, in other words, as increasing or decreasing by a perpetual motion. Which quantities he denotes by the latter letters of the alphabet, and their fluxions or celerities of increasing by the same letters pointed over head, and the fluxions of fluxions, or second fluxions, i. e. the mutations more or less swift of the first celerities, by the same letters pointed with double points; and the mutations of those mutations of the first mutations, or fluxions or celerities of increasing, which he calls fluxions of fluxions of fluxions, or third fluxions, by three points; the fourth fluxions by four points; the fifth by five; and so on.* Sir Isaac, you see, speaks of quantity in general. And in the

* See his treatise De Quadraturâ Curvarum.

Analyst the doctrine is exemplified and the case is put in lines. Now in lines, where there is only one dimension, how are we enabled to conceive second, third, or fourth fluxions, by conceiving the generation of three dimensions in a cube? Let any one but read what Sir Isaac Newton or what I have said, and then apply what Mr. Walton hath written about the three dimensions of a cube, and see whether the difficulties are solved, or the doctrine made one whit the clearer by this explication.

XVI. That you may the better judge of the merit of this part of Mr. Walton's performance, I shall beg leave to set down a passage or two from the Analyst. "As it is impossible to conceive velocity without time or space, without either finite length or finite duration, it must seem above the power of man to comprehend even the first fluxions. And if the first are incomprehensible, what shall we say of the second and third fluxions, &c.? He who can conceive the beginning of a beginning or the end of an end, somewhat before the first or after the last, may perhaps be sharp-sighted enough to conceive these things. But most men, I believe, will find it impossible to understand them in any sense whatsoever. One would think that men could not speak too exactly on so nice a subject. And yet we may often observe, that the exponents of fluxions, or notes representing fluxions, are confounded with the fluxions themselves. Is not this the case, when just after the fluxions of flowing quantities were said to be the celerities of their increasing, and the second fluxions to be the mutations of the first fluxions or celerities, we are told that $\dddot{z}.\ \ddot{z}.\ \dot{z}.\ z.\ \ddot{z}.\ \dddot{z}.$ represents a series of quantities whereof each subsequent quantity is the fluxion of the preceding; and each foregoing is a fluent quantity having the following one for its fluxion. Divers series of quantities and expressions geometrical and algebraical may be easily conceived in lines, in surfaces, in species, to be continued without end or limit. But it will not be found so easy to conceive a series, either of mere velocities or of mere nascent increments, distinct therefrom and corresponding thereunto."* Compare what is here said with Mr. Walton's genesis of a cube, and you will then clearly see how far this answerer is from explaining the nature of second, third, and fourth fluxions: and how justly I might repay that gentleman in kind, and tell him in his own language, that "all his skill is vain and impertinent," Vind. p. 36.

XVII. But it doth not become me to find fault with this learned professor, who at bottom militates on my side, and in this very section makes it his business directly to overthrow Sir Isaac Newton's doctrine. For he saith in plain terms, that there can be no fourth fluxion of a cube (p. 25), that is, there can be no second fluxion of a line, and, *à fortiori*, no third, fourth, fifth,

* Analyst, sect. xliv., xlv., xlvi.

&c. Insomuch, that with one single dash of his pen, Mr. Walton destroys, to the great relief of the learned world, an indefinite rank of fluxions of different orders that might have reached from pole to pole. I had distinctly pointed out the difficulties in several parts both of my Analyst and Defence, and I leave you to judge whether he explains or even attempts to explain one of them. Instead thereof he tells us of the trine dimension of a cube generated by motion: whence he takes occasion, as hath been observed, to explode Sir Isaac's own doctrine, which is utterly inconsistent with Mr. Walton's. And can you now doubt the real design of this egregious vindicator?

XVIII. Before ever Sir Isaac Newton thought of his fluxions, everybody knew there were three dimensions in a cube, and that a solid might be generated by the motion of a surface, a surface by the motion of a line, and a line by the motion of a point. And this in effect is all we know from Mr. Walton's explication. As for his dwelling so minutely on the genesis of the solid parts of a cube, a thing so foreign from the purpose, the only rational account I can give of it is, that Mr. Walton, by puzzling the imagination of his vulgar readers, hoped the better to disguise his betraying the doctrine of his great client, which to a discerning eye he manifestly gives up; and instead thereof humorously substitutes, what all the world knew before Sir Isaac was born, to wit, the three dimensions of a cube and the genesis thereof by motion.

XIX. Upon the whole, I appeal to you and every intelligent reader, whether this thing, which Mr. Walton is pleased ironically to call a full answer, doth not carry throughout a sly insinuation, that the profound science of fluxions cannot be maintained but by the help of most unintelligible paradoxes and inconsistencies. So far, indeed, as affirmations go he showeth himself an able support of Sir Isaac Newton. But then in his reasonings he drops that great man upon the most important points, to wit, his doctrine of motion and his doctrine of fluxions, not regarding how far the demonstration of his famous Principia is interested therein. To convince you still more and more of the truth hereof, do but reflect a little on Mr. Walton's conduct. Can you think it probable, that so learned and clear-headed a writer would have laid down such a direct repugnancy to common sense, as his idea of motion in a point, for the ground-work of his explanation, had it been his real intention to explain? Or can you suppose he would have been absolutely silent on so many points urged home, both in the Analyst and Defence, which it concerned a vindicator of Sir Isaac not to have overlooked? Can you imagine, that if he meant seriously to defend the doctrine of fluxions, he would have contented himself with barely asserting that "Sir Isaac Newton, in the introduction to his Quadrature of Curves, in the second lemma of the second

book, and in the scholium to the first section of the first book of his principles of philosophy, hath delivered his doctrine of fluxions in so clear and distinct a manner, without the least inconsistency in terms and arguments, that one would have thought it impossible for any person not to have understood him," p. 30.

XX. Is it possible, I say, that Mr. Walton could in earnest hope we should take his bare word, as so much more credible than Sir Isaac's, and not rather have endeavoured to answer the questions and reconcile the difficulties set forth in my Defence of Free-thinking, for instance, in sect. xxxvi. Wherein I entreat my antagonist to explain "whether Sir Isaac's momentum be a finite quantity, or an infinitesimal, or a mere limit;" adding, "If you say a finite quantity, be pleased to reconcile this with what he saith in the scholium of the second lemma of the first section of the first book of his Principles: 'Cave intelligas quantitates magnitudine determinatas, sed cogita semper diminuendas sine limite.' If you say an infinitesimal, reconcile this with what is said in his introduction to the Quadratures: 'Volui ostendere quod in methodo fluxionum non opus sit figuras infinite parvas in geometriam inducere.' If you should say it is a mere limit, be pleased to reconcile this with what we find in the first case of the second lemma in the second book of his Principles: 'Ubi de lateribus A et B deerant momentorum dimidia,' &c., where the moments are supposed to be divided." I shall scarce think it worth my while to bestow a serious thought on any writer who shall pretend to maintain Sir Isaac's doctrine, and yet leave this passage without a reply. And the reader, I believe, will think with me that, in answer to difficulties distinctly proposed and insisted on, to offer nothing but a magisterial assertion is a mere grimace of one who made merry with fluxions, under the notion of defending them. And he will be further confirmed in this way of thinking, when he observes that Mr. Walton hath not said one syllable in reply to those several sections of my defence, which I had particularly referred to, as containing a full answer to his Vindication. But it is no wonder if, with Sir Isaac's doctrine, he should drop also his own arguments in favour thereof.

XXI. I have been at the pains once for all to write this short comment on Mr. Walton, as the only way I could think of for making him intelligible, which will also serve as a key to his future writings on this subject. And I was the rather inclined to take this trouble, because it seemeth to me, there is no part of learning that wants to be cleared up more than this same doctrine of fluxions, which hath hitherto walked about in a mist to the stupefaction of the literati of the present age. To conclude, I accept this professor's recantation, nor am at all displeased at the ingenious method he takes to disguise it. Some zealous fluxionist may perhaps answer him.

# AN ESSAY

TOWARDS

# PREVENTING THE RUIN OF GREAT BRITAIN.

# AN ESSAY,

ETC.

WHETHER the prosperity that preceded, or the calamities that succeed the South Sea project have most contributed to our undoing, is not so clear a point as it is that we are actually undone, and lost to all sense of our true interest; nothing less than this could render it pardonable to have recourse to those old-fashioned, trite maxims concerning religion, industry, frugality, and public spirit, which are now forgotten, but if revived and put in practice, may not only prevent our final ruin, but also render us a more happy and flourishing people than ever.

Religion hath in former days been cherished and reverenced by wise patriots and lawgivers, as knowing it to be impossible that a nation should thrive and flourish without virtue, or that virtue should subsist without conscience, or conscience without religion: insomuch that an atheist or infidel was looked on with abhorrence, and treated as an enemy to his country. But in these wiser times, a cold indifference for the national religion, and indeed for all matters of faith and divine worship, is thought good sense. It has even become fashionable to decry religion; and that little talent of ridicule is applied to such wrong purposes, that a good Christian can hardly keep himself in countenance.

Liberty is the greatest human blessing that a virtuous man can possess, and is very consistent with the duties of a good subject and a good Christian; but the present age aboundeth with injudicious patrons of liberty, who, not distinguishing between that and licentiousness, take the surest method to discredit what they would seem to propagate; for, in effect, can there be a greater affront offered to that just freedom of thought and action, which is the prerogative of a rational creature, or can any thing recommend it less to honest minds, than under colour thereof to obtrude scurrility and profaneness on the world? But it hath been always observed of weak men, that they know not how to avoid one extreme without running into another.

Too many of this sort pass upon vulgar readers for great authors and men of profound thought, not on account of any superiority either in sense or style, both which they possess in a very moderate degree, nor of any discoveries they have made in arts or sciences, which they seem to be little acquainted with: but purely because they flatter the passions of corrupt men, who

are pleased to have the clamours of conscience silenced, and those great points of the Christian religion made suspected, which withheld them from many vices of pleasure and interest, or made them uneasy in the commission of them.

In order to promote that laudable design of effacing all sense of religion from among us, they form themselves into assemblies, and proceed with united counsels and endeavours; with what success, and with what merit towards the public, the effect too plainly shows; I will not say, these gentlemen have formed a direct design to ruin their country, or that they have the sense to see half the ill consequences which must necessarily flow from the spreading of their opinions; but the nation feels them, and it is high time the legislature put a stop to them.

I am not for placing an invidious power in the hands of the clergy, or complying with the narrowness of any mistaken zealots, who should incline to persecute dissenters: but whatever conduct common sense, as well as Christian charity, obligeth us to use, towards those who differ from us in some points of religion, yet the public safety requireth, that the avowed contemners of all religion should be severely chastised, and perhaps it may be no easy matter to assign a good reason why blasphemy against God should not be inquired into, and punished with the same rigour as treason against the king.

For though we may attempt to patch up our affairs, yet it will be to no purpose; the finger of God will unravel all our vain projects, and make them snares to draw us into greater calamities, if we do not reform that scandalous libertinism which (whatever some shallow men may think) is our worst symptom and the surest prognostic of our ruin.

Industry is the natural sure way to wealth; this is so true, that it is impossible an industrious free people should want the necessaries and comforts of life, or an idle enjoy them under any form of government. Money is so far useful to the public, as it promoteth industry, and credit, having the same effect, is of the same value with money; but money or credit circulating through a nation from hand to hand, without producing labour and industry in the inhabitants, is direct gaming.

It is not impossible for cunning men to make such plausible schemes, as may draw those who are less skilful into their own and the public ruin. But surely, there is no man of sense and honesty, but must see and own, whether he understands the game or not, that it is an evident folly for any people, instead of prosecuting the old honest methods of industry and frugality, to sit down to a public gaming-table, and play off their money one to another.

The more methods there are in a state for acquiring riches without industry or merit, the less there will be of either in that state; this is as evident as the ruin that attends it. Besides,

when money is shifted from hand to hand in such a blind, fortuitous manner, that some men shall from nothing in an instant acquire vast estates, without the least desert; while others are as suddenly stripped of plentiful fortunes, and left on the parish by their own avarice and credulity, what can be hoped for on the one hand, but abandoned luxury and wantonness, or on the other, but extreme madness and despair.

In short, all projects for growing rich by sudden and extraordinary methods, as they operate violently on the passions of men, and encourage them to despise the slow, moderate gains that are to be made by an honest industry, must be ruinous to the public, and even the winners themselves will at length be involved in the public ruin.

It is an easy matter to contrive projects for the encouragement of industry; I wish it were as easy to persuade men to put them in practice. There is no country in Europe where there is so much charity collected for the poor, and none where it is so ill managed. If the poor-tax was fixed at a medium in every parish, taken from a calculation of the last ten years, and raised for seven years by act of parliament, that sum (if the common estimate be not very wrong) frugally and prudently laid out in workhouses, would for ever free the nation from the care of providing for the poor, and at the same time considerably improve our manufactures. We might by these means rid our streets of beggars; even the children, the maimed, and the blind might be put in a way of doing something for their livelihood. As for the small number of those who by age or infirmities are utterly incapable of all employment, they might be maintained by the labour of others; and the public would receive no small advantage from the industry of those who are now so great a burthen and expense to it.

The same tax, continued three years longer, might be very usefully employed in making high roads, and rendering rivers navigable, two things of so much profit and ornament to a nation, that we seem the only people in Europe who have neglected them.* So that in the space of ten years the public may be for ever freed from a heavy tax, industry encouraged, commerce facilitated, and the whole country improved, and all this only by a frugal, honest management, without raising one penny extraordinary.

The number of people is both means and motives to industry; it should therefore be of great use to encourage propagation, by allowing some reward or privilege to those who have a certain number of children; and on the other hand, enacting that the public shall inherit half the unentailed estates of all who die unmarried of either sex.

* This was published before turnpikes were erected.

Besides the immediate end proposed by the foregoing methods, they furnish taxes upon passengers, and dead bachelors, which are in no sort grievous to the subject, and may be applied towards clearing the public debt, which, all mankind agree, highly concerneth the nation in general, both court and country. Cæsar, indeed, mentions it as a piece of policy, that he borrowed money from his officers to bestow it on the soldiers, which fixed both to his interest; and though something like this may pass for skill at certain junctures in civil government, yet if carried too far, it will prove a dangerous experiment.

There is still room for invention or improvement in most trades and manufactures, and it is probable that premiums given on that account to ingenious artists, would soon be repaid a hundredfold to the public. No colour is so much worn in Italy, Spain, and Portugal as black; but our black cloth is neither so lasting nor of so good a dye as the Dutch, which is the reason of their engrossing the profit of that trade: this is so true, that I have known English merchants abroad wear black cloth of Holland themselves, and sell and recommend it as better than that of their own country. It is commonly said the water of Leyden hath a peculiar property for colouring black; but it hath also been said and passed current, that good glasses may be made no where but at Venice, and there only in the little island of Murano: which was attributed to some peculiar property in the air; and we may possibly find other opinions of that sort to be as groundless, should the legislature think it worth while to propose premiums in the foregoing, or in the like cases of general benefit to the public; but I remember to have seen, about seven years ago, a man pointed at in a coffee-house, who (they said) had first introduced the right scarlet dye among us, by which the nation in general, as well as many private persons, have since been great gainers, though he was himself a beggar, who, if this be true, deserved an honourable maintenance from the public.

There are also several manufactures which we have from abroad, that may be carried on to as great perfection here as elsewhere. If it be considered that more fine linen is worn in Great Britain than in any other country of Europe, it will be difficult to assign a reason why paper may not be made here as good, and in the same quantity, as in Holland, or France, or Genoa. This is a manufacture of great consumption, and would save much to the public. The like may be said of tapestry, lace, and other manufactures, which, if set on foot in cheap parts of the country, would employ many hands, and save money to the nation, as well as bring it from abroad. Projects for improving old manufactures, or setting up new ones, should not be despised in a trading country, but the making them pretences for stock-jobbing hath been a fatal imposition.

As industry dependeth upon trade, and this, as well as the public security, upon our navigation, it concerneth the legislature to provide that the number of our sailors do not decrease, to which it would very much conduce, if a law were made prohibiting the payment of sailors in foreign parts; for it is usual with those on board merchantmen, as soon as they set foot on shore, to receive their pay, which is soon spent in riotous living; and when they have emptied their pockets, the temptation of a pistole present money, never faileth to draw them into any foreign service. To this (if I may credit the information I have had from some English factors abroad) it is chiefly owing, that the Venetians, Spaniards, and others, have so many English on board their ships; some merchants indeed and masters of vessels may make a profit in defrauding those poor wretches, when they pay them in strange coin (which I have been assured often amounts to twelvepence in the crown), as well as in ridding themselves of the charge of keeping them when they sell their ships, or stay long in port, but the public lose both the money and the men: who if their arrears were to be cleared at home, would be sure to return, and spend them in their own country; it is a shame this abuse should not be remedied.

Frugality of manners is the nourishment and strength of bodies politic. It is that by which they grow and subsist, until they are corrupted by luxury, the natural cause of their decay and ruin. Of this we have examples in the Persians, Lacedæmonians, and Romans: not to mention many later governments which have sprung up, continued a while, and then perished by the same natural causes. But these are, it seems, of no use to us; and, in spite of them, we are in a fair way of becoming ourselves another useless example to future ages.

Men are apt to measure national prosperity by riches; it would be righter to measure it by the use that is made of them. Where they promote an honest commerce among men, and are motives to industry and virtue, they are without doubt of great advantage; but where they are made (as too often happens) an instrument to luxury, they enervate and dispirit the bravest people. So just is that remark of Machiavel, that there is no truth in the common saying, money is the nerves of war; and though we may subsist tolerably for a time among corrupt neighbours, yet if ever we have to do with a hardy, temperate, religious sort of men, we shall find to our cost, that all our riches are but a poor exchange for that simplicity of manners which we despise in our ancestors.

This sole advantage hath been the main support of all the republics that have made a figure in the world; and perhaps it might be no ill policy in a kingdom to form itself upon the manners of a republic.

Simplicity of manners may be more easily preserved in a re-

public than a monarchy; but if once lost, may be sooner recovered in a monarchy, the example of a court being of great efficacy, either to reform or to corrupt a people; that alone were sufficient to discountenance the wearing of gold or silver, either in clothes or equipage; and if the same were prohibited by law, the saving so much bullion would be the smallest benefit of such an institution; there being nothing more apt to debase the virtue and good sense of our gentry of both sexes, than the trifling vanity of apparel, which we have learnt from France, and which hath had such visible ill consequences on the genius of that people. Wiser nations have made it their care to shut out this folly by severe laws and penalties, and its spreading among us can forebode no good, if there be any truth in the observation of one of the ancients, that the direct way to ruin a man is to dress him up in fine clothes.

It cannot be denied that luxury of dress giveth a light behaviour to our women, which may pass for a small offence, because it is a common one, but is in truth the source of great corruptions. For this very offence the prophet Isaiah denounced a severe judgment against the ladies of his time. I shall give the passage at length: "Moreover, the Lord saith, Because the daughters of Zion are haughty, and walk with stretched forth necks and wanton eyes, walking and mincing as they go, and making a tinkling with their feet; therefore the Lord will smite with a scab the crown of the head of the daughters of Zion, and the Lord will discover their secret parts. In that day the Lord will take away the bravery of their tinkling ornaments about their feet, and their cauls and their round tires like the moon, the chains, and the bracelets, and the mufflers, the bonnets, and the ornaments of the legs, and the headbands, and the tablets, and the earrings, the rings and nose-jewels, the changeable suits of apparel, and the mantles, and the wimples, and the crisping pins, the glasses, and the fine linen, and the hoods, and the veils. And it shall come to pass, that instead of a sweet smell there shall be a stink; and instead of a girdle a rent; and instead of well set hair, baldness; and instead of a stomacher, a girding of sackcloth; and burning instead of beauty." The scab, the stench, and the burning, are terrible pestilential symptoms, and our ladies would do well to consider, they may chance to resemble those of Zion in their punishment as well as their offence.

But dress is not the only thing to be reformed; sumptuary laws are useful in many other points. In former times the natural plainness and good sense of the English made them less necessary. But ever since the luxurious reign of King Charles the Second, we have been doing violence to our natures, and are by this time so much altered for the worse, that it is to be feared the very same dispositions that make them necessary, will for ever hinder them from being enacted or put in execution.

A private family in difficult circumstances, all men agree, ought to melt down their plate, walk on foot, retrench the number of their servants, wear neither jewels nor rich clothes, and deny themselves expensive diversions; and why not the public? Had any thing like this been done, our taxes had been less, or, which is the same thing, we should have felt them less. But it is very remarkable that luxury was never at so great a height, nor spread so generally through the nation as during the expensé of the late wars, and the heavy debt that still lieth upon us.

This vice draweth after it a train of evils which cruelly infest the public; faction, ambition, envy, avarice, and that of the worst kind, being much more hurtful in its consequences, though not so infamous as penury. It was the great art of cardinal Richelieu, by encouraging luxury and expense to impoverish the French nobility, and render them altogether dependent on the crown, which hath been since very successfully effected. These and many more considerations show the necessity there is for sumptuary laws, nor can any thing be said against them in this island which might not with equal force be objected in other countries, which have nevertheless judged the public benefit of such institutions to be of far greater importance than the short sufferings of a few who subsist by the luxury of others.

It is evident that old taxes may be better borne, as well as new ones raised, by sumptuary laws judiciously framed, not to damage our trade, but retrench our luxury. It is evident, that, for want of these, luxury (which, like the other fashions, never faileth to descend) hath infected all ranks of people, and that this enableth the Dutch and French to undersell us, to the great prejudice of our traffic. We cannot but know, that in our present circumstances it should be our care, as it is our interest, to make poverty tolerable; in short, we have the experience of many ages to convince us, that a corrupt, luxurious people must of themselves fall into slavery, although no attempt be made upon them. These and the like obvious reflections should, one would think, have forced any people in their senses upon frugal measures.

But we are doomed to be undone. Neither the plain reason of the thing, nor the experience of past ages, nor the examples we have before our eyes, can restrain us from imitating, not to say surpassing, the most corrupt and ruined people, in those very points of luxury that ruined them. Our gaming, our operas, our masquerades, are, in spite of our debts and poverty, become the wonder of our neighbours. If there be any man so void of all thought and common sense as not to see where this must end, let him but compare what Venice was at the league of Cambray with what it is at present, and he will be convinced how truly those fashionable pastimes are calculated to depress and ruin a nation.

But neither Venice nor Paris, nor any other town in any part of the world, ever knew such an expensive, ruinous folly as our masquerade. This alone is sufficient to inflame and satisfy the several appetites for gaming, dressing, intriguing, luxurious eating and drinking. It is a most skilful abridgment, the very quintessence, the abstract of all those senseless vanities that have ever been the ruin of fools and detestation of wise men. And all this, under the notion of an elegant entertainment, hath been admitted among us; though it be in truth a contagion of the worst kind. The plague, dreadful as it is, is an evil of short duration; cities have often recovered and flourished after it; but when was it known that a people broken and corrupt by luxury recovered themselves? Not to say that general corruption of manners never faileth to draw after it some heavy judgment of war, famine, or pestilence. Of this we have a fresh instance in one of the most debauched towns of Europe,* and nobody knows how soon it may be our own case. This elegant entertainment is indeed suspended for the present, but there remains so strong a propension towards it, that, if the wisdom of the legislature does not interpose, it will soon return with the additional temptation of having been forbid for a time. It were stupid and barbarous to declaim against keeping up the spirit of the people by proper diversions; but then they should be proper, such as polish and improve their minds, or increase the strength and activity of their bodies; none of which ends are answered by the masquerade, no more than by those French and Italian follies, which, to our shame, are imported and encouraged at a time when the nation ought to be too grave for such trifles.

It is not to be believed what influence public diversions have on the spirit and manners of a people. The Greeks wisely saw this, and made a very serious affair of their public sports. For the same reason it will perhaps seem worthy the care of our legislature to regulate the public diversions by an absolute prohibition of those which have a direct tendency to corrupt our morals, as well as by a reformation of the drama; which, when rightly managed, is such a noble entertainment, and gave those fine lessons of morality and good sense to the Athenians of old, and to our British gentry above a century ago; but for these last ninety years hath entertained us, for the most part, with such wretched things as spoil, instead of improving, the taste and manners of the audience. Those who are attentive to such propositions only as may fill their pockets, will probably slight these things as trifles below the care of the legislature. But I am sure all honest thinking men must lament to see their country run headlong into all those luxurious follies, which, it is evident,

* Marseilles.

have been fatal to other nations, and will undoubtedly prove fatal to us also, if a timely stop be not put to them.

Public spirit, that glorious principle of all that is great and good, is so far from being cherished or encouraged, that it is become ridiculous in this enlightened age, which is taught to laugh at every thing that is serious as well as sacred. The same atheistical narrow spirit, centring all our cares upon private interest, and contracting all our hopes within the enjoyment of this present life, equally produceth a neglect of what we owe to God and our country. Tully hath long since observed, "that it is impossible for those who have no belief of the immortality of the soul, or a future state of rewards and punishments, to sacrifice their particular interests and passions to the public good, or have a generous concern for posterity," and our own experience confirmeth the truth of this observation.

In order therefore to recover a sense of public spirit, it is to be wished that men were first affected with a true sense of religion; *pro aris et focis*, having ever been the great motive to courage and perseverance in a public cause.

It would likewise be a very useful policy, and warranted by the example of the wisest governments, to make the natural love of fame and reputation subservient to promoting that noble principle. Triumphal arches, columns, statues, inscriptions, and the like monuments of public services, have, in former times, been found great incentives to virtue and magnanimity, and would probably have the same effects on Englishmen which they have had on Greeks and Romans. And perhaps, a pillar of infamy would be found a proper and exemplary punishment in cases of signal public villany, where the loss of fortune, liberty, or life, are not proportioned to the crime; or where the skill of the offender, or the nature of his offence, may screen him from the letter of the law.

Several of these are to be seen at Genoa, Milan, and other towns of Italy, where it is the custom to demolish the house of a citizen, who hath conspired the ruin of his country, or been guilty of any enormous crime towards the public, and in place thereof to erect a monument of the crime, and criminal, described in the blackest manner. We have nothing of this sort, that I know, but that which is commonly called the monument, which, in the last age, was erected for an affair no way more atrocious than the modern unexampled attempt * of men, easy in their fortunes, and unprovoked by hardships of any sort, in cool blood, and with open eyes, to ruin their native country. This fact will never be forgotten, and it were to be wished, that with it the public detestation thereof may be transmitted to pos-

* The South-sea project.

terity, which would, in some measure, vindicate the honour of the present, and be a useful lesson to future ages.

Those noble arts of architecture, sculpture, and painting, do not only adorn the public, but have also an influence on the minds and manners of men, filling them with great ideas, and spiriting them up to an emulation of worthy actions. For this cause they were cultivated and encouraged by the Greek cities, who vied with each other in building and adorning their temples, theatres, porticos, and the like public works, at the same time that they discouraged private luxury, the very reverse of our conduct.

To propose the building a parliament house, courts of justice, royal palace, and other public edifices, suitable to the dignity of the nation, and adorning them with paintings and statues, which may transmit memorable things and persons to posterity, would probably be laughed at as a vain affair, of great expence, and little use to the public; and it must be owned, we have reduced ourselves to such straits, that any proposition of expense suiteth ill with our present circumstances. But how proper soever this proposal may be for the times, yet it comes so properly into a discourse of public spirit, that I could not but say something of it. And at another time it will not seem unreasonable, if we consider that it is no more than the wisest nations have done before us, that it would spirit up new arts, employ many hands, keep the money circulating at home, and, lastly, that it would be a notable instance of public spirit, as well as a motive to it.

The same noble principle may be also encouraged by erecting an academy of ingenious men, whose employment it would be to compile the history of Great Britain, to make discourses proper to inspire men with a zeal for the public, and celebrate the memory of those who have been ornaments to the nation, or done it eminent service. Not to mention that this would improve our language, and amuse some busy spirits of the age; which, perhaps, would be no ill policy.

This is not without example; for, to say nothing of the French academy, which is prostituted to meaner purposes, it hath been the custom of the Venetian senate, to appoint one of their order to continue the history of the republic. This was introduced in the flourishing state of that people, and is still in force. We fall short of other nations in the number of good historians, though no nation in christendom hath produced greater events, or more worthy to be recorded. The Athenian senate appointed orators to commemorate annually, those who died in defence of their country, which solemnity was performed at the monuments erected in honour of them by the public; and the panegyrics, composed by Isocrates and Pericles, as well as many passages in Tully, inform us, with what pleasure the ancient orators used to expatiate in praise of their country.

Concord and union among ourselves is rather to be hoped for, as an effect of public spirit, than proposed as a means to promote it. Candid, generous men, who are true lovers of their country, can never be enemies to one half of their countrymen, or carry their resentments so far as to ruin the public for the sake of a party. Now I have fallen upon the mention of our parties, I shall beg leave to insert a remark or two, for the service both of whig and tory, without entering into their respective merits. First, it is impossible for either party to ruin the other, without involving themselves and their posterity in the same ruin. Secondly, it is very feasible for either party to get the better of the other, if they could first get the better of themselves; and instead of indulging the little womanish passions of obstinacy, resentment, and revenge, steadily promote the true interest of their country, in those great clear points of piety, industry, sobriety of manners, and an honest regard for posterity; which, all men of sense agree, are essential to public happiness. There would be something so great and good in this conduct, as must necessarily overbear all calumny and opposition. But that men should act reasonably, is rather to be wished than hoped.

I am well aware, that to talk of public spirit, and the means of retrieving it, must, to narrow sordid minds, be matter of jest and ridicule, how conformable soever it be to right reason, and the maxims of antiquity. Though one would think, the most selfish men might see it was their interest to encourage a spirit in others, by which they, to be sure, must be gainers. Yet such is the corruption and folly of the present age, that a public spirit is treated like ignorance of the world, and want of sense; and all the respect is paid to cunning men, who bend and wrest the public interest to their own private ends, that in other times hath been thought due to those who were generous enough to sacrifice their private interest to that of their country.

Such practices and such maxims as these must necessarily ruin a state. But if the contrary should prevail, we may hope to see men in power prefer the public wealth and security to their own, and men of money make free gifts, or lend it without interest to their country. This, how strange and incredible soever it may seem to us, hath been often done in other states. And the natural English temper considered, together with the force of example, no one can tell how far a proposal for a free gift may go among the monied men, when set on foot by the legislature, and encouraged by the example of two or three men of figure, who have the spirit to do a generous thing, and the understanding to see it is every private man's interest to support that of the public.

If they who have their fortunes in money should make a voluntary gift, the public would be eased, and at the same time

maintain its credit. Nor is a generous love of their country the only motive that should induce them to this. Common equity requires, that all subjects should equally share the public burthen. And common sense shows, that those who are foremost in the danger, should not be the most backward in contributing to prevent it.

Before I leave this subject, I cannot but take notice of that most infamous practice of bribery, than which nothing can be more opposite to public spirit, since every one who takes a bribe plainly owns, that he prefers his private interest to that of his country. This corruption is become a national crime, having infected the lowest as well as the highest among us, and is so general and notorious, that, as it cannot be matched in former ages, so it is to be hoped it will not be imitated by posterity.

This calls to mind another national guilt, which we possess in a very eminent degree; there being no nation under the sun, where solemn perjury is so common, or where there are such temptations to it. The making men swear so often in their own cases, and where they have an interest to conceal the truth, hath gradually wore off that awful respect which was once thought due to an appeal to Almighty God; insomuch, that men now-a-days break their fast and a custom-house oath with the same peace of mind. It is a policy peculiar to us, the obliging men to perjure or betray themselves, and hath had no good effect, but many very ill ones. Sure I am, that other nations, without the hundredth part of our swearing, contrive to do their business at least as well as we do. And perhaps our legislature will think it proper to follow their example. For whatever measures are taken, so long as we lie under such a load of guilt, as national perjury and national bribery, it is impossible we can prosper.

This poor nation hath sorely smarted of late, and to ease the present smart, a sudden remedy (as is usual in such cases) hath been thought of. But we must beware not to mistake an anodyne for a cure. Where the vitals are touched, and the whole mass of humours vitiated, it is not enough to ease the part pained, we must look further, and apply general correctives; otherwise the ill humour may soon show itself in some other part.

The South-sea affair, how sensible soever, is not the original evil, or the great source of our misfortunes, it is but the natural effect of those principles, which for many years have been propagated with great industry. And as a sharp distemper, by reclaiming a man from intemperance, may prolong his life, so it is not impossible but this public calamity that lies so heavy on the nation may prevent its ruin. It would certainly prove the greatest of blessings, if it should make all honest men of one party; if it should put religion and virtue in countenance, restore a sense of public spirit, and convince men it is a dangerous folly to

pursue private aims in opposition to the good of their country, if it should turn our thoughts from gousenage and stock-jobbing, to industry and frugal methods of life; in fine, if it should revive and inflame that native spark of British worth and honour, which hath too long lain smothered and oppressed.

With this view I have, among so many projects for remedying the ill state of our affairs in a particular instance, ventured to publish the foregoing general hints, which as they have been thrown together from a zeal for the public good, so I heartily wish they may be regarded neither more nor less, than as they are fitted to promote that end.

Though it must be owned, that little can be hoped if we consider the corrupt degenerate age we live in. I know it is an old folly to make peevish complaints of the times, and charge the common failures of human nature on a particular age. One may nevertheless venture to affirm, that the present hath brought forth new and portentous villanies, not to be paralleled in our own or any other history. We have been long preparing for some great catastrophe. Vice and villany have by degrees grown reputable among us; our infidels have passed for fine gentlemen, and our venal traitors for men of sense, who knew the world. We have made a jest of public spirit, and cancelled all respect for whatever our laws and religion repute sacred. The old English modesty is quite worn off, and instead of blushing for our crimes, we are ashamed only of piety and virtue. In short, other nations have been wicked, but we are the first who have been wicked upon principle.

The truth is, our symptoms are so bad, that notwithstanding all the care and vigilance of the legislature, it is to be feared the final period of our state approaches. Strong constitutions, whether politic or natural, do not feel light disorders. But, when they are sensibly affected, the distemper is for the most part violent and of an ill prognostic. Free governments like our own were planted by the Goths in most parts of Europe; and though we all know what they are come to, yet we seem disposed rather to follow their example, than to profit by it.

Whether it be in the order of things that civil states should have, like natural products, their several periods of growth, perfection, and decay; or whether it be an effect, as seems more probable, of human folly, that as industry produces wealth, so wealth should produce vice, and vice ruin.

God grant the time be not near, when men shall say, 'this island was once inhabited by a religious, brave, sincere people, of plain uncorrupt manners, respecting inbred worth rather than titles and appearances, assertors of liberty, lovers of their country, jealous of their own rights, and unwilling to infringe the rights of others; improvers of learning and useful arts, enemies to

luxury, tender of other men's lives, and prodigal of their own; inferior in nothing to the old Greeks or Romans, and superior to each of those people in the perfections of the other. Such were our ancestors during their rise and greatness; but they degenerated, grew servile flatterers of men in power, adopted epicurean notions, became venal, corrupt, injurious, which drew upon them the hatred of God and man, and occasioned their final ruin.'

# A DISCOURSE,

ADDRESSED TO

## MAGISTRATES AND MEN IN AUTHORITY:

OCCASIONED BY THE ENORMOUS LICENSE AND IRRELIGION OF THE TIMES.

# A DISCOURSE.

THE pretensions and discourse of men throughout these kingdoms, would, at first view, lead one to think the inhabitants were all politicians; and yet, perhaps, political wisdom hath, in no age or country, been more talked of and less understood. License is taken for the end of government, and popular humour for its origin. No reverence for the laws, no attachment to the constitution, little attention to matters of consequence, and great altercation upon trifles, such idle projects about religion and government, as if the public had both to choose, a general contempt of all authority, divine and human, an indifference about the prevailing opinions, whether they tend to produce order or disorder, to promote the empire of God or the devil: these are the symptoms that strongly mark the present age; and this could never have been the case, if a neglect of religion had not made way for it.

When the Jews accused Paul upon religious matters and points of their law before Gallio, the Roman magistrate, it is said, that Gallio "cared for none of those things." And it is to be feared, there are not a few magistrates in this Christian country, who think with the same indifference on the subject of religion. Herein, nevertheless, they judge amiss, and are much wanting to their duty. For, although it be admitted, that the magistrate's peculiar object is the temporal welfare of the state; yet this will by no means exclude a proper care about the prevailing notions and opinions of religion, which influence the lives and actions of men, and have therefore a mighty effect on the public. Men's behaviour is the consequence of their principles. Hence it follows, that in order to make a state thrive and flourish, care must be taken that good principles be propagated in the minds of those who compose it.

It would be vain to depend on the outward form, the constitution and structure of a state, while the majority are ever governed by their inward ways of thinking, which at times will break out and show themselves paramount to all laws and institutions whatsoever. It must be great folly therefore to overlook notions, as matters of small moment to the state; while experience shows there is nothing more important; and that a prevailing disorder in the principles and opinions of its members, is ever dangerous to society, and capable of producing the greatest public evils.

Man is an animal, formidable both from his passions and his reason; his passions often urging him to great evils, and his reason furnishing means to achieve them. To tame this animal, and make him amenable to order, to inure him to a sense of justice and virtue, to withhold him from ill courses by fear, and encourage him in his duty by hopes; in short, to fashion and model him for society, hath been the aim of civil and religious institutions; and in all times, the endeavour of good and wise men. The aptest method for attaining this end, hath been always judged a proper education.

If men's actions are an effect of their principles, that is, of their notions, their belief, their persuasions; it must be admitted, that principles early sown in the mind, are the seeds which produce fruit and harvest in the ripe state of manhood. How lightly soever some men may speak of notions, yet so long as the soul governs the body, men's notions must influence their actions, more or less, as they are stronger or weaker; and to good or evil, as they are better or worse.

Our notions and opinions are a constant check on our appetites, and balance to our passions; and although they may not in every instance control and rule, yet they will never fail strongly to affect both the one and the other. What is it that bridles the impetuous desires of men? that restrains them when they are driven by the most violent passions? In a word, what is it that renders this world habitable, but the prevailing notions of order, virtue, duty, and providence? Some perhaps may imagine, that the eye of the magistrate alone is sufficient to keep mankind in awe. But if every man's heart was set to do all the mischief his appetite should prompt him to do, as often as opportunity and secresy presented themselves, there could be no living in the world.

And although too many of those entrusted with civil power, in these our days, may be said with Gallio, to "care for none of those things;" and many more who would pass for men of judgment and knowledge, may look on notions early imbibed, before their grounds and reasons are apprehended or understood, to be but mere prejudices; yet this will detract nothing from their truth and usefulness. To place this matter in a due light, I propose to show, that a system of salutary notions, is absolutely necessary to the support of every civil constitution. I shall enforce this point by the testimony of those who are esteemed the wisest men; and I shall make some remarks on the modern prevailing spirit, and the tendency of the maxims of our times.

Order is necessary, not only to the well-being, but to the very being of a state. Now, order and regularity in the actions of men, is not an effect of appetite or passion, but of judgment: and the judgment is governed by notions or opinions. There

must, therefore, of necessity, in every state, be a certain system of salutary notions, a prevailing set of opinions, acquired either by private reason and reflection, or taught or instilled by the general reason of the public; that is, by the law of the land. True it is, that where men either cannot, or will not use their own reason, think and examine for themselves; in such case, the notions taught and instilled into their minds are embraced rather by the memory than the judgment. Nor will it be any objection to say, that these are prejudices; inasmuch as they are therefore neither less useful, nor less true, although their proofs may not be understood by all men.

Licentious habits of youth give a cast or turn to age: the young rake makes an old infidel: libertine practices beget libertine opinions: and a vicious life generally ends in an old age of prejudice not to be conquered by reasoning. Of this we see instances even in persons celebrated for parts, and who reason admirably on other points where they are not biassed; but on the subject of religion obtrude their guesses, surmises, and broken hints for arguments. Against such there is no reasoning.

Prejudices are notions, or opinions, which the mind entertains without knowing the grounds and reasons of them, and which are assented to without examination. The first notions which take possession of the minds of men, with regard to duties social, moral, and civil, may therefore be justly styled prejudices. The mind of a young creature cannot remain empty; if you do not put into it that which is good, it will be sure to receive that which is bad.

Do what you can, there will still be a bias from education; and if so, is it not better this bias should lie towards things laudable and useful to society? This bias still operates, although it may not always prevail. The notions first instilled have the earliest influence, take the deepest root, and generally are found to give a colour and complexion to the subsequent lives of men, inasmuch as they are in truth the great source of human actions. It is not gold, or honour, or power, that move men to act, but the opinions they entertain of those things. Hence it follows, that if a magistrate should say, no matter what notions men embrace, I will take heed to their actions; therein he shows his weakness; for, such as are men's notions, such will be their deeds.

For a man to do as he would be done by; to love his neighbour as himself; to honour his superiors; to believe that God scans all his actions, and will reward or punish them; and to think that he who is guilty of falsehood, or injustice, hurts himself more than any one else: are not these such notions, and principles, as every wise governor, or legislator, would covet above all things, to have firmly rooted in the mind of every individual under his care? This is allowed, even by the enemies of religion,

who would fain have it thought the offspring of state policy, honouring its usefulness at the same time that they disparage its truth. What, therefore, cannot be acquired by every man's reasoning, must be introduced by precept, and riveted by custom; that is to say, the bulk of mankind must, in all civilized societies, have their minds by timely instruction, well seasoned and furnished with proper notions, which, although the grounds or proofs thereof be unknown to them, will nevertheless influence their conduct, and so far render them useful members of the state. But, if you strip men of these their notions, or, if you will, prejudices, with regard to modesty, decency, justice, charity, and the like, you will soon find them so many monsters, utterly unfit for human society.

I desire it may be considered, that most men want leisure, opportunity, or faculties, to derive conclusions from their principles, and establish morality on a foundation of human science. True it is, as St. Paul observes, that "the invisible things of God, from the creation of the world, are clearly seen."* And from thence the duties of natural religion may be discovered. But these things are seen and discovered by those alone who open their eyes, and look narrowly for them. Now, if you look throughout the world, you shall find but few of these narrow inspectors and inquirers, very few who make it their business to analyze opinions and pursue them to their rational source, to examine whence truths spring, and how they are inferred. In short, you shall find all men full of opinions, but knowledge only in a few.

It is impossible from the nature and circumstances of human kind, that the multitude should be philosophers, or that they should know things in their causes. We see every day, that the rules, or conclusions alone, are sufficient for the shopkeeper to state his account, the sailor to navigate his ship, or the carpenter to measure his timber; none of which understand the theory, that is to say, the grounds and reasons either of arithmetic or geometry. Even so in moral, political, and religious matters, it is manifest, that the rules and opinions early imbibed at the first dawn of understanding, and without the least glimpse of science, may yet produce excellent effects, and be very useful to the world: and that in fact they are so, will be very visible to every one who shall observe what passeth round about him.

It may not be amiss to inculcate, that the difference between prejudices and other opinions doth not consist in this; that the former are false, and the latter true; but in this, that the former are taken upon trust, and the latter acquired by reasoning. He who hath been taught to believe the immortality of the soul, may be as right in his notion, as he who hath reasoned himself into

* Rom. i. 20

that opinion. It will then by no means follow, that because this or that notion is a prejudice, it must be therefore false. The not distinguishing between prejudices and errors, is a prevailing oversight among our modern free-thinkers.

There may be, indeed, certain mere prejudices or opinions, which having no reasons either assigned or assignable, to support them, are nevertheless entertained by the mind, because they intruded betimes into it. Such may be supposed false, not because they were early learned, or learned without their reasons; but because there are in truth no reasons to be given for them.

Certainly, if a notion may be concluded false, because it was early imbibed, or because it is with most men an object of belief rather than of knowledge, one may by the same reasoning conclude several propositions of Euclid to be false. A simple apprehension of conclusions as taken in themselves, without the deductions of science, is what falls to the share of mankind in general. Religious awe, the precepts of parents and masters, the wisdom of legislators, and the accumulated experience of ages, supply the place of proofs and reasonings with the vulgar of all ranks: I would say, that discipline, national constitution, and laws human or divine, are so many plain land marks, which guide them into the paths wherein it is presumed they ought to tread.

From what hath been premised, it plainly appears, that in the bulk of mankind, there are, and must be prejudices; that is, opinions taken upon trust: or, in other words, that there are points of faith among all men, whatsoever, as well as among Christians.

And, as it is evident, that the unthinking part of every age, sex, and condition among us, must necessarily receive notions with the submission of faith; so it is very reasonable, that they should submit their faith to the greatest authorities human and divine, the law and the gospel. But, if once all reverence for these be destroyed, our pretenders to moral knowledge will have no authority to imbue the multitude with such notions as may control their appetites. From all which it follows, that the modern schemes of our free-thinkers, who pretend to separate morality from religion, how rational soever they may seem to their admirers, are, in truth and effect, most irrational and pernicious to civil society.

Let any one, who thinks at all, consider the savage state of undisciplined men, whose minds are nurtured to no doctrine, broke by no instruction, governed by no principle. Let him at the same time reflect on a society of persons educated in the principles of our church, formed betimes to fear God, to reverence their superiors, to be grateful to their benefactors, forgiving to their enemies, just and charitable to all men; and he will then be able to judge of the merits of those who are so active to weed out the prejudices of education.

Among the many wild notions broached in these giddy times, it must be owned, that some of our declaimers against prejudice, have wrought themselves into a sort of esteem for savages, as a virtuous and unprejudiced people. In proof of which, they allege their being free from many vices practised in civilized nations. Now, it is very true, among savages there are few instances to be found of luxury, avarice, or ambition: not that the contrary virtues take place, but because the opportunities and faculties for such vices, are wanting. For the same reason you do not see them in brutes.

What they esteem and admire in those creatures is not innocence, but ignorance: it is not virtue, but necessity. Give them but the means of transgressing, and they know no bounds. For example: supply the water drinking savage with strong liquor, and he shall be drunk for several days and nights together. Again: we admit an uneducated savage knows not how to supplant a rival with the refined treachery of a courtier; yet, if you put his foe once in his power, you shall soon see what a horrible relish and delight the monster hath in cruelty.

Above all others, religious notions, or, if you will, prejudices (since this, as hath been already observed, detracts nothing from their truth and usefulness) have the most influence, they are the strongest curb from vice, and the most effectual spur to worthy conduct. And indeed, whether we consider the reason of things, or the practice of men in all times, we shall be satisfied that nothing truly great and good can enter into the heart of one attached to no principles of religion, who believes no Providence, who neither fears hell, nor hopes for heaven.

Punishments and rewards have always had, and always will have, the greatest weight with men; and the most considerable of both kinds are proposed by religion, the duties whereof fall in with the views of the civil magistrate; it undeniably follows that nothing can add more strength to a good and righteous government than religion. Therefore it mainly concerns governors to keep an attentive eye on the religion of their subjects. And indeed, it is one lesson to magistrate and people, prince and subject, "Keep my commandments and live, and my law as the apple of thine eye."*

Although it is no consequence, from what hath been said, that men should be debarred the free use of reason and inquiry; yet surely it will follow, that without good reason a man should not reject those notions which have been instilled by the laws and education of his country. And even they who think they have such reason have nevertheless no right of dictating to others.†

* Prov. vii. 3.

† Though a man's private judgment be a rule to himself, it will not thence follow, that he hath any right to set it up for a rule to others.

It is true divine authority is superior to all human prejudices, institutions, and regards whatsoever. And it is wise, although at the risk of liberty or life, to obey God rather than man. But our modern reformers of prejudice have nothing to plead* of that kind.

There is no magistrate so ignorant as not to know that power, physical power, resides in the people; but authority is from opinion, which authority is necessary to restrain and direct the people's power, and therefore religion is the great stay and support of a state. Every religion that inculcates virtue, and discourageth vice, is so far of public benefit. The Christian religion doth not only this, but further makes every legal constitution sacred by commanding our submission thereto. "Let every soul be subject to the higher powers," saith St. Paul; "for the powers that be are ordained of God."† And in effect, for several years past, while the reverence for our church and religion hath been decaying and wearing off from the minds of men, it may be observed, that loyalty hath in proportion lost ground; and now the very word seems quite forgotten. Submission for conscience, as well as for wrath, was once reckoned an useful lesson; but now, with other good lessons, is laid aside as an obsolete prejudice.

That prince or magistrate, however great or powerful, who thinks his own authority sufficient to make him respected and obeyed, lies under a woful mistake, and never fails to feel it sooner or later. Obedience to all civil power is rooted in the religious fear of God; it is propagated, preserved, and nourished by religion. This makes men obey, not with eye-service, but in sincerity of heart. Human regards may restrain men from open and penal offences; but the fear of God is a restraint from all degrees of all crimes, however circumstanced. Take away this stay and prop of duty, this root of civil authority; and all that was sustained by it, or grew from it, shall soon languish. The authority, the very being of the magistrate, will prove a poor and precarious thing.

An inward sense of the supreme majesty of the King of kings, is the only thing that can beget and preserve a true respect for subordinate majesty in all the degrees of power, the first link of authority being fixed at the throne of God. But in these our days, that *majestas imperii*, that sacredness of character, which rooted in a religious principle, was the great guard and security of the state, is through want thereof become the public scorn. And indeed, what hold can the prince or magistrate have on the conscience of those who have no conscience? How can he build

* No man can say he is obliged in conscience, honour, or prudence, to insult the public wisdom, or to ridicule the laws under whose protection he lives.

† Rom. xiii. 1.

on the principles of such as have no principles? Or how can he hope for respect where God himself is neglected?

It is manifest, that no prince upon earth can hope to govern well, or even to live easy and secure, much less respected by his people, if he do not contribute by his example and authority, to keep up in their minds an awful sense of religion. As for a moral sense and moral fitness, or eternal relations, how insufficient those things are for establishing general and just notions of morality, or for keeping men within due bounds, is so evident from fact and experience, that I need not now enter into a particular disquisition about them.*

It must be owned, that the claws of rapine and violence may in some degree be pared and blunted by the outward polity of a state. But should we not rather try, if possible, to pull them quite out? The evil effects of wickedness may be often redressed by public justice. But would it not be better to heal the source, and by an inward principle extirpate wickedness from the heart, rather than depend altogether on human laws for preventing or redressing the bad effects thereof? "I might," said the Chinese doctor Confucius, "hear and decide controversies as well as another: but what I would have is, that men should be brought to abstain from controversies, out of an inward love and regard for each other."†

Too many in this age of free remarks and projects are delighted with republican schemes, and imagine they might remedy whatever was amiss, and render a people great and happy, merely by a new plan or form of government. This dangerous way of thinking and talking is grown familiar, through the foolish‡ freedom of the times. But, alas! those men do not seem to have touched either the true cause or cure of public evils. Be the plan ever so excellent, or the architects ever so able, yet no man in his wits would undertake to build a palace with mere mud or dirt. There must be fit materials; and without a religious principle men can never be fit materials for any society, much less for a republic. Religion is the centre which unites, and the cement which connects the several parts or members of the political body. Such it hath been held by all wise men, from the remotest times, down to our ingenious contemporaries; who, if they are in the right, it must be admitted that all the rest of the world have been in the wrong.

From the knowledge of its being absolutely necessary to the government of a state, that the hearts and minds of the people be inwardly imbued with good principles, Plato§ tells, that "Jupiter, to preserve the race of men from perishing, sent Mercury

* See Alciphron, dial. iii. and iv. † Scientia Sin. lib. i. fol. 12.

‡ Men forget that liberty consists in a mean, or that there is any other extreme beside tyranny. § In Protagora.

with orders to introduce modesty and justice among them, as the firmest ties of human society, and without which it could not subsist." And elsewhere the same author gives it plainly as his sense,* that "concerning those great duties which men's appetites and passions render difficult, it should seem rather the work of God to provide than of human legislators, if it were possible to hope for a system of laws framed and promulgated by God himself." You see how agreeable the Mosaic and Christian institutions are to the wishes of the wisest heathen.

Moses, indeed, doth not insist on a future state, the common basis of all political institutions. Nor do other lawgivers make a particular mention of all things necessary, but suppose some things as generally known or believed. The belief of a future state (which it is manifest the Jews were possessed of long before the coming of Christ) seems to have obtained among the Hebrews from primeval tradition; which might render it unnecessary for Moses to insist on that article. But the Sadducees and Epicureans had, in progress of time, gone so far towards rooting out this ancient and original sentiment, that it was in danger of being lost, had it not been taught and promulgated in a new light by our blessed Saviour.

But many among us who would pass for assertors of truth and liberty are accustomed to rail at this, and all other established opinions, as prejudices which people are taught whether they will or no, and before they are able to distinguish whether they are right or wrong. These lovers of truth would do well to consider, that in political, moral, and religious matters, the opinions of the vulgar, whether they go in coaches, or walk on foot, are for the most part prejudices; and are so like to be whatever side of the question they embrace; whether they follow the old maxims of the religion of their country, or the modern instructions of their new masters. I have already observed, that a point's being useful, and inculcated betimes, can be no argument of its falsehood, even although it should be a prejudice; far otherwise, utility and truth are not to be divided; the general good of mankind being the rule or measure of moral truth.†

I shall now add, that it is to be apprehended, many of those who are the most forward to banish prejudices would be the first to feel the want of them. It is even pitiful to think what would become of certain modern declaimers on that article, were prejudice really set aside, and were all men to be weighed in the exact scale of merit, and considered in proportion only to their intrinsic worth. Some prejudices are grounded in truth, reason, and nature: such are the respects which are paid to knowledge, learning, age, honesty, and courage, in all civilized countries. Others are purely the effect of particular constitutions; such are the

* De Legibus, lib. viii. † See Alciphron, dial. i. sect. 16.

respects, rights, and preeminences ascribed to some men by their fellow-subjects, on account of their birth and quality; which, in the great empires of Turkey and China, pass for nothing; and will pass for nothing elsewhere as soon as men have got rid of their prejudices, and learned to despise the constitutions of their country. It may behove those who are concerned to reflect on this betimes.

God, comprehending within himself the beginning, end, and middle of all things and times, exerts his energy throughout the whole creation. He never ceaseth to influence by instinct, by the light of nature, by his declared will. And it is the duty of magistrates and lawgivers to cultivate and encourage those divine impressions in the minds of all men under their care. We are not to think it is the work of God, and therefore not to be seconded by human care. Far otherwise, for that very reason it claims our utmost care and diligence, it being the indispensable duty of all good men, throughout the whole course of their lives, to co-operate with the designs of Providence. In religion, as in nature, God doth somewhat, and somewhat is to be done on the part of man. He causes the earth to bring forth materials for food and raiment; but human industry must improve, prepare, and properly apply both the one and the other, or mankind may perish with cold and hunger. And according to this same analogy,* the principles of piety and religion, the things that belong to our salvation, although originally and primarily the work of God, yet require the protection of human government, as well as the furtherance and aid of all wise and good men.

And if religion in all governments be necessary, yet it seems to be so more especially in monarchies: forasmuch as the frugal manners, and more equal fortunes in republics, do not so much inflame men's appetites, or afford such power or temptation to mischief, as the high estate and great wealth of nobles under a king. Therefore, although the magistrate (as was already observed) hath for his peculiar object the temporal well-being of the state; yet this will by no means exempt him from a due concern for the religion of his country.

What was the sense of our ancestors on this point appears throughout the whole constitution of these kingdoms; and in order to justify this constitution, and the wisdom of those who framed it, I shall crave leave to make use of some unsuspected testimonies, ancient and modern, which will show, that the public care of a national religion, hath been always a most principal point in the esteem of wise men, however run down by the prevailing license of our times.

* It will be sufficient, if such analogy appears between the dispensations of grace and nature as may make it probable to suppose them derived from the same author.—Alciphron, dial. vi. sect. 31.

The first testimony I shall produce is that of Zaleucus, the famous lawgiver of the Locrians; who, in his preamble to his laws,* begins with religion, laying it down as the corner-stone, or foundation of his whole superstructure, "That every inhabitant subject of the state should be persuaded that there is a God and divine providence: that the only way of becoming dear to God is by endeavouring, above all things, to be good, both in deed and in will: that a worthy citizen is one that prefers integrity to wealth." He further admonishes those who are difficult to persuade, "To bethink themselves of God's providence, and the punishments that await evil-doers; and in all their actions to be ever mindful of the last day, as if it were present, or in case the devil† should tempt a man to sin, he exhorts such a one to frequent the temples and altars, worshipping and imploring the divine assistance."

Aristotle,‡ discoursing of the means to preserve a monarchy, admonishes the supreme magistrate above all things to show himself zealous in religious matters; and this particularly for two reasons. "1. Because the subjects will have less to fear from one who fears God. 2. Because they will be less apt to rebel against him whom they take to be the favourite of heaven." And elsewhere this same philosopher recommends the worship of the gods as the first care of the state.§

Plato likewise begins his laws with the care of religious rites. He even maintains religion, or divine worship, to be the chief aim and scope of human life.‖

Hippodamus the Milesian,¶ in his scheme of a republic, allotted a third part of the land for maintaining divine worship.**

The Roman historians and poets do so abound with passages ascribing the successes of their government to religion, and its declension to the want or neglect thereof, that it may seem impertinent to enter into a detail of what every schoolboy knows.

To come from ancient to modern authority, Machiavel himself represents religion as absolutely necessary to maintain civil order and government. He observes, that for many years there was a most awful sense of religion in the old Romans; and that this did much facilitate their great undertakings. He likewise observes, and shows by divers instances, that the Romans were more afraid to break an oath than to transgress the laws; and that those things which even the love of their country and constitution could not bring them to, they were brought to through

* Stobæus de Leg. et Consuet. ser. 145.

† Δαίμων κακὸς. ‡ De Republ. lib. v. § Ibid. lib. vii. cap. 17.

‖ De Leg. lib. iv. et vi. ¶ Arist. de Republ. lib. ii. cap. 8.

** The abolishing of the Christian religion, upon a frugal principle, must be bad policy, if we may judge what will be by what hath been in the great pagan states of antiquity, whose religions, upon a fair estimate, will be found to have been more expensive.

a sense of religion. Upon the whole, he concludes, that old Rome was more obliged to Numa, who established a national religion, than to Romulus himself, the founder of that state.*

And here, by the by, I shall take notice, that some may imagine, the various forms and institutions of religion ought to unsettle men's minds with regard to the truth and certainty of any. But this matter rightly considered will, I think, produce a contrary effect. It showeth, indeed, that men groping out their way by the dim twilight of nature did only approach, some nearer, some farther off, while all were short of the truth. But then it showeth likewise, upon the whole, and in general, that religion is so natural to our minds, so useful to society, and of so necessary importance to the world, as might well prove its truth, and render it worthy of the divine care to propagate by prophecies, miracles, and the mission of the Son of God.

Philip de Comines,† a wise statesman and honest writer, who had great experience in affairs, declares it to be his opinion, "That want of religious faith is the only fountain of all mischiefs."

And that able minister, the famous Monsieur Colbert,‡ makes it his observation, "That if once the ecclesiastical character, as such, is vilified, the civil magistrate, even the crown itself, will, in consequence thereof, lose all authority."

It would be no hard matter to produce a cloud of testimonies in behalf of a national religion, from the most eminent of our own writers; but I shall content myself with adding one only, and that from a very unsuspected writer, Mr. Harrington, author of the Oceana, who shows that to be just and fair which others have shown to be expedient. "A man," saith he, "that, pleading for liberty of conscience, refuseth liberty to the national conscience, must be most absurd."§ And again: "If the conviction of a man's private conscience produces his private religion, the conviction of the national conscience must produce a national religion."‖

All these authorities are taken from thinking men and able politicians, none of which can be supposed to say what he did not really think; and it had been very easy to have increased the number. But I am sorry I was obliged to mention any at all, in proof of so plain and fundamental a point as that of a national religion. It is, indeed, a shameful necessity we lie under, of proving at this time of day the first elements, I will not say of Christianity, but even of natural light, from reasons and from authorities. The spirit of the times hath rendered this unavoidable.

If it should be asked, after all, how comes it then to pass that

* Discorsi, lib. i. cap. 12. † Hist. b. v. ‡ Test. Pol. cap. 8.
§ P. 27, first edit. ‖ Ibid.

the fashionable and prevailing maxims among our betters, in a neighbouring nation, should run directly counter to all such reasons and authorities? I will answer this question by asking, when were our neighbours known to abound to that degree in highwaymen, murderers, housebreakers, incendiaries? When did such numbers lay violent hands on themselves? When was there such a general and indecent contempt of whatever is esteemed sacred, in the state as well as the church? When were there known among them such public frauds, such open confederacies in villany, as the present age hath produced? When were they lower in the esteem of mankind, more divided at home, or more insulted abroad?

We of this land have a fatal tendency to overlook the good qualities, and imitate whatever is amiss, in those whom we respect. This leads me to make some remarks on the modern spirit of reformation that works so strongly in both these kingdoms.

Freedom of thought is the general plea and cry of the age; and we all grant, that thinking is the way to know; and the more real knowledge there is in the land the more likely it will be to thrive. We are not therefore against freedom of thought, but we are against those unthinking, overbearing people,* who, in these odd times, under that pretence, set up for reformers and new moulders of the constitution. We declare against those who would seduce ignorant and unexperienced persons from the reverence they owe to the laws and religion of their country; and under the notion of extirpating prejudices, would erase from their minds all impressions of piety and virtue, in order to introduce prejudices of another kind, destructive of society.

We esteem it a horrible thing to laugh at the apprehensions of a future state, with the author of the Characteristics;† or with him who wrote the Fable of the Bees, to maintain that "moral virtues are the political offspring which flattery begot upon pride;"‡ that "in morals there is no greater certainty than in fashions of dress;"§ that, indeed, "the doctrine of good manners teacheth men to speak well of all virtues; but requires no more of them in any age or country than the outward appearance of those in fashion."‖ Two authors of infidel systems these, who setting out upon opposite principles, are calculated to draw all mankind, by flattering either their vanity or their passions, into one or other system. And yet the people among whom such books are published, wonder how it comes to pass that the civil

* It is not reason, candidly proposed, that offends; but the reviling, insulting, ridiculing of the national laws and religion. All this profiteth for free-thinking, and must needs be offensive to all reasonable men.

† Vol. iii. Miscel. iii. c. 2.

‡ Inquiry into the Origin of Moral Virtue, ed. vi. p. 37.

§ The author's remarks on his Fable of the Bees, p. 379.

‖ Remarks, part ii. p. 155.

magistrate daily loseth his authority, that the laws are trampled upon, and the subject in constant fear of being robbed, or murdered, or having his house burnt over his head?

It may be presumed that the science of finding fault, which above all others is easiest to learn, suits best with a modern education. Too many there are of better fortunes than understandings, who have made the inquiry after truth a very small part of their care: these see somewhat, but not enough. It were to be wished, they knew either less or more. One thing it is evident they do not know; to wit, that while they rail at prejudice they are undoing themselves: they do not comprehend (what hath been before hinted) that their whole figure, their political existence, is owing to certain vulgar prejudices, in favour of birth, title, or fortune, which add nothing of real worth either to mind or body; and yet cause the most worthless person to be respected.

Freedom of thought is the prerogative of human kind; it is a quality inherent in the very nature of a thinking being. Nothing is more evident, than that every one can think his own way, in spite of any outward force or power whatsoever. It is therefore ridiculous for any man to declaim in defence of a privilege which cannot be denied or taken from him. But this will not infer a boundless freedom of speech,* an open contempt of laws, and a prescribing from private judgment† against public authority: things never borne in any well-ordered state, and which make the crying distemper of our times.

I am sensible, that whatever looks like a restraint on freedom of inquiry, must be very disagreeable to all reasoning and inquisitive men. But against this, I have said nothing.‡ On the contrary, I will freely own, a judicious and impartial search after truth, is the most valuable employment of the mind. Those who have the talents, and will be at the pains, cannot do better than engage in that noble pursuit. But those who are not qualified by age or education; those who have neither disposition, nor leisure, nor faculties to dig in the mine of truth themselves, must take it retailed out by others. I see no remedy. God who knows the opportunities of every man, requires impossibilities from no man. And where there is a sincere love of truth and virtue, the grace of God can easily supply the defect of human means.

It hath been before observed, and showed at large, that the bulk of mankind must have their minds betimes imbued with

* Is there no difference between indulging scrupulous consciences, and tolerating public deriders of all conscience and religion?

† A man who is himself permitted to follow his own private judgment cannot well complain, although he may not set it up as a public rule.

‡ The profane and lawless scorner is one thing, and the modest inquirer after truth another.

good and wholesome notions or principles, by their parents, pastors, and tutors, or else bad notions, hurtful to themselves and others, will undoubtedly take possession thereof. Such bad notions have, for several years past, been propagated with uncommon industry in these kingdoms: they now bring forth fruit every day more and more abundant. It is to be feared, that what hath been long ripening, is now near ripe. Many are the signs and tokens. He that runs may read.

But there cannot be a higher, or more flagrant symptom of the madness of our times, than that execrable fraternity of blasphemers, lately set up within this city of Dublin. Blasphemy against God is a great crime against the state. But that a set of men should, in open contempt of the laws, make this very crime their profession, distinguish themselves by a peculiar name,* and form a distinct society, whereof the proper and avowed business shall be, to shock all serious Christians by the most impious and horrid blasphemies, uttered in the most public manner: this surely must alarm all thinking men. It is a new thing under the sun reserved for our worthy times and country.

It is no common blasphemy I speak of: it is not simple cursing and swearing: it is not the effect either of habit or surprise; but a train of studied deliberate indignities against the divine majesty; and those of so black and hellish a kind, as the tongues alone which uttered them, can duly characterise and express. This is no speculative heresy, no remote or doubtful inference from an author's tenets: it is a direct and open attack on God himself. It is such a calm premeditated insult upon religion, law, and the very light of nature, that there is no sect or nation of men, whether Christians, Jews, Mahometans, or even civilized heathens, that would not be struck with horror and amazement at the thought of it, and that would not animadvert† on its authors with the utmost severity.

Deliberate, atheistical blasphemy, is of all crimes most dangerous to the public, inasmuch as it opens the door to all other crimes, and virtually contains them all. A religious awe and fear of God, being (as we have already observed) the centre that unites, and the cement that connects all human society. He who makes it his business to lessen or root out from the minds of men this principle, doth in effect endeavour to fill his country with highwaymen, house-breakers, murderers, fraudulent dealers, perjured witnesses, and every other pest of society. Therefore, it would be the greatest cruelty to our children, neighbours, and country, to connive at such a crime; a crime! which hath no

* Blasters.

† They (if there be any such) who think to serve the Reformation, by joining with blasters and devil-worshippers in a plea for license, are in truth a scandal and reproach to the Protestant cause.

natural passion or temptation to plead for it, but is the pure effect of an abandoned impudence in wickedness; and, perhaps, of a mistaken hope, that the laws and magistrates are asleep.

The question is not now, whether religion shall be established by law: the thing is already done, (and done with good reason, as appeareth from the premises) but whether a reverence* for the laws shall be preserved. Religion, considered as a system of saving truths, hath its sanction from heaven; its rewards and penalties are divine. But religion, as useful and necessary to society, hath been wisely established by law; and so established, and wrought into the very frame and principles of our government, is become a main part of the civil constitution. Our laws are the laws of a Christian country: our government hath been constituted and modelled by Christians; and is still administered and maintained by men professing belief in Christ. Can it then be supposed, that impious men shall with impunity, invent and †publicly utter the most horrid blasphemies: and at the same time, the whole constitution not be endangered? Or can it be supposed that magistrates, or men invested with power, should look on, and see the most sacred part of our constitution trampled under foot, and yet imagine their own dignity and authority to be secure, which rest entirely thereupon? I will venture to say, that whoever is a wise man, and a lover of his country, will not only be solicitous to preserve the honour of God sacred and entire; he will even discourage that prevailing prejudice against the dispensers of God's word, the teachers of those salutary doctrines, without which the public cannot thrive or subsist. He will be no contemner, not even of those rites and ordinances enjoined by law, as necessary to imprint and retain a sense of religion in the minds of men. He will extend his care to the outworks, as knowing that when these are gone, it may be difficult to preserve the rest.

Notwithstanding the vain assertion of those men, who would justify the present, by saying "all times are alike," it is most evident, that the magistrates, the laws, the very constitution of these realms, have lost no small share of their authority and reverence, since this great growth and spreading of impious principles. Whatever be the cause, the effect is apparent. Whether we ascribe it to the natural course of things, or to a just judgment upon those, who, having been careless to preserve a due sense of the divine authority, have seen and shall see their own despised.

* They who plead a right to contradict the laws, can pretend none for doing it with insolence or disrespect.

† To make the cause of such men the cause of liberty or toleration would be monstrous. A man is not suffered publicly to blaspheme, therefore he may not think freely: a profane miscreant is not indulged in the public worship of the devil, therefore a conscientious person may not serve God his own way: is not this absurd?

Darius, a heathen prince, made a decree, that in every dominion of his kingdom, men should tremble and fear before God.* Nebuchadnezzar likewise, another heathen, made a decree, that every people, nation, and language which spoke any thing amiss against God should be cut in pieces, and their houses made a dunghill† And if these things were done in Persia and Babylon, surely it may be expected, that impious blasphemers against God, and his worship, should at least be discouraged and put out of countenance in these Christian countries. Now, a constant course of disfavour from men in authority, would prove a most effectual check to all such miscreants. When therefore they are public and bold in their blasphemies, this is no small reflection on those who might check them if they would.

It is not so much the execution of the laws, as the countenance of those in authority, that is wanting to the maintenance of religion. If men of rank and power, who have a share in distributing justice, and a voice in the public councils, shall be observed to neglect divine worship themselves, it must needs be a great temptation for others to do the same. But if they and their families should set a good example, it may be presumed, that men of less figure would be disposed to follow it. Fashions are always observed to descend, and people are generally fond of being in the fashion; whence one would be apt to suspect, the prevailing contempt of God's word, and estrangement from his house, to a degree that was never known in any Christian country, must take its rise from the irreligion and bad example of those who are styled *the better sort.*

Offences must come, but woe be to him by whom the offence cometh. A man who is entrusted with power and influence in his country, hath much to answer for, if religion and virtue suffer through want of his authority and countenance. But in case he should, by the vanity of his discourse, his favour to wicked men, or his own apparent neglect of all religious duties, countenance what he ought to condemn, and authorise by his own example what he ought to punish; such a one, whatever he may pretend, is, in fact, a bad patriot, a bad citizen, and a bad subject, as well as a bad Christian.

Our prospect is very terrible, and the symptoms grow stronger every day. The morals of a people are in this, like their fortunes; when they feel a national shock, the worst doth not show itself immediately. Things make a shift to subsist for a time, on the credit of old notions and dying opinions. But the youth born and brought up in wicked times, without any bias to good from early principle, or instilled opinion, when they grow

* Dan. vi. 26. † Dan. iii. 29.

ripe must be monsters indeed. And, it is to be feared, that age of monsters is not far off.

Whence this impiety springs, by what means it gains ground among us, and how it may be remedied, are matters that deserve the attention of all those who have the power and the will to serve their country. And although many things look like a prelude to general ruin; although it is much to be apprehended, we shall be worse before we are better; yet who knows what may ensue, if all persons in power, from the supreme executor of the law, down to a petty constable, would, in their several stations, behave themselves like men, truly conscious and mindful, that the authority they are clothed with, is but a ray derived from the supreme authority of heaven? This may not a little contribute to stem that torrent, which, from small beginnings, and under specious pretences, hath grown to such a head, and daily gathers force more and more to that degree, as threatens a general inundation and destruction of these realms.

# A WORD TO THE WISE:

OR,

AN EXHORTATION

TO

THE ROMAN CATHOLIC CLERGY OF IRELAND.

# A WORD TO THE WISE.

Be not startled, reverend sirs, to find yourselves addressed to by one of a different communion. We are indeed (to our shame be it spoken) more inclined to hate for those articles wherein we differ, than to love one another for those wherein we agree. But if we cannot extinguish, let us at least suspend our animosities, and forgetting our religious feuds, consider ourselves in the amiable light of countrymen and neighbours. Let us for once turn our eyes on those things, in which we have one common interest. Why should disputes about faith interrupt the duties of civil life? or the different roads we take to heaven prevent our taking the same steps on earth? Do we not inhabit the same spot of ground, breathe the same air, and live under the same government? Why then should we not conspire in one and the same design to promote the common good of our country?

We are all agreed about the usefulness of meat, drink, and clothes, and without doubt, we all sincerely wish our poor neighbours were better supplied with them. Providence and nature have done their part; no country is better qualified to furnish the necessaries of life, and yet no people are worse provided. In vain is the earth fertile, and the climate benign, if human labour be wanting. Nature supplies the materials, which art and industry improve to the use of man, and it is the want of this industry that occasions all our other wants.

The public hath endeavoured to excite and encourage this most useful virtue. Much hath been done; but whether it be from the heaviness of the climate, or from the Spanish or Scythian blood that runs in their veins, or whatever else may be the cause, there still remains in the natives of this island a remarkable antipathy to labour. You, gentlemen, can alone conquer their innate hereditary sloth. Do you then, as you love your country, exert yourselves.

You are known to have great influence on the minds of your people, be so good as to use this influence for their benefit. Since other methods fail, try what you can do. "Be instant in season, out of season, reprove, rebuke, exhort."* Make them thoroughly sensible of the sin and folly of sloth, Show your charity in clothing the naked, and feeding the hungry, which

* 2 Tim. iv. 2.

you may do by the mere breath of your mouths. Give me leave to tell you, that no set of men upon earth have it in their power to do good on easier terms, with more advantage to others, and less pains or loss to themselves. Your flock are of all others most disposed to follow directions, and of all others want them most; and indeed what do they not want?

The house of an Irish peasant is the cave of poverty; within you see a pot and a little straw; without, a heap of children tumbling on the dunghill. Their fields and gardens are a lively counterpart of Solomon's description in the Proverbs; "I went," saith that wise king, "by the field of the slothful, and by the vineyard of the man void of understanding, and lo! it was all grown over with thorns, and nettles had covered the face thereof, and the stone wall thereof was broken down."* In every road the ragged ensigns of poverty are displayed; you often meet caravans of poor, whole families in a drove, without clothes to cover, or bread to feed them, both which might be easily procured by moderate labour. They are encouraged in this vagabond life by the miserable hospitality they meet with in every cottage, whose inhabitants expect the same kind reception in their turn, when they become beggars themselves; beggary being the last refuge of these improvident creatures.

If I seem to go out of my province, or to prescribe to those who must be supposed to know their own business, or to paint the lower inhabitants of this land in no very pleasing colours, you will candidly forgive a well meant zeal, which obligeth me to say things, rather useful than agreeable, and to lay open the sore in order to heal it.

But whatever is said must be so taken, as not to reflect on persons of rank and education, who are no way inferior to their neighbours; nor yet to include all even of the lowest sort, though it may well extend to the generality, of those especially in the western and southern parts of the kingdom, where the British manners have less prevailed. We take our notions from what we see, mine are a faithful transcript from originals about me.

The Scythians were noted for wandering, and the Spaniards for sloth and pride; our Irish are behind neither of these nations from which they descend, in their respective characteristics. "Better is he that laboureth and aboundeth in all things, than he that boasteth himself and wanteth bread," saith the son of Sirach,† but so saith not the Irishman. In my own family a kitchen-wench refused to carry out cinders, because she was descended from an old Irish stock. Never was there a more monstrous conjunction than that of pride with beggary; and yet this prodigy is seen every day in almost every part of this king-

* Prov. xxiv. 30, 31. † Ch. x. 27.

dom. At the same time these proud people are more destitute than savages, and more abject than negroes. The negroes in our plantations have a saying, "If negro was not negro, Irishman would be negro." And it may be affirmed with truth, that the very savages of America are better clad and better lodged than the Irish cottagers throughout the fine fertile counties of Limerick and Tipperary.

Having long observed and bewailed this wretched state of my countrymen, and the insufficiency of several methods set on foot to reclaim them, I have recourse to your Reverences, as the *dernier resort.* Make them to understand that you have their interest at heart, that you persuade them to work for their own sakes, and that God hath ordered matters so as that they who will not work for themselves, must work for others. The terrors of debt, slavery, and famine should, one would think, drive the most slothful to labour. Make them sensible of these things, and that the ends of Providence and order of the world require industry in human creatures. "Man goeth forth to his work and to his labour until the evening," saith the psalmist, where here he is describing the beauty, order, and perfection of the works of God.* But what saith the slothful person? "Yet a little sleep, a little slumber, a little folding the hands to sleep."† But what saith the wise man? "So shall thy poverty come as one that travelleth, and thy want as an armed man."‡

All nature will furnish you with arguments and examples against sloth: "Go to the ant, thou sluggard," cries Solomon. The ant, the bee, the beetle, and every insect but the drone, reads a lesson of industry to man. But the shortest and most effectual lesson is that of St. Paul: "If any man will not work, neither should he eat."§ This command was enjoined the Thessalonians, and equally respects all Christians, and indeed all mankind; it being evident by the light of nature, that the whole creation works together for good, and that no part was designed to be useless; as therefore the idle man is of no use, it follows that he hath no right to a subsistence. "Let them work," saith the apostle, "and eat their own bread;"‖ not bread got by begging, not bread earned by the sweat of other men; but their own bread, that which is got by their own labour. "Then shalt thou eat the labour of thine hands," saith the psalmist, to which he adds, "Happy shalt thou be, and it shall be well with thee;"¶ intimating, that to work and enjoy the fruits thereof is a great blessing.

A slothful man's imagination is apt to dress up labour in a horrible mask; but horrible as it is, idleness is more to be dreaded, and a life of poverty (its necessary consequence) is far

* Psalm civ. 23. † Prov. vi. 10. ‡ Prov. vi. 11.
§ 2 Thess. iii. 10. ‖ 2 Thess. iii. 12. ¶ Psalm cxxviii. 2.

more painful. It was the advice of Pythagoras, to choose the best kind of life; for that use would render it agreeable, reconciling men even to the roughest exercise. By practice, pains become at first easy, and in the progress pleasant; and this is so true, that whoever examines things will find, there can be no such thing as a happy life without labour, and that whoever doth not labour with his hands, must in his own defence labour with his brains.

Certainly, planting and tilling the earth is an exercise not less pleasing than useful; it takes the peasant from his smoky cabin into the fresh air and the open field, rendering his lot far more desirable than that of the sluggard, who lies in the straw, or sits whole days by the fire.

Convince your people that not only pleasure invites, but necessity also drives them to labour. If you have any compassion for these poor creatures, put them in mind how many of them perished in a late memorable distress, through want of that provident care against a hard season, observable not only in all other men, but even in irrational animals. Set before their eyes in lively colours, their own indigent and sordid lives, compared with those of other people, whose industry hath procured them hearty food, warm clothes, and decent dwellings. Make them sensible what a reproach it is, that a nation which makes so great pretensions to antiquity, and is said to have flourished many years ago in arts and learning, should in these our days turn out a lazy, destitute, and degenerate race.

Raise your voices, reverend sirs, exert your influence, show your authority over the multitude, by engaging them to the practice of an honest industry, a duty necessary to all, and required in all, whether Protestants or Roman Catholics, whether Christians, Jews, or pagans. Be so good among other points to find room for this, than which none is of more concern to the souls and bodies of your hearers, nor consequently deserves to be more amply or frequently insisted on.

Many and obvious are the motives that recommend this duty. Upon a subject so copious you can never be at a loss for something to say. And while by these means you rescue your countrymen from want and misery, you will have the satisfaction to behold your country itself improved. What pleasure must it give you to see these wastes and wild scenes, these naked ditches and miserable hovels, exchanged for fine plantations, rich meadows, well tilled fields, and neat dwellings; to see people well fed and well clad, instead of famished, ragged scarecrows, and those very persons tilling the fields that used to beg in the streets.

Neither ought the difficulty of the enterprise to frighten you from attempting it. It must be confessed a habit of industry is

not at once introduced; neighbour, nevertheless, will emulate neighbour, and the contagion of good example will spread as surely as of bad, though perhaps not so speedily. It may be hoped, there are many that would be allured by a plentiful and decent manner of life to take pains, especially when they observe it to be attained by the industry of their neighbours, in no sort better qualified than themselves.

If the same gentle spirit of sloth did not soothe our squires as well as peasants, one would imagine there should be no idle hands among us. Alas! how many incentives to industry offer themselves in this island, crying aloud to the inhabitants for work? Roads to be repaired, rivers made navigable, fisheries on the coasts, mines to be wrought, plantations to be raised, manufactures improved, and, above all, lands to be tilled and sowed with all sorts of grain.

When so many circumstances provoke and animate your people to labour, when their private wants and the necessities of the public, when the laws, the magistrates, and the very country calls upon them, you cannot think it becomes you alone to be silent, or hindmost in every project for promoting the public good. Why should you, whose influence is greatest, be least active? why should you, whose words are most likely to prevail, say least in the common cause?

Perhaps it will be said, the discouragements attending those of your communion are a bar against all endeavours for exciting them to a laudable industry. Men are stirred up to labour by the prospect of bettering their fortunes, by getting estates or employments; but those who are limited in the purchase of estates, and excluded from all civil employments, are deprived of those spurs to industry.

To this it may be answered, that admitting these considerations do, in some measure, damp industry and ambition in persons of a certain rank, yet they can be no let to the industry of poor people, or supply an argument against endeavouring to procure meat, drink, and clothes. It is not proposed, that you should persuade the better sort to acquire estates, or qualify themselves for becoming magistrates; but only that you should set the lowest of the people at work, to provide themselves with necessaries, and supply the wants of nature.

It will be alleged in excuse of their idleness, that the country people want encouragement to labour, as not having a property in the lands. There is small encouragement, say you, for them to build, or plant upon another's land, wherein they have only a temporary interest. To which I answer, that life itself is but temporary; that all tenures are not of the same kind; that the case of our English and the original Irish is equal in this respect; and that the true aborigines, or natural Irish, are noted for want

of industry in improving even on their own lands, whereof they have both possession and property.

How many industrious persons are there in all civilized countries, without any property in lands, or any prospect of estates or employments? Industry never fails to reward her votaries. There is no one but can earn a little, and little added to little makes a heap. In this fertile and plentiful island none can perish for want but the idle and improvident. None who have industry, frugality, and foresight, but may get into tolerable, if not wealthy circumstances. Are not all trades and manufactures open to those of your communion? have you not the same free use, and may you not make the same advantage of fairs and markets as other men? do you pay higher duties, or are you liable to greater impositions than your fellow subjects? and are not the public premiums and encouragements given indifferently to artists of all communions? have not, in fact, those of your communion a very great share of the commerce of this kingdom in their hands? and is not more to be got by this than by purchasing estates, or possessing civil employments, whose incomes are often attended with large expenses?

A tight house, warm apparel, and wholesome food, are sufficient motives to labour. If all had them we should be a flourishing nation. And if those who take pains may have them, those who will not take pains are not to be pitied; they are to be looked on and treated as drones, the pest and disgrace of society.

It will be said, the hardness of the landlord cramps the industry of the tenant. But if rent be high, and the landlord rigorous, there is more need of industry in the tenant. It is well-known that in Holland taxes are much higher, and rent both of land and houses far dearer than in Ireland. But this is no objection or impediment to the industry of the people, who are rather animated and spurred on to earn a livelihood by labour, that is not to be got without it.

You will say, it is an easy matter to make a plausible discourse on industry and its advantages; but what can be expected from poor creatures, who are destitute of all conveniences for exerting their industry, who have nothing to improve upon, nothing to begin the world with? I answer, they have their four quarters, and five senses. Is it nothing to possess the bodily organs sound and entire? That wonderful machine, the hand, was it formed to be idle?

Was there but will to work, there are not wanting in this island either opportunities or encouragements. Spinning alone might employ all idle hands, children as well as parents, being soon learned, easily performed, and never failing of a market, requiring neither wit nor strength, but suited to all ages and capacities. The public provides utensils, and persons for teach-

ing the use of them; but the public cannot provide a heart and will to be industrious. These, I will not deny, may be found in several persons in some other parts of the kingdom, and wherever they are found the comfortable effects show themselves. But seldom, very seldom, are they found in these southern people, whose indolence figureth a lion in the way, and is proof against all encouragement.

But you will insist, how can a poor man, whose daily labour goes for the payment of his rent, be able to provide present necessaries for his family, much less to lay up a store for the future? It must be owned, a considerable share of the poor man's time and labour goes towards paying his rent. But how are his wife and children employed, or how doth he employ himself the rest of his time? The same work tires, but different works relieve. Where there is a true spirit of industry, there will never be wanting something to do, without doors or within, by candle-light, if not by day-light. "*Labor ipse voluptas*," saith the poet, and this is verified in fact.

In England, when the labour of the field is over, it is usual for men to betake themselves to some other labour of a different kind. In the northern parts of that industrious land, the inhabitants meet, a jolly crew, at one another's houses, where they merrily and frugally pass the long and dark winter evenings; several families by the same light and the same fire, working at their different manufactures of wool, flax, or hemp; company meanwhile mutually cheering and provoking to labour. In certain other parts* you may see, on a summer's evening, the common labourers sitting along the streets of a town, or village, each at his own door, with a cushion before him, making bone-lace, and earning more in an evening's pastime than an Irish family would in a whole day. Those people, instead of closing the day with a game on greasy cards, or lying stretched before the fire, pass the time much more cheerfully in some useful employment, which custom hath rendered light and agreeable.

But admitting, for the various reasons above alleged, that it is impossible for our cottagers to be rich, yet it is certain they may be clean. Now bring them to be cleanly, and your work is half-done. A little washing, scrubbing, and rubbing, bestowed on their persons and houses, would introduce a sort of industry, and industry in any one kind is apt to beget it in another.

Indolence in dirt is a terrible symptom, which shows itself in our lower Irish more, perhaps, than in any people on this side the Cape of Good Hope. I will venture to add, that look throughout the kingdom, and you shall not find a clean house inhabited by cleanly people, and yet wanting necessaries; the same

* E. g. Newport Pagnel in Buckinghamshire.

spirit of industry that keeps folk clean, being sufficient to keep them also in food and raiment.

But alas! our poor Irish are wedded to dirt upon principle. It is with some of them a maxim, that the way to make children thrive is to keep them dirty. And I do verily believe, that the familiarity with dirt, contracted and nourished from their infancy, is one great cause of that sloth which attends them in every stage of life. Were children but brought up in an abhorrence of dirt, and obliged to keep themselves clean, they would have something to do, whereas they now do nothing.

It is past all doubt, that those who are educated in a supine neglect of all things, either profitable or decent, must needs contract a sleepiness and indolence, which doth necessarily lead to poverty, and every other distress that attends it. "Love not sleep," cries Solomon, "lest thou come to poverty, open thine eyes, and thou shalt be satisfied with bread."* It is therefore greatly to be wished, that you would persuade parents, to inure their children betimes to a habit of industry, as the surest way to shun the miseries that must otherwise befall them.

An early habit, whether of sloth or diligence, will not fail to show itself throughout the whole course of a man's life "Train up a child," saith the wise man, "in the way he should go, and when he is old he will not depart from it."† The first tincture often leaves so deep a stain as no after-thought or endeavour can wash out. Hence sloth in some minds is proof against all arguments and examples whatsoever, all motives of interest and duty, all impressions even of cold and hunger. This habit rooted in the child, grows up and adheres to the man, producing a general listlessness and aversion from labour. This I take to be our great calamity.

For admitting, that some of our 'squires and landlords are vultures with iron bowels, and that their hardness and severity is a great discouragement to the tenant, who will naturally prefer want and ease before want and toil; it must at the same time be admitted, that neither is the landlord, generally speaking, so hard, nor the climate so severe, nor the soil so ungrateful, as not to answer the husbandman's labour, where there is a spirit of industry; the want of which is the true cause of our national distress. Of this there are many evident proofs.

I have myself known a man, from the lowest condition of life, without friends or education, not knowing so much as to write or read, bred to no trade or calling, by pure dint of day-labour, frugality, and foresight, to have grown wealthy, even in this island, and under all the above mentioned disadvantages. And what is done by one, is possible to another.

* Prov. xx. 13. † Prov. xxii. 6

In Holland a child five years old is maintained by its own labour; in Ireland many children of twice that age do nothing but steal, or encumber the earth and dunghill. This shameful neglect of education shows itself through the whole course of their lives, in a matchless sloth bred in the very bone, and not to be accounted for by any outward hardship or discouragement whatever. It is the native colour, if we may so speak, and complexion of the people. Dutch, English, French, or Flemish cannot match them.

Mark an Irishman at work in the field; if a coach, or horseman go by, he is sure to suspend his labour, and stand staring until they are out of sight. A neighbour of mine made it his remark in a journey from London to Bristol, that all the labourers, of whom he inquired the road, constantly answered without looking up, or interrupting their work, except one who stood staring and leaning on his spade, and him he found to be an Irishman.

It is a shameful thing and peculiar to this nation, to see lusty vagabonds strolling about the country, and begging without any pretence to beg. Ask them why they do not labour to earn their own livelihood, they will tell you, They want employment; offer to employ them, and they shall refuse your offer; or, if you get them to work one day, you may be sure not to see them the next. I have known them decline even the lightest labour, that of hay-making, having at the same time neither clothes for their backs, nor food for their bellies.

A sore leg is an estate to such a fellow, and this may be easily got, and continued with small trouble. Such is their laziness, that rather than work they will cherish a distemper. This I know to be true, having seen more than one instance, wherein the second natures so far prevailed over the first, that sloth was preferred to health. To these beggars who make much of their sores, and prolong their diseases, you cannot do a more thankless office than cure them, except it be to shave their beards, which conciliate a sort of reverence to that order of men.

It is indeed a difficult task to reclaim such fellows from their slothful and brutal manner of life, to which they seem wedded with an attachment that no temporal motives can conquer; nor is there, humanly speaking, any hopes they will mend, except their respect for your lessons, and fear of something beyond the grave be able to work a change in them.

Certainly, if I may advise, you should in return for the lenity and indulgence of the government, endeavour to make yourselves useful to the public; and this will be best performed, by rousing your poor countrymen from their beloved sloth. I shall not now dispute the truth or importance of other points, but will venture to say, that you may still find time to inculcate this doctrine of

an *honest industry*, and that this would by no means be time thrown away, if promoting your country's interest, and rescuing so many unhappy wretches of your communion from beggary, or the gallows, be thought worth your pains.

It should seem you cannot in your sermons do better than inveigh against idleness, that extensive parent of many miseries and many sins; idleness, the mother of hunger and sister of theft; "idleness," which, the son of Sirach assures us, "teacheth many vices."

The same doctrine is often preached from the gallows. And indeed the poverty, nakedness, and famine which idleness entaileth on her votaries, do make men so wretched, that they may well think it better to die than to live such lives. Hence a courage for all villanous undertakings, which bringing men to a shameful death, do then open their eyes when they are going to be closed for ever.

If you have any regard (as it is not to be doubted) either for the souls or bodies of your people, or even for your own interest and credit, you cannot fail to inveigh against this crying sin of your country. Seeing you are obnoxious to the laws, should you not in prudence try to reconcile yourselves to the favour of the public; and can you do this more effectually, than by co-operating with the public spirit of the legislature, and men in power?

Were this but done heartily, would you but "be instant in season and out of season, reprove, rebuke, exhort," * such is the ascendant you have gained over the people, that we might soon expect to see the good effects thereof. We might hope that our garners would be soon full, affording all manner of store, that our sheep would bring forth thousands, that our oxen would be strong to labour, that there would be no breaking in nor going out" (no robbery, nor migration for bread), "and that there would be no complaining in our streets." †

It stands you upon to act with vigour in this cause, and shake off the shackles of sloth from your countrymen, the rather, because there be some who surmise, that yourselves have put them on. Right or wrong, men will be apt to judge of your doctrines by their fruits. It will reflect small honour on their teachers, if instead of honesty and industry those of your communion are peculiarly distinguished by the contrary qualities, or if the nation converted by the great and glorious St. Patrick should, above all other nations, be stigmatized and marked out as good for nothing.

I can never suppose you so much your own enemies, as to be friends to this odious sloth. But were this once abolished, and a laudable industry introduced in its stead, it may perhaps be asked,

* 2 Tim. iv. 2. † Ps. cxliv. 13, 14.

who are to be gainers? I answer, your reverences are like to be great gainers; for every penny you now gain, you will gain a shilling: you would gain also in your credit: and your lives would be more comfortable.

You need not be told, how hard it is to rake from rags and penury a tolerable subsistence; or how offensive to perform the duties of your function, amidst stench and nastiness; or how much things would change for the better, in proportion to the industry and wealth of your flocks. Duty as well as interest calls upon you to clothe the naked, and feed the hungry, by persuading them to "eat" (in the apostle's phrase) "their own bread," or, as the Psalmist expresseth it, "the labour of their own hands." By inspiring your flocks with a love of industry, you will at once strike at the root of many vices, and dispose them to practise many virtues. This therefore is the readiest way to improve them.

Consult your superiors. They shall tell you the doctrine here delivered is a sound catholic doctrine, not limited to protestants, but extending to all, and admitted by all, whether Protestants or Roman Catholics, Christians or Mahometans, Jews or Gentiles. And as it is of the greatest extent, so it is also of the highest importance. St. Paul expressly saith, that "if any provide not for his own, and especially for those of his own house, he hath denied the faith, and is worse than an infidel."*

In vain then do you endeavour to make men orthodox in points of faith, if at the same time, in the eyes of Christ and his apostles, you suffer them to be worse than infidels, than those who have no faith at all. There is something it seems worse than even infidelity; and to incite and stimulate you to put away that cursed thing from among you, is the design and aim of this address. The doctrine we recommend is an evident branch of the law of nature; it was taught by prophets, inculcated by apostles, encouraged and enforced by philosophers, legislators, and all wise states, in all ages, and in all parts of the world. Let me therefore intreat you to exert yourselves, to "be instant in season and out of season, rebuke, reprove, exhort." Take all opportunities to drive the lion out of the way; raise your voices, omit no occasion, public or private, of awakening your wretched countrymen from their sweet dream of sloth.

Many suspect your religion to be the cause of that notorious idleness which prevails so generally among the natives of this island, as if the Roman Catholic faith was inconsistent with an honest diligence in a man's calling. But whoever considers the great spirit of industry that reigns in Flanders and France, and even beyond the Alps, must acknowledge this to be a groundless suspicion. In Piedmont and Genoa, in the Milanese and the

* 1 Tim. v. 8.

Venetian state, and indeed throughout all Lombardy, how well is the soil cultivated, and what manufactures of silk, velvet, paper, and other commodities flourish? The king of Sardinia will suffer no idle hands in his territories, no beggar to live by the sweat of another's brow; it has even been made penal at Turin to relieve a strolling beggar. To which I might add, that the person whose authority will be of the greatest weight with you, even the pope himself, is at this day endeavouring to put new life into the trade and manufactures of his country.

Though I am in no secret of the court of Rome, yet I will venture to affirm, that neither pope, nor cardinals, will be pleased to hear, that those of their communion are distinguished above all others, by sloth, dirt, and beggary; or be displeased at your endeavouring to rescue them from the reproach of such an infamous distinction.

The case is as clear as the sun: what we urge is enforced by every motive that can work on a reasonable mind. The good of your country, your own private interest, the duty of your function, the cries and distresses of the poor do with one voice call for your assistance. And if it is on all hands allowed to be right and just, if agreeable both to reason and religion, if coincident with the views both of your temporal and spiritual superiors, it is to be hoped, this address may find a favourable reception, and that a zeal for disputed points, will not hinder your concurring to propagate so plain and useful a doctrine, wherein we are all agreed.

When a leak is to be stopped, or a fire extinguished, do not all hands co-operate without distinction of sect or party? Or if I am fallen into a ditch, shall I not suffer a man to help out, until I have first examined his creed? Or when I am sick shall I refuse the physic, because my physician doth, or doth not believe the pope's supremacy?

*Fas est et ab hoste doceri.* But in truth, I am no enemy to your persons, whatever I may think of your tenets. On the contrary I am your sincere well-wisher. I consider you as my countrymen, as fellow-subjects, as professing belief in the same Christ. And I do most sincerely wish, there was no other contest between us but—who shall most completely practise the precepts of him by whose name we are called, and whose disciples we all profess to be.

# A LETTER

TO

## THE ROMAN CATHOLICS OF THE DIOCESE OF CLOYNE.

PUBLISHED IN THE LATE REBELLION, A. D. 1745.

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MY COUNTRYMEN AND FELLOW-SUBJECTS,

NOTWITHSTANDING the differences of our religious opinions, I should be sorry to be wanting in any instance of humanity or good neighbourhood to any of you. For which reason I find myself strongly inclined, at this critical juncture, to put you in mind, that you have been treated with a truly Christian lenity under the present government; that your persons have been protected, and your properties secured by equal laws, and that it would be highly imprudent, as well as ungrateful, to forfeit these advantages, by making yourselves tools to the ambition of foreign princes, who fancy it expedient to raise disturbances among us at present, but as soon as their own ends are served, will not fail to abandon you, as they have always done.

Is it not evident, that your true interest consists in lying still, and waiting the event, since Ireland must necessarily follow the fate of England; and that therefore prudence and policy prescribe quiet to the Roman Catholics of this kingdom, who, in case a change of hands should not succeed, after your attempting to bring it about, must then expect to be on a worse foot than ever?

But we will suppose it succeeds to your wish. What then? Would not this undermine even your own interests and fortune, which are often interwoven with those of your neighbours? Would not all those, who have debts or money, or other effects in the hands of Protestants, be fellow-sufferers with them? Would not all those who hold, under the acts of settlement, be as liable as Protestants themselves to be dispossessed by the old proprietors? Or, can even those who are styled proprietors, flatter themselves with hopes of possessing the estates which they claim, which, in all likelihood, would be given to favourites, (perhaps to foreigners), who are near the person, or who fought the battles of their master.

Under Protestant governments, those of your communion have formerly enjoyed a greater share of the lands of this kingdom, and more ample privileges. You bore your part in the magistracy and the legislature, and could complain of no hardships on the score of your religion. If these advantages have been since impaired or lost, was it not by the wrong measures yourselves took to enlarge them, in several successive attempts, each of which left you weaker, and in a worse condition than you were before. And this, notwithstanding the vaunted succours of France and Spain, whose vain efforts, in conjunction with yours, constantly recoiled on your own heads, even when your numbers and circumstances were far more considerable than they now are.

You all know these things to be true. I appeal to your own breasts. Dear bought experience hath taught you, and past times instruct the present. But perhaps you follow conscience rather than interest. Will any men amongst you pretend to plead conscience against being quiet, or against paying allegiance and peaceable submission to a Protestant prince, which the first Christians paid even to heathen, and which those of your communion, at this day, pay to Mahometan and to idolatrous princes in Turkey and China, and which you yourselves have so often professed to pay to our present gracious sovereign? Conscience is quite out of the case. And what man in his senses would engage in a dangerous course, to which neither interest doth invite, nor conscience oblige him?

I heartily wish, that this advice may be as well taken as it is meant, and that you may maturely consider your true interest, rather than rashly repeat the same errors which you have so often repented of. So recommending you to the merciful guidance of Almighty God, I subscribe myself,

Your real well-wisher,

GEORGE CLOYNE.

# MAXIMS CONCERNING PATRIOTISM.

1 EVERY man by consulting his own heart, may easily know whether he is or is not a patriot. But it is not so easy for the by-standers.

2. Being loud and vehement either against a court, or for a court, is no proof of patriotism.

3 A man whose passion for money runs high, bids fair for being no patriot. And he likewise whose appetite is keen for power.

4. A native than a foreigner, a married man than a bachelor, a believer than an infidel, have a better chance for being patriots.

5. It is impossible an epicure should be a patriot.

6. It is impossible a man who cheats at cards, or cogs the dice, should be a patriot.

7. It is impossible a man who is false to his friends and neighbours should be true to the public.

8. Every knave is a thorough knave. And a thorough knave is a knave throughout.

9. A man who hath no sense of God or conscience; would you make such a one guardian to your child? if not, why guardian to the state?

10. A sot, a beast, benummed and stupified by excess, is good for nothing, much less to make a patriot of.

11. A fop or man of pleasure makes but a scurvy patriot.

12. A sullen, churlish man, who loves nobody, will hardly love his country.

13. The love of praise and esteem may do something: but to make a true patriot there must be an inward sense of duty and conscience.

14. Honesty (like other things) grows from its proper seed, good principles early laid in the mind.

15. To be a real patriot, a man must consider his countrymen as God's creatures, and himself as accountable for his acting towards them.

16. If *pro aris et focis* be the life of patriotism, he who hath no religion or no home makes a suspected patriot.

17. No man perjures himself for the sake of conscience.

18. There is an easy way of reconciling malcontents. *Sunt verba et voces quibus hunc lenire dolorem*, &c.

19. A good groom will rather stroke than strike.

20. He who saith there is no such thing as an honest man, you may be sure is himself a knave.

21. I have no opinion of your bumper patriots. Some eat, some drink, some quarrel for their country. MODERN PATRIOTISM!

22. Ibycus is a carking, griping, closefisted fellow. It is odds that Ibycus is not a patriot.

23. We are not to think every clamorous haranguer, or every splenetic repiner against a court, is therefore a patriot.

24. A patriot is one who heartily wisheth the public prosperity, and doth not only wish, but also study and endeavour to promote it.

25. Gamesters, fops, rakes, bullies, stock-jobbers: alas! what patriots?

26. Some writers have thought it impossible that men should be brought to laugh at public spirit. Yet this hath been done in the present age.

27. The patriot aims at his private good in the public. The knave makes the public subservient to his private interest. The former considers himself as part of a whole, the latter considers himself as the whole.

28. There is and ever will be a natural strife between court and country. The one will get as much, and the other give as little as it can. How must the patriot behave himself?

29. He gives the necessary. If he gives more it is with a view of gaining more to his country.

30. A patriot will never barter the public money for his private gain.

31. Moral evil is never to be committed, physical evil may be incurred, either to avoid a greater evil, or to procure a good.

32. Where the heart is right, there is true patriotism.

33. In your man of business, it is easier to meet with a good head than a good heart.

34. A patriot will admit there may be honest men, and that honest men may differ.

35. He that always blames or always praises is no patriot.

36. Were all sweet and sneaking courtiers, or were all sour malcontents; in either case the public would thrive but ill.

37. A patriot would hardly wish there was no contrast in the state.

38. Ferments of the worst kind succeed to perfect inaction.

39. A man rages, rails, and raves; I suspect his patriotism.

40. The fawning courtier and the surly 'squire, often mean the same thing, each his own interest.

41. A patriot will esteem no man for being of his party.

42. The factious man is apt to mistake himself for a patriot.

# THE QUERIST:

CONTAINING

## SEVERAL QUERIES,

PROPOSED TO THE CONSIDERATION OF THE PUBLIC.

# ADVERTISEMENT

## BY THE AUTHOR.

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THE Querist was first printed in the year one thousand seven hundred and thirty-five, since which time the face of things is somewhat changed. In this edition some alterations have been made. The three parts are published in one; some few queries are added, and many omitted, particularly of those relating to the sketch or plan of a national bank; which it may be time enough to take again in hand, when the public shall seem disposed to make use of such an expedient. I had determined with myself never to prefix my name to the Querist, but in the last edition was overruled by a friend, who was remarkable for pursuing the public interest with as much diligence, as others do their own. I apprehend the same censure on this that I incurred upon another occasion, for meddling out of my profession. Though to feed the hungry and clothe the naked, by promoting an honest industry, will, perhaps, be deemed no improper employment for a clergyman, who still thinks himself a member of the commonwealth. As the sum of human happiness is supposed to consist in the goods of mind, body, and fortune, I would fain make my studies of some use to mankind, with regard to each of these three particulars, and hope it will not be thought faulty or indecent in any man, of what profession soever, to offer his mite towards improving the manners, health, and prosperity of his fellow-creatures.

# THE QUERIST.

*Qu.* 1. WHETHER there ever was, is, or will be, an industrious nation poor, or an idle rich?

2. Whether a people can be called poor, where the common sort are well fed, clothed, and lodged?

3. Whether the drift and aim of every wise state should not be, to encourage industry in its members? And whether those, who employ neither heads nor hands for the common benefit, deserve not to be expelled like drones out of a well-governed state?

4. Whether the four elements, and man's labour therein, be not the true source of wealth?

5. Whether money be not only so far useful, as it stirreth up industry, enabling men mutually to participate the fruits of each other's labour?

6. Whether any other means, equally conducing to excite and circulate the industry of mankind, may not be as useful as money?

7. Whether the real end and aim of men be not power? And whether he who could have every thing else at his wish or will, would value money?

8. Whether the public aim in every well governed state be not, that each member, according to his just pretensions and industry, should have power?

9. Whether power be not referred to action; and whether action doth not follow appetite or will?

10. Whether fashion doth not create appetites; and whether the prevailing will of a nation is not the fashion?

11. Whether the current of industry and commerce be not determined by this prevailing will?

12. Whether it be not owing to custom, that the fashions are agreeable?

13. Whether it may not concern the wisdom of the legislature to interpose in the making of fashions; and not leave an affair of so great influence, to the management of women and fops, tailors, and vintners?

14. Whether reasonable fashions are a greater restraint on freedom than those which are unreasonable?

15. Whether a general good taste in a people would not

greatly conduce to their thriving? And whether an uneducated gentry be not the greatest of national evils?

16. Whether customs and fashions do not supply the place of reason in the vulgar of all ranks? Whether, therefore, it doth not very much import that they should be wisely framed?

17. Whether the imitating those neighbours in our fashions, to whom we bear no likeness in our circumstances, be not one cause of distress to this nation?

18. Whether frugal fashions in the upper rank, and comfortable living in the lower, be not the means to multiply inhabitants?

19. Whether the bulk of our Irish natives are not kept from thriving, by that cynical content in dirt and beggary, which they possess to a degree beyond any other people in Christendom?

20. Whether the creating of wants be not the likeliest way to produce industry in a people? And whether, if our peasants were accustomed to eat beef and wear shoes, they would not be more industrious?

21. Whether other things being given, as climate, soil, &c., the wealth be not proportioned to the industry, and this to the circulation of credit, be the credit circulated or transferred by what marks or tokens soever?

22. Whether, therefore, less money, swiftly circulating, be not, in effect, equivalent to more money slowly circulating? Or, whether, if the circulation be reciprocally as the quantity of coin, the nation can be a loser?

23. Whether money is to be considered as having an intrinsic value, or as being a commodity, a standard, a measure, or a pledge, as is variously suggested by writers? And whether the true idea of money, as such, be not altogether that of a ticket or counter?

24. Whether the value or price of things be not a compounded proportion, directly as the demand, and reciprocally as the plenty?

25. Whether the terms crown, livre, pound sterling, &c., are not to be considered as exponents or denominations of such proportion? And whether gold, silver, and paper, are not tickets or counters for reckoning, recording, and transferring thereof?

26. Whether the denominations being retained, although the bullion were gone, things might not nevertheless be rated, bought and sold, industry promoted, and a circulation of commerce maintained?

27. Whether an equal raising of all sorts of gold, silver, and copper coin, can have any effect in bringing money into the kingdom? And whether altering the proportions between the several sorts can have any other effect, but multiplying one kind and lessening another, without any increase of the sum total?

28. Whether arbitrary changing the denomination of coin be not a public cheat?

29 What makes a wealthy people? Whether mines of gold and silver are capable of doing this? And whether the negroes, amidst the gold sands of Africa, are not poor and destitute?

30. Whether there be any virtue in gold or silver, other than as they set people at work, or create industry?

31. Whether it be not the opinion or will of the people, exciting them to industry, that truly enricheth a nation? And whether this doth not principally depend on the means for counting, transferring, and preserving power, that is, property of all kinds?

32. Whether if there was no silver or gold in the kingdom, our trade might not nevertheless supply bills of exchange, sufficient to answer the demands of absentees in England, or elsewhere?

33. Whether current bank-notes may not be deemed money? And whether they are not actually the greater part of the money of this kingdom?

34. Provided the wheels move, whether it is not the same thing, as to the effect of the machine, be this done by the force of wind, or water, or animals?

35. Whether power to command the industry of others be not real wealth? And whether money be not, in truth, tickets or tokens for conveying and recording such power? And whether it be of great consequence what materials the tickets are made of?

36. Whether trade, either foreign or domestic, be in truth any more than this commerce of industry?

37. Whether to promote, transfer, and secure this commerce, and this property in human labour, or, in other words, this power, be not the sole means of enriching a people; and how far this may be done independently of gold and silver?

38. Whether it were not wrong to suppose land itself to be wealth? And whether the industry of the people is not first to be considered as that which constitutes wealth, which makes even land and silver to be wealth, neither of which would have any value but as means and motives to industry?

39. Whether in the wastes of America a man might not possess twenty miles square of land, and yet want his dinner, or a coat to his back?

40. Whether a fertile land, and the industry of its inhabitants, would not prove inexhaustible funds of real wealth, be the counters for conveying and recording thereof what you will, paper, gold, or silver?

41. Whether a single hint be sufficient to overcome a prejudice? And whether even obvious truths will not sometimes bear repeating?

42. Whether if human labour be the true source of wealth, it doth not follow that idleness should of all things be discouraged in a wise state?

43. Whether even gold, or silver, if they should lessen the industry of its inhabitants, would not be ruinous to a country? And whether Spain be not an instance of this?

44. Whether the opinion of men, and their industry consequent thereupon, be not the true wealth of Holland, and not the silver supposed to be deposited in the bank at Amsterdam?

45. Whether there is in truth any such treasure lying dead? And whether it be of great consequence to the public that it should be real, rather than notional?

46. Whether, in order to understand the true nature of wealth and commerce, it would not be right to consider a ship's crew cast upon a desert island, and by degrees forming themselves to business and civil life, while industry begot credit, and credit moved to industry?

47. Whether such men would not all set themselves to work? Whether they would not subsist by the mutual participation of each other's industry? Whether when one man had in his way procured more than he could consume, he would not exchange his superfluities to supply his wants? Whether this must not produce credit? Whether to facilitate these conveyances, to record and circulate this credit, they would not soon agree on certain tallies, tokens, tickets, or counters?

48. Whether reflection in the better sort might not soon remedy our evils? And whether our real defect be not a wrong way of thinking?

49. Whether it would not be an unhappy turn in our gentlemen, if they should take more thought to create an interest to themselves in this or that county, or borough, than to promote the real interest of their country?

50. Whether if a man builds a house he doth not in the first place provide a plan which governs his work? And shall the public act without an end, a view, a plan?

51. Whether by how much the less particular folk think for themselves, the public be not so much the more obliged to think for them?

52. Whether small gains be not the way to great profit? And if our tradesmen are beggars, whether they may not thank themselves for it?

53. Whether some way might not be found for making criminals useful in public works, instead of sending them either to America or to the other world?

54. Whether we may not, as well as other nations, contrive employment for them? And whether servitude, chains, and hard labour, for a term of years, would not be a more discouraging,

as well as a more adequate punishment for felons, than even death itself?

55. Whether there are not such things in Holland as bettering houses, for bringing young gentlemen to order? And whether such an institution would be useless among us?

56. Whether it be true that the poor in Holland have no resource but their own labour, and yet there are no beggars in their streets?

57. Whether he whose luxury consumeth foreign products, and whose industry produceth nothing domestic to exchange for them, is not so far forth injurious to his country?

58. Whether necessity is not to be hearkened to before convenience, and convenience before luxury?

59. Whether to provide plentifully for the poor be not feeding the root, the substance whereof will shoot upwards into the branches, and cause the top to flourish?

60. Whether there be any instance of a state wherein the people, living neatly and plentifully, did not aspire to wealth?

61. Whether nastiness and beggary do not, on the contrary, extinguish all such ambition, making men listless, hopeless, and slothful?

62. Whether a country inhabited by people well fed, clothed, and lodged, would not become every day more populous? And whether a numerous stock of people in such circumstances would not constitute a flourishing nation? And how far the product of our own country may suffice for the compassing of this end?

63. Whether a people, who had provided themselves with the necessaries of life in good plenty, would not soon extend their industry to new arts and new branches of commerce?

64. Whether those same manufactures which England imports from other countries, may not be admitted from Ireland? And if so, whether lace, carpets, and tapestry, three considerable articles of English importation, might not find encouragement in Ireland? And whether an academy for design might not greatly conduce to the perfecting those manufactures among us?

65. Whether France and Flanders could have drawn so much money from England, for figured silks, lace, and tapestry, if they had not had academies for designing?

66. Whether when a room was once prepared, and models in plaster of Paris, the annual expense of such an academy need stand the public in above two hundred pounds a year?

67. Whether our linen manufacture would not find the benefit of this institution? And whether there be any thing that makes us fall short of the Dutch, in damasks, diapers, and printed linen, but our ignorance in design?

68. Whether those, who may slight this affair as notional, have sufficiently considered the extensive use of the art of design,

and its influences in most trades and manufactures, wherein the forms of things are often more regarded than the materials?*

69. Whether there be any art sooner learned than that of making carpets? And whether our women, with little time and pains, may not make more beautiful carpets than those imported from Turkey? And whether this branch of the woollen-manufacture be not open to us?

70. Whether human industry can produce, from such cheap materials, a manufacture of so great value, by any other art, as by those of sculpture and painting?

71. Whether pictures and statues are not in fact so much treasure? And whether Rome and Florence would not be poor towns without them?

72. Whether they do not bring ready money, as well as jewels? Whether in Italy, debts are not paid, and children portioned with them, as with gold and silver?

73. Whether it would not be more prudent to strike out and exert ourselves in permitted branches of trade, than to fold our hands and repine, that we are not allowed the woollen?

74. Whether it be true, that two millions are yearly expended by England by foreign lace and linen?

75. Whether immense sums are not drawn yearly into the Northern countries, for supplying the British navy with hempen manufactures?

76. Whether there be any thing more profitable than hemp? And whether there should not be great premiums for encouraging our hempen trade? What advantages may not Great Britain make of a country where land and labour are so cheap?

77. Whether Ireland alone might not raise hemp sufficient for the British navy? And whether it would not be vain to expect this from the British colonies in America, where hands are so scarce, and labour so excessively dear?

78. Whether if our own people want will or capacity for such an attempt, it might not be worth while for some undertaking spirits in England to make settlements, and raise hemp in the counties of Clare and Limerick, than which, perhaps, there is not fitter land in the world for that purpose? And whether both nations would not find their advantage therein?

79. Whether if all the idle hands in this kingdom were employed on hemp and flax, we might not find sufficient vent for these manufactures?

80. How far it may be in our own power to better our affairs, without interfering with our neighbours?

81. Whether the prohibition of our woollen-trade, ought not naturally to put us on other methods which give no jealousy?

* Since the first publication of this query, the art of design seems to be more considered and countenanced among us.

82. Whether paper be not a valuable article of commerce? And whether it be not true, that one single bookseller in London yearly expended above four thousand pounds in that foreign commodity?

83. How it comes to pass that the Venetians and Genoese, who wear so much less linen, and so much worse than we do, should yet make very good paper, and in great quantity, while we make very little?

84. How long it will be before my countrymen find out, that it is worth while to spend a penny, in order to get a groat?

85. If all the land were tilled that is fit for tillage, and all that sown with hemp and flax that is fit for raising them, whether we should have much sheep-walk beyond what was sufficient to supply the necessities of the kingdom?

86. Whether other countries have not flourished without the woollen-trade?

87. Whether it be not a sure sign, or effect of a country's thriving, to see it well cultivated and full of inhabitants? And if so, whether a great quantity of sheep-walk be not ruinous to a country, rendering it waste, and thinly inhabited?

88. Whether the employing so much of our land under sheep, be not in fact an Irish blunder?

89. Whether our hankering after our woollen-trade be not the true and only reason which hath created a jealousy in England towards Ireland? And whether any thing can hurt us more than such jealousy?

90. Whether it be not the true interest of both nations to become one people? And whether either be sufficiently apprised of this?

91. Whether the upper part of this people are not truly English, by blood, language, religion, manners, inclination, and interest?

92. Whether we are not as much Englishmen, as the children of old Romans born in Britain, were still Romans?

93. Whether it be not our true interest, not to interfere with them; and, in every other case, whether it be not their true interest to befriend us?

94. Whether a mint in Ireland might not be of great convenience to the kingdom; and whether it could be attended with any possible inconvenience to Great Britain? And whether there were not mints in Naples and in Sicily, when those kingdoms were provinces to Spain, or the house of Austria?

95. Whether any thing can be more ridiculous, than for the North of Ireland to be jealous of a linen manufacture in the South?

96. Whether the county of Tipperary be not much better land than the county of Armagh: and yet whether the latter is not much better improved and inhabited than the former?

97. Whether every landlord in the kingdom doth not know the cause of this? And yet how few are the better for such their knowledge?

98. Whether large farms under few hands, or small ones under many, are likely to be made most of? And whether flax and tillage do not naturally multiply hands, and divide land into small holdings, and well-improved?

99. Whether, as our exports are lessened, we ought not to lessen our imports? And whether these will not be lessened as our demands, and these as our wants, and these as our customs or fashions? Of how great consequence therefore are fashions to the public?

100. Whether it would not be more reasonable to mend our state than to complain of it; and how far this may be in our own power?

101. What the nation gains by those who live in Ireland upon the produce of foreign countries?

102. How far the vanity of our ladies in dressing, and of our gentlemen in drinking, contributes to the general misery of the people?

103. Whether nations as wise and opulent as ours, have not made sumptuary laws; and what hinders us from doing the same?

104. Whether those who drink foreign liquors, and deck themselves and their families with foreign ornaments, are not so far forth to be reckoned absentees?

105. Whether as our trade is limited, we ought not to limit our expences; and whether this be not the natural and obvious remedy?

106. Whether the dirt, and famine, and nakedness of the bulk of our people, might not be remedied, even although we had no foreign trade? And whether this should not be our first care; and whether, if this were once provided for, the conveniences of the rich would not soon follow?

107. Whether comfortable living doth not produce wants, and wants industry, and industry wealth?

108. Whether there is not a great difference between Holland and Ireland? And whether foreign commerce, without which the one could not subsist, be so necessary for the other?

109. Might we not put a hand to the plough, or the spade, although we had no foreign commerce?

110. Whether the exigencies of nature are not to be answered by industry on our own soil? And how far the conveniences and comforts of life may be procured, by a domestic commerce between the several parts of this kingdom?

111. Whether the women may not sew, spin, weave, embroider, sufficiently for the embellishment of their persons, and even

enough to raise envy in each other, without being beholden to foreign countries?

112. Suppose the bulk of our inhabitants had shoes to their feet, clothes to their backs, and beef in their bellies? Might not such a state be eligible for the public, even though the 'squires were condemned to drink ale and cider?

113. Whether if drunkenness be a necessary evil, men may not as well drink the growth of their own country?

114. Whether a nation within itself might not have real wealth, sufficient to give its inhabitants power and distinction, without the help of gold and silver?

115. Whether, if the arts of sculpture and painting were encouraged among us, we might not furnish our houses in a much nobler manner with our own manufactures?

116. Whether we have not, or may not have, all the necessary materials for building at home?

117. Whether tiles and plaster may not supply the place of Norway fir for flooring and wainscot?

118. Whether plaster be not warmer, as well as more secure, than deal? And whether a modern fashionable house, lined with fir, daubed over with oil and paint, be not like a fire-ship, ready to be lighted up by all accidents?

119. Whether larger houses, better built and furnished, a greater train of servants, the difference with regard to equipage and table, between finer and coarser, more and less elegant, may not be sufficient to feed a reasonable share of vanity, or support all proper distinctions? And whether all these may not be procured by domestic industry out of the four elements, without ransacking the four quarters of the globe?

120. Whether any thing is a nobler ornament, in the eye of the world, than an Italian palace, that is, stone and mortar skilfully put together, and adorned with sculpture and painting; and whether this may not be compassed without foreign trade?

121. Whether an expense in gardens and plantations would not be an elegant distinction for the rich, a domestic magnificence, employing many hands within, and drawing nothing from abroad?

122. Whether the apology which is made for foreign luxury in England, to wit, that they could not carry on their trade without imports as well as exports, will hold in Ireland?

123. Whether one may not be allowed to conceive and suppose a society, or nation of human creatures, clad in woollen cloths and stuffs, eating good bread, beef and mutton, poultry and fish in great plenty, drinking ale, mead and cider, inhabiting decent houses built of brick and marble, taking their pleasure in fair parks and gardens, depending on no foreign imports either for food or raiment? And whether such people ought much to be pitied?

124. Whether Ireland be not as well qualified for such a state as any nation under the sun?

125. Whether in such a state the inhabitants may not contrive to pass the twenty-four hours with tolerable ease and cheerfulness? And whether any people upon earth can do more?

126. Whether they may not eat, drink, play, dress, visit, sleep in good beds, sit by good fires, build, plant, raise a name, make estates, and spend them?

127. Whether upon the whole, a domestic trade may not suffice in such a country as Ireland, to nourish and clothe its inhabitants, and provide them with the reasonable conveniences, and even comforts of life?

128. Whether a general habit of living well would not produce numbers and industry; and whether, considering the tendency of human kind, the consequence thereof would not be foreign trade and riches, how unnecessary soever?

129. Whether, nevertheless, it be a crime to inquire how far we may do without foreign trade, and what would follow on such a supposition?

130. Whether the number and welfare of the subjects be not the true strength of the crown?

131. Whether in all public institutions, there should not be an end proposed, which is to be the rule and limit of the means? Whether this end should not be the well-being of the whole? And whether, in order to this, the first step should not be to clothe and feed our people?

132. Whether there be upon earth any Christian, or civilized people, so beggarly, wretched, and destitute, as the common Irish?

133. Whether, nevertheless, there is any other people whose wants may be more easily supplied from home?

134. Whether, if there was a wall of brass a thousand cubits high, round this kingdom, our natives might not nevertheless live cleanly and comfortably, till the land and reap the fruits of it?

135. What should hinder us from exerting ourselves, using our hands and brains, doing something or other, man, woman, and child, like the other inhabitants of God's earth?

136. Be the restraining our trade well or ill advised in our neighbours, with respect to their own interest, yet whether it be not plainly ours to accommodate ourselves to it?

137. Whether it be not vain to think of persuading other people to see their interest, while we continue blind to our own?

138. Whether there be any other nation possessed of so much good land, and so many able hands to work it, which yet is beholden for bread to foreign countries?

139. Whether it be true, that we import corn to the value of two hundred thousand pounds in some years?*

* Things are now better in respect of this particular, and some others, than they were when the Querist was first published.

140. Whether we are not undone by fashions made for other people? And whether it be not madness in a poor nation to imitate a rich one?

141. Whether a woman of fashion ought not to be declared a public enemy?

142. Whether it be not certain, that from the single town of Cork were exported, in one year, no less than one hundred and seven thousand one hundred and sixty-one barrels of beef; seven thousand three hundred and seventy-nine barrels of pork; thirteen thousand four hundred and sixty-one casks, and eighty-five thousand seven hundred and twenty-seven firkins of butter? And what hands were employed in this manufacture?

143. Whether a foreigner could imagine, that one half of the people were starving, in a country which sent out such plenty of provisions?

144. Whether an Irish lady, set out with French silks, and Flanders lace, may not be said to consume more beef and butter than a hundred of our labouring peasants?

145. Whether nine tenths of our foreign trade be not carried on singly to support the article of vanity?

146. Whether it can be hoped, that private persons will not indulge this folly, unless restrained by the public?

147. How vanity is maintained in other countries? Whether in Hungary, for instance, a proud nobility are not subsisted with small imports from abroad?

148. Whether there be a prouder people upon earth than the noble Venetians, although they all wear plain black clothes?

149. Whether a people are to be pitied that will not sacrifice their little particular vanities to the public good? And yet, whether each part would not accept their own foible from this public sacrifice, the 'squire his bottle, the lady her lace?

150. Whether claret be not often drank rather for vanity than for health or pleasure?

151. Whether it be true, that men of nice palates have been imposed on, by elder wine for French claret, and by mead for palm sack?

152. Do not Englishmen abroad purchase beer and cider at ten times the price of wine?

153. How many gentlemen are there in England of a thousand pounds per annum, who never drink wine in their own houses? Whether the same may be said of any in Ireland who have even one hundred pounds per annum?

154. What reason have our neighbours in England for discouraging French wines, which may not hold with respect to us also?

155. How much of the necessary sustenance of our people is yearly exported for brandy?

156. Whether, if people must poison themselves, they had not better do it with their own growth?

157. If we imported neither claret from France, nor fir from Norway, what the nation would save by it?

158. When the root yieldeth insufficient nourishment, whether men do not top the tree to make the lower branches thrive?

159. Whether, if our ladies drank sage or balm tea out of Irish ware, it would be an insupportable national calamity?

160. Whether it be really true that such wine is best as most encourages drinking, i. e. that must be given in the largest dose to produce its effect? And whether this holds with regard to any other medicine?

161. Whether that trade should not be accounted most pernicious, wherein the balance is most against us? And whether this be not the trade with France?

162. Whether it be not even madness to encourage trade with a nation that takes nothing of our manufacture?

163. Whether Ireland can hope to thrive, if the major part of her patriots shall be found in the French interest?

164. Whether great plenty and variety of excellent wines are not to be had on the coasts of Italy and Sicily? And whether those countries would not take our commodities of linen, leather, butter, &c., in exchange for them?

165. Particularly, whether the *Vinum Mamertinum*, which grows on the mountains about Messina, a red, generous wine, highly esteemed (if we may credit Pliny) by the ancient Romans, would not come cheap, and please the palates of our islanders?

166. Why, if a bribe by the palate or the purse be in effect the same thing, they should not be alike infamous?

167. Whether the vanity and luxury of a few ought to stand in competition with the interest of a nation?

168. Whether national wants ought not to be the rule of trade? And whether the most pressing wants of the majority ought not to be first considered?

169. Whether it is possible the country should be well improved, while our beef is exported, and our labourers live upon potatoes?

170. If it be resolved that we cannot do without foreign trade, whether, at least, it may not be worth while to consider what branches thereof deserve to be entertained, and how far we may be able to carry it on under our present limitations?

171. What foreign imports may be necessary, for clothing and feeding the families of persons not worth above one hundred pounds a year? And how many wealthier there are in the kingdom, and what proportion they bear to the other inhabitants?

172. Whether trade be not then on a right foot, when foreign commodities are imported in exchange only for domestic superfluities?

173. Whether the quantities of beef, butter, wool and leather, exported from this island, can be reckoned the superfluities of a country, where there are so many natives naked and famished?

174. Whether it would not be wise so to order our trade, as to export manufactures rather than provisions, and of those such as employ most hands?

175. Whether she would not be a very vile matron, and justly thought either mad or foolish, that should give away the necessaries of life from her naked and famished children, in exchange for pearls to stick in her hair, and sweat meats to please her own palate?

176. Whether a nation might not be considered as a family?

177. Whether the remark made by a Venetian ambassador to Cardinal Richelieu—that "France needed nothing to be rich and easy, but to know how to spend what she dissipates"—may not be of use also to other people?

178. Whether hungry cattle will not leap over bounds? And whether most men are not hungry in a country where expensive fashions obtain?

179. Whether there should not be published yearly schedules of our trade, containing an account of the imports and exports of the foregoing year?

180. Whether other methods may not be found for supplying the funds, besides the custom on things imported?

181. Whether any art or manufacture be so difficult as the making of good laws?

182. Whether our peers and gentlemen are born legislators? Or, whether that faculty be acquired by study and reflection?

183. Whether to comprehend the real interest of a people, and the means to procure it, doth not imply some fund of knowledge, historical, moral, and political, with a faculty of reason improved by learning?

184. Whether every enemy to learning be not a Goth? And whether every such Goth among us be not an enemy to the country?

185. Whether, therefore, it would not be an omen of ill presage, a dreadful phenomenon in the land, if our great men should take it in their heads to deride learning and education?

186. Whether, on the contrary, it should not seem worth while to erect a mart of literature in this kingdom, under wiser regulations and better discipline than in any other part of Europe? And whether this would not be an infallible means of drawing men and money into the kingdom?

187. Whether the governed be not too numerous for the governing part of our college? And whether it might not be expedient to convert thirty natives' places into twenty fellowships?

188. Whether if we had two colleges, there might not spring

a useful emulation between them? And whether it might not be contrived, so to divide the fellows, scholars, and revenues between both, as that no member should be a loser thereby?

189. Whether ten thousand pounds, well laid out, might not build a decent college, fit to contain two hundred persons; and whether the purchase money of the chambers would not go a good way towards defraying the expense?

190. Where this college should be situated?

191. Whether, in imitation of the Jesuits at Paris, who admit Protestants to study in their colleges, it may not be right for us also to admit Roman Catholics into our college, without obliging them to attend chapel duties, or catechisms, or divinity lectures? And whether this might not keep money in the kingdom, and prevent the prejudices of a foreign education?

192. Whether it is possible a state should not thrive, whereof the lower part were industrious, and the upper wise?

193. Whether the collected wisdom of ages and nations be not found in books?

194. Whether Themistocles's art of making a little city, or a little people, become a great one, be learned any where so well as in the writings of the ancients?

195. Whether a wise state hath any interest nearer heart than the education of youth?

196. Whether the mind, like soil, doth not by disuse grow stiff; and whether reasoning and study be not like stirring and dividing the glebe?

197. Whether an early habit of reflection, although obtained by speculative sciences, may not have its use in practical affairs?

198. Whether even those parts of academical learning which are quite forgotten may not have improved and enriched the soil, like those vegetables which are raised, not for themselves, but ploughed in for a dressing of land?

199. Whether it was not an Irish professor who first opened the public schools at Oxford? Whether this island hath not been anciently famous for learning? And whether at this day it hath any better chance for being considerable?

200. Whether we may not with better grace sit down and complain when we have done all that lies in our power to help ourselves?

201. Whether the gentleman of estate hath a right to be idle; and whether he ought not to be the great promoter and director of industry among his tenants and neighbours?

202. Whether in the cantons of Switzerland all under thirty years of age are not excluded from their great councils?

203. Whether Homer's compendium of education,

Μύθων μεν ῥητῆρ ἔμεναι, πρηκτῆρά τε ἔργων, Iliad ix.

would not be a good rule for modern educators of youth? And

whether half the learning and study of these kingdoms is not useless, for want of a proper delivery and pronunciation being taught in our schools and colleges?

204. Whether, in any order, a good building can be made of bad materials? Or whether any form of government can make a happy state out of bad individuals?

205. What was it that Solomon compared to a jewel of gold in a swine's snout?

206. Whether the public is more concerned in any thing than in the procreation of able citizens?

207. Whether to the multiplying of human kind, it would not much conduce, if marriages were made with good liking?

208. Whether, if women had no portions, we should then see so many unhappy and unfruitful marriages?

209. Whether the laws be not, according to Aristotle, a mind without appetite or passion; and, consequently, without respect of persons?

210. Suppose a rich man's son marries a poor man's daughter, suppose also that a poor man's daughter is deluded and debauched by the son of a rich man; which is most to be pitied?

211. Whether the punishment should be placed on the seduced or the seducer?

212. Whether a promise made before God and man, in the most solemn manner, ought to be violated?

213. Whether it was Plato's opinion that, "for the good of the community, rich should marry with rich?" De Leg. lib. 4.

214. Whether as seed equally scattered produceth a goodly harvest, even so an equal distribution of wealth doth not cause a nation to flourish?

215. Whence is it that Barbs and Arabs are so good horses? And whether in those countries they are not exactly nice in admitting none but males of a good kind to their mares?

216. What effects would the same care produce in families?

217. Whether the real foundation for wealth must not be laid in the numbers, the frugality, and the industry of the people? And whether all attempts to enrich a nation by other means, as raising the coin, stock-jobbing and such arts, are not vain?

218. Whether a door ought not to be shut against all other methods of growing rich, save only by industry and merit? And whether wealth got otherwise would not be ruinous to the public?

219. Whether the abuse of banks and paper-money is a just objection against the use thereof? And whether such abuse might not easily be prevented?

220. Whether national banks are not found useful in Venice, Holland, and Hamburgh? And whether it is not possible to contrive one that may be useful also in Ireland?

221. Whether the banks of Venice and Amsterdam are not in the hands of the public?

222. Whether it may not be worth while to inform ourselves in the nature of those banks? And what reason can be assigned, why Ireland should not reap the benefit of such public banks, as well as other countries?

223. Whether a bank of national credit, supported by public funds, and secured by parliament, be a chimera or impossible thing; and if not, what would follow from the supposal of such a bank?

224. Whether the currency of a credit so well secured, would not be of great advantage to our trade and manufactures?

225. Whether the notes of such public bank would not have a more general circulation than those of private banks, as being less subject to frauds and hazards?

226. Whether it be not agreed that paper hath, in many respects, the advantage above coin, as being of more dispatch in payments, more easily transferred, preserved, and recovered when lost?

227. Whether, besides these advantages, there be not an evident necessity for circulating credit by paper, from the defect of coin in this kingdom?

228. Whether it be rightly remarked by some, that, as banking brings no treasure into the kingdom like trade, private wealth must sink as the bank riseth? And whether, whatever causeth industry to flourish and circulate, may not be said to increase our treasure?

229. Whether the ruinous effects of Mississippi, South Sea, and such schemes, were not owing to an abuse of paper-money or credit, in making it a means for idleness and gaming, instead of a motive and help to industry?

230. Whether the rise of the bank of Amsterdam was not purely casual, for the security and dispatch of payments? And whether the good effects thereof, in supplying the place of coin, and promoting a ready circulation of industry and commerce, may not be a lesson to us, to do that by design, which others fell upon by chance?

231. Whether plenty of small cash be not absolutely necessary for keeping up a circulation among the people; that is, whether copper be not more necessary than gold?

232. Whether that which increaseth the stock of a nation be not a means of increasing its trade? And whether that which increaseth the current credit of a nation, may not be said to increase its stock?

233. Whether the credit of the public funds be not a mine of gold to England? And whether any step that should lessen this credit ought not to be dreaded?

234. Whether such credit be not the principal advantage that England hath over France? I may add, over every other country in Europe.

235. Whether by this the public is not become possessed of the wealth of foreigners as well as natives? And whether England be not in some sort the treasury of christendom?

236. Whether, as our current domestic credit grew, industry would not grow likewise; and if industry, our manufactures; and if these, our foreign credit?

237. Whether foreign demands may not be answered by our exports without drawing cash out of the kingdom?

238. Whether, as industry increased, our manufactures would not flourish; and as these flourished, whether better returns would not be made from estates to their landlords, both within and without the kingdom?

239. Whether the sure way to supply people with tools and materials, and to set them at work, be not a free circulation of money, whether silver or paper?

240. Whether in New England, all trade and business is not as much at a stand, upon a scarcity of paper money, as with us from the want of specie?

241. Whether it be certain, that the quantity of silver in the bank of Amsterdam, be greater now than at first; but whether it be not certain, that there is a greater circulation of industry and extent of trade, more people, ships, houses, and commodities of all sorts, more power by sea and land?

242. Whether money, lying dead in the bank of Amsterdam, would not be as useless as in the mine?

243. Whether our visible security in land could be doubted? And whether there be any thing like this in the bank of Amsterdam?

244. Whether it be just to apprehend danger from trusting a national bank with power to extend its credit, to circulate notes which it shall be felony to counterfeit, to receive goods on loans, to purchase lands, to sell also or alienate them, and to deal in bills of exchange; when these powers are no other than have been trusted for many years with the bank of England, although in truth but a private bank?

245. Whether the objection from monopolies and an overgrowth of power, which are made against private banks, can possibly hold against a national one?

246. Whether the evil effects, which of late years have attended paper-money and credit in Europe, did not spring from subscriptions, shares, dividends, and stock-jobbing.

247. Whether the great evils attending paper-money in the British plantations of America have not sprung from the overrating their lands, and issuing paper without discretion, and

from the legislators breaking their own rules in favour of themselves, thus sacrificing the public to their private benefit? And whether a little sense and honesty might not easily prevent all such inconveniences?

248. Whether the subject of free thinking in religion be not exhausted? And whether it be not high time for our free thinkers to turn their thoughts to the improvement of their country?

249. Whether it must not be ruinous for a nation to sit down to game, be it with silver or with paper?

250. Whether, therefore, the circulating paper, in the late ruinous schemes of France and England, was the true evil, and not rather the circulating thereof, without industry? And whether the bank of Amsterdam, where industry had been for so many years substituted and circulated by transfers on paper, doth not clearly decide this point?

251. Whether there are not to be seen in America fair towns, wherein the people are well lodged, fed, and clothed, without a beggar in their streets, although there be not one grain of gold or silver current among them?

252. Whether these people do not exercise all arts and trades, build ships and navigate them to all parts of the world, purchase lands, till and reap the fruits of them, buy and sell, educate and provide for their children? Whether they do not even indulge themselves in foreign vanities?

253. Whether, whatever inconveniencies those people may have incurred from not observing either rules or bounds in their paper-money, yet it be not certain that they are in a more flourishing condition, have larger and better built towns, more plenty, more industry, more arts and civility, and a more extensive commerce, than when they had gold and silver current among them?

254. Whether a view of the ruinous effects of absurd schemes and credit mismanaged, so as to produce gaming and madness instead of industry, can be any just objection against a national bank calculated purely to promote industry?

255. Whether a scheme for the welfare of this nation should not take in the whole inhabitants? And whether it be not a vain attempt to project the flourishing of our protestant gentry, exclusive of the bulk of the natives?

256. Whether an oath, testifying allegiance to the king and disclaiming the pope's authority in temporals, may not be justly required of the Roman catholics? And whether, in common prudence or policy, any priest should be tolerated who refuseth to take it?

257. Whether there is any such thing as a body of inhabitants in any Roman catholic country under the sun, that profess an absolute submission to the pope's orders in matters of an in-

different nature, or that in such points do not think it their duty to obey the civil government?

258. Whether, since the peace of Utrecht, mass was not celebrated, and the sacraments administered in divers dioceses of Sicily, notwithstanding the pope's interdict?

259. Whether a sum, which would go but a little way towards erecting hospitals for maintaining and educating the children of the native Irish, might not go far in binding them out apprentices to protestant masters, for husbandry, useful trades, and the service of families?

260. Whether there be any instance of a people's being converted in a Christian sense, otherwise than by preaching to them and instructing them in their own language?

261. Whether catechists in the Irish tongue may not easily be procured and subsisted? And whether this would not be the most practicable means for converting the natives?

262. Whether it be not of great advantage to the church of Rome that she hath clergy suited to all ranks of men, in gradual subordination, from cardinals down to mendicants?

263. Whether her numerous poor clergy are not very useful in missions, and of much influence with the people?

264. Whether, in defect of able missionaries, persons conversant in low life, and speaking the Irish tongue, if well instructed in the first principles of religion and in the popish controversy, though for the rest on a level with the parish clerks, or the schoolmasters of charity-schools, may not be fit to mix with, and bring over our poor illiterate natives to the established church? Whether it is not to be wished that some parts of our liturgy and homilies were publicly read in the Irish language? And whether, in these views, it may not be right to breed up some of the better sort of children in the charity-schools, and qualify them for missionaries, catechists, and readers?

265. Whether a 'squire, possessed of land to the value of a thousand pounds per annum, or a merchant worth twenty thousand pounds in cash, would have most power to do good or evil upon any emergency? And whether the suffering Roman catholics to purchase forfeited lands, would not be good policy as tending to unite their interest with that of the government?

266. Whether the sea-ports of Galway, Limerick, Cork, and Waterford, are not to be looked on as keys of this kingdom? And whether the merchants are not possessed of these keys; and who are the most numerous merchants in those cities?

267. Whether a merchant cannot more speedily raise a sum, more easily conceal or transfer his effects, and engage in any desperate design with more safety than a landed man, whose estate is a pledge for his behaviour?

268. Whether a wealthy merchant bears not great sway

among the populace of a trading city? And whether power be not ultimately lodged in the people?

269. Whether, as others have supposed an Atlantis or Utopia, we also may not suppose an hyperborean island inhabited by reasonable creatures?

270. Whether an indifferent person, who looks into all hands, may not be a better judge of the game than a party who sees only his own?

271. Whether there be any country in Christendom more capable of improvement than Ireland?

272. Whether we are not as far before other nations with respect to natural advantages, as we are behind them with respect to arts and industry?

273. Whether we do not live in a most fertile soil and temperate climate, and yet whether our people in general do not feel great want and misery?

274. Whether my countrymen are not readier at finding excuses than remedies?

275. Whether the wealth and prosperity of our country do not hang by a hair, the probity of one banker, the caution of another, and the lives of all?

276. Whether we have not been sufficiently admonished of this by some late events?

277. Whether a national bank would not at once secure our properties, put an end to usury, facilitate commerce, supply the want of coin, and produce ready payments in all parts of the kingdom?

278. Whether the use or nature of money, which all men so eagerly pursue, be yet sufficiently understood or considered by all?

279. What doth Aristotle mean by saying, Λῆρος εἶναι δοκεῖ τὸ νόμισμα, De Repub. lib. ix. 9.

280. Whether mankind are not governed by imitation rather than by reason?

281. Whether there be not a measure or limit within which gold and silver are useful, and beyond which they may be hurtful?

282. Whether that measure be not the circulating of industry?

283. Whether a discovery of the richest gold mine, that ever was in the heart of this kingdom, would be a real advantage to us?

284. Whether it would not tempt foreigners to prey upon us?

285. Whether it would not render us a lazy, proud, and dastardly people?

286. Whether every man who had money enough, would not be a gentleman? And whether a nation of gentlemen would not be a wretched nation?

287. Whether all things would not bear a high price? And

whether men would not increase their fortunes without being the better for it?

288. Whether the same evils would be apprehended from paper-money under an honest and thrifty regulation?

289. Whether, therefore, a national bank would not be more beneficial than even a mine of gold?

290. Whether without private banks what little business and industry there is would not stagnate? But whether it be not a mighty privilege for a private person, to be able to create an hundred pounds with a dash of his pen?

291. Whether the wise state of Venice was not the first that conceived the advantage of a national bank?

292. Whether the great exactness and integrity with which this bank is managed, be not the chief support of that republic?

293. Whether the bank of Amsterdam was not begun about one hundred and thirty years ago, and whether at this day, its stock be not conceived to amount to three thousand tons of gold, or thirty millions sterling?

294. Whether all payments of contracts for goods in gross and letters of exchange, must not be made by tranfers in the bank books, provided the sum exceed three hundred florins?

295. Whether it be not owing to this bank that the city of Amsterdam, without the least confusion, hazard, or trouble, maintains and every day promotes so general and quick a circulation of industry.

296. Whether it be not the greatest help and spur to commerce, that property can be so readily conveyed and so well secured by a *compte en banc*, that is, by only writing one man's name for another's in the bank-book?

297. Whether at the beginning of the last century, those who had lent money to the public during the war with Spain, were not satisfied by the sole expedient of placing their names in a *compte en banc*, with liberty to transfer their claims?

298. Whether the example of those easy transfers in the *compte en banc*, thus casually erected, did not tempt other men to become creditors to the public, in order to profit by the same secure and expeditious method of keeping and transferring their wealth?

299. Whether this *compte en banc* hath not proved better than a mine of gold to Amsterdam?

300. Whether that city may not be said to owe her greatness to the unpromising accident of her having been in debt more than she was able to pay?

301. Whether it be known that any state from such small beginnings, in so short a time, ever grew to so great wealth and power as the province of Holland hath done; and whether the

bank of Amsterdam hath not been the real cause of such extraordinary growth?

302. Whether the success of those public banks in Venice, Amsterdam, and Hamburgh, would not naturally produce in other states an inclination to the same methods?

303. Whether it be possible, for a national bank to subsist and maintain its credit under a French government?

304. Whether our natural appetites, as well as powers, are not limited to their respective ends and uses? But whether artificial appetites may not be infinite?

305. Whether the simple getting of money, or passing it from hand to hand without industry, be an object worthy of a wise government?

306. Whether, if money be considered as an end, the appetite thereof be not infinite? But whether the ends of money itself be not bounded?

307. Whether the total sum of all other powers, be it of enjoyment or action, which belong to man, or to all mankind together, is not in truth a very narrow and limited quantity? But whether fancy is not boundless?

308. Whether this capricious tyrant, which usurps the place of reason, doth not most cruelly torment and delude those poor men, the usurers, stock-jobbers, and projectors, of content to themselves from heaping up riches, that is, from gathering counters, from multiplying figures, from enlarging denominations, without knowing what they would be at, and without having a proper regard to the use, or end, or nature of things?

309. Whether the *ignis fatuus* of fancy doth not kindle immoderate desires, and lead men into endless pursuits and wild labyrinths?

310. Whether counters be not referred to other things, which so long as they keep pace and proportion with the counters, it must be owned the counters are useful, but whether beyond that to value or covet counters, be not direct folly?

311. Whether the public aim ought not to be that men's industry should supply their present wants, and the overplus be converted into a stock of power?

312. Whether the better this power is secured, and the more easily it is transferred, industry be not so much the more encouraged?

313. Whether money, more than is expedient for those purposes, be not upon the whole hurtful, rather than beneficial to a state?

314. Whether the promoting of industry should not be always in view, as the true and sole end, the rule and measure of a national bank? And whether all deviations from that object should not be carefully avoided?

315. Whether it may not be useful, for supplying manufactures and trade with stock, for regulating exchange, for quickening commerce, for putting spirit into the people?

316. Whether we are sufficiently sensible of the peculiar security there is in having a bank, that consists of land and paper, one of which cannot be exported, and the other is in no danger of being exported?

317. Whether it be not delightful to complain? And whether there be not many who had rather utter their complaints than redress their evils?

318. Whether, if "the crown of the wise be their riches,"* we are not the foolishest people in Christendom?

319. Whether we have not all the while great civil as well as natural advantages?

320. Whether there be any people who have more leisure to cultivate the arts of peace and study the public weal?

321. Whether other nations who enjoy any share of freedom, and have great objects in view, be not unavoidably embarrassed and distracted by factions? But whether we do not divide upon trifles, and whether our parties are not a burlesque upon politics?

322. Whether it be not an advantage that we are not embroiled in foreign affairs; that we hold not the balance of Europe; that we are protected by other fleets and armies; that it is the true interest of a powerful people, from whom we are descended, to guard us on all sides?

323. Whether England doth not really love us and wish well to us, as bone of her bone, and flesh of her flesh? And whether it be not our part to cultivate this love and affection all manner of ways?

324. What sea-ports or foreign trade have the Swiss? And yet how warm are those people, and how well provided!

325. Whether there may not be found a people who so contrive as to be impoverished by their trade? And whether we are not that people?

326. Whether it would not be better for this island, if all our fine folk of both sexes were shipped off, to remain in foreign countries, rather than that they should spend their estates at home in foreign luxury, and spread the contagion thereof through their native land?

327. Whether our gentry understand or have a notion of magnificence, and whether for want thereof they do not affect very wretched distinctions?

328. Whether there be not an art or skill in governing human pride, so as to render it subservient to the public aim?

329. Whether the great and general aim of the public should not be to employ the people?

* Prov. xiv. 24.

330. What right an eldest son hath to the worst education?

331. Whether men's counsels are not the result of their knowledge and their principles?

332. Whether there be not labour of the brains as well as of the hands, and whether the former is beneath a gentleman?

333. Whether the public be more interested to protect the property acquired by mere birth than that which is the immediate fruit of learning and virtue?

334. Whether it would not be a poor and ill-judged project to attempt to promote the good of the community, by invading the rights of one part thereof, or of one particular order of men?

335. Whether there be a more wretched, and at the same time a more unpitied case, than for men to make precedents for their own undoing?

336. Whether to determine about the rights and properties of men by other rules than the law be not dangerous?

337. Whether those men who move the corner-stones of a constitution may not pull an old house on their own heads?

338. Whether there be not two general methods whereby men become sharers in the national stock of wealth or power, industry and inheritance? And whether it would be wise in a civil society to lessen that share which is allotted to merit and industry?

339. Whether all ways of spending a fortune be of equal benefit to the public; and what sort of men are aptest to run into an improper expense?

340. If the revenues allotted for the encouragement of religion and learning were made hereditary in the hands of a dozen lay lords, and as many overgrown commoners, whether the public would be much the better for it?

341. Whether the church's patrimony belongs to one tribe alone; and whether every man's son, brother, or himself, may not, if he please, be qualified to share therein?

342. What is there in the clergy to create a jealousy in the public? Or what would the public lose by it, if every 'squire in the land wore a black coat, said his prayers, and was obliged to reside?

343. Whether there be any thing perfect under the sun? And whether it be not with the world as with a particular state, and with a state or body politic as with the human body, which lives and moves under various indispositions, perfect health being seldom or never to be found?

344. Whether, nevertheless, men should not in all things aim at perfection? And, therefore, whether any wise and good man would be against applying remedies? But whether it is not natural to wish for a benevolent physician?

345. Whether the public happiness be not proposed by the

legislature, and whether such happiness doth not contain that of the individuals?

346. Whether, therefore, a legislator should be content with a vulgar share of knowledge? Whether he should not be a person of reflection and thought, who hath made it his study to understand the true nature and interest of mankind, how to guide men's humours and passions, how to incite their active powers, how to make their several talents co-operate to the mutual benefit of each other, and the general good of the whole?

347. Whether it doth not follow, that above all things a gentleman's care should be to keep his own faculties sound and entire?

348. Whether the natural phlegm of this island needs any additional stupifier?

349. Whether all spirituous liquors are not, in truth, opiates?

350. Whether our men of business are not generally very grave by fifty?

351. Whether all men have not faculties of mind or body which may be employed for the public benefit?

352. Whether the main point be not to multiply and employ our people?

353. Whether hearty food and warm clothing would not enable and encourage the lower sort to labour?

354. Whether, in such a soil as ours, if there was industry, there could be want?

355. Whether the way to make men industrious be not to let them taste the fruits of their industry? And whether the labouring ox should be muzzled?

356. Whether our landlords are to be told, that industry and numbers would raise the value of their lands, or that one acre about the Tholsel is worth ten thousand acres in Connaught?

357. Whether our old native Irish are not the most indolent and supine people in Christendom?

358. Whether they are yet civilized, and whether their habitations and furniture are not more sordid than those of the savage Americans?

359. Whether it be not a sad circumstance to live among lazy beggars? And whether, on the other hand, it would not be delightful to live in a country swarming, like China, with busy people?

360. Whether we should not cast about, by all manner of means, to excite industry, and to remove whatever hinders it? And whether every one should not lend an helping hand?

361. Whether vanity itself should not be engaged in this good work? And whether it is not to be wished, that the finding of employment for themselves and others, were a fashionable distinction among the ladies?

362. Whether idleness be the mother or the daughter of spleen?

363. Whether it may not be worth while to publish the conversation of Ischomachus and his wife, in Xenophon, for the use of our ladies?

364. Whether it is true, that there have been, upon a time, one hundred millions of people employed in China, without the woollen-trade, or any foreign commerce?

365. Whether the natural inducements to sloth are not greater in the mogul's country than in Ireland, and yet whether in that suffocating and dispiriting climate, the Banyans are not all, men, women, and children, constantly employed?

366. Whether it be not true, that the great mogul's subjects might undersell us even in our own markets, and clothe our people with their stuffs and calicoes, if they were imported duty free?

367. Whether there can be a greater reproach on the leading men and the patriots of a country, than that the people should want employment? And whether methods may not be found to employ even the lame and the blind, the dumb, the deaf, and the maimed, in some or other branch of our manufactures?

368. Whether much may not be expected from a biennial consultation of so many wise men about the public good?

369. Whether a tax upon dirt would not be one way of encouraging industry?

370. Whether it would be a great hardship, if every parish were obliged to find work for their poor?

371. Whether children especially, should not be inured to labour betimes?

372. Whether there should not be erected, in each province, an hospital for orphans and foundlings at the expense of old bachelors?

373. Whether it be true, that in the Dutch workhouses, things are so managed, that a child four years old, may earn its own livelihood?

374. What a folly is it to build fine houses, or establish lucrative posts and large incomes, under the notion of providing for the poor?

375. Whether the poor grown up and in health need any other provision, but their own industry under public inspection?

376. Whether the poor-tax in England hath lessened or increased the number of the poor?

377. Whether workhouses should not be made at the least expense, with clay-floors and walls of rough stone, without plastering, ceiling, or glazing.

378. Whether it be an impossible attempt to set our people at work, or whether industry be a habit which like other habits, may by time and skill be introduced among any people?

379. Whether all manner of means should not be employed to possess the nation in general, with an aversion and contempt for idleness and all idle folk?

380. Whether it would be a hardship on people destitute of all things, if the public furnished them with necessaries which they should be obliged to earn by their labour?

381. Whether other nations have not found great benefit from the use of slaves in repairing high roads, making rivers navigable, draining bogs, erecting public buildings, bridges and manufactures?

382. Whether temporary servitude would not be the best cure for idleness and beggary?

383. Whether the public hath not a right to employ those who cannot, or who will not find employment for themselves?

384. Whether all sturdy beggars should not be seized and made slaves to the public for a certain term of years?

385. Whether he who is chained in a jail or dungeon hath not for the time lost his liberty? And if so, whether temporary slavery be not already admitted among us?

386. Whether a state of servitude, wherein he should be well worked, fed and clothed, would not be a preferment to such a fellow?

387. Whether criminals in the freest country may not forfeit their liberty, and repair the damage they have done the public by hard labour?

388. What the word servant signifies in the New Testament?

389. Whether the view of criminals chained in pairs and kept at hard labour, would not be very edifying to the multitude?

390. Whether the want of such an institution be not plainly seen in England, where the disbelief of a future state hardeneth rogues against the fear of death, and where, through the great growth of robbers and house-breakers it becomes every day more necessary?

391. Whether it be not easier to prevent than to remedy, and whether we should not profit by the example of others?

392. Whether felons are not often spared, and therefore encouraged, by the compassion of those who should prosecute them?

393. Whether many that would not take away the life of a thief, may not nevertheless be willing to bring him to a more adequate punishment?

394. Whether the most indolent would be fond of idleness, if they regarded it as the sure road to hard labour?

395. Whether the industry of the lower part of our people doth not much depend on the expense of the upper?

396. What would be the consequence, if our gentry affected to distinguish themselves by fine houses rather than fine clothes?

397. Whether any people in Europe are so meanly provided

with houses and furniture in proportion to their incomes, as the men of estates in Ireland?

398. Whether building would not peculiarly encourage all other arts in this kingdom?

399. Whether smiths, masons, bricklayers, plasterers, carpenters, joiners, tilers, plumbers, and glaziers, would not all find employment if the humour of building prevailed?

400. Whether the ornaments and furniture of a good house do not employ a number of all sorts of artificers, in iron, wood, marble, brass, pewter, copper, wool, flax, and divers other materials?

401. Whether in buildings and gardens, a great number of day-labourers do not find employment?

402. Whether by these means much of that sustenance and wealth of this nation which now goes to foreigners would not be kept at home, and nourish and circulate among our own people?

403. Whether as industry produced good living, the number of hands and mouths would not be increased; and in proportion thereunto, whether there would not be every day more occasion for agriculture? And whether this article alone would not employ a world of people?

404. Whether such management would not equally provide for the magnificence of the rich, and the necessities of the poor?

405. Whether an expense in building and improvements doth not remain at home, pass to the heir, and adorn the public? And whether any of these things can be said of claret?

406. Whether fools do not make fashions, and wise men follow them?

407. Whether, for one who hurts his fortune by improvements, twenty do not ruin themselves by foreign luxury?

408. Whether in proportion as Ireland was improved and beautified by fine seats, the number of absentees would not decrease?

409. Whether he who employs men in buildings and manufactures doth not put life in the country, and whether the neighbourhood round him be not observed to thrive?

410. Whether money circulated on the landlords own lands, and among his own tenants, doth not return into his own pocket?

411. Whether every 'squire that made his domain swarm with busy hands, like a bee-hive or ant-hill, would not serve his own interest, as well as that of his country?

412. Whether a gentleman, who hath seen a little of the world and observed how men live elsewhere, can contentedly sit down in a cold, damp, sordid habitation, in the midst of a bleak country, inhabited by thieves and beggars?

413. Whether on the other hand, a handsome seat amidst well-improved lands, fair villages, and a thriving neighbourhood,

may not invite a man to dwell on his own estate, and quit the life of an insignificant saunterer about town, for that of an useful country-gentleman?

414. Whether it would not be of use and ornament, if the towns throughout this kingdom were provided with decent churches, town-houses, workhouses, market-places and paved streets, with some order taken for cleanliness?

415. Whether if each of these towns were addicted to some peculiar manufacture, we should not find, that the employing many hands together on the same work was the way to perfect our workmen? And whether all these things might not soon be provided by a domestic industry, if money were not wanting?

416. Whether money could ever be wanting to the demands of industry, if we had a national bank?

417. Whether the fable of Hercules and the carter, ever suited any nation like this nation of Ireland?

418. Whether it be not a new spectacle under the sun, to behold in such a climate and such a soil, and under such a gentle government, so many roads untrodden, fields untilled, houses desolate and hands unemployed?

419. Whether there is any country in Christendom, either kingdom or republic, depending or independent, free or enslaved, which may not afford us an useful lesson?

420. Whether the frugal Swiss have any other commodities, but their butter and cheese and a few cattle, for exportation; whether, nevertheless, the single canton of Bearn hath not in her public treasury two millions sterling?

421. Whether that small town of Bearn, with its scanty, barren territory, in a mountainous corner, without sea-ports, without manufactures, without mines, be not rich by mere dint of frugality?

422. Whether the Swiss in general have not sumptuary laws, prohibiting the use of gold, jewels, silver, silk, and lace in their apparel, and indulging the women only to wear silk on festivals, weddings, and public solemnities?

423. Whether there be not two ways of growing rich, sparing and getting? But whether the lazy spendthrift must not be doubly poor?

424. Whether money circulating be not the life of industry; and whether the want thereof doth not render a state gouty and inactive?

425. But, whether if we had a national bank, and our present cash (small as it is) were put into the most convenient shape, men should hear any public complaints for want of money?

426. Whether all circulation be not alike a circulation of credit, whatsoever medium (metal or paper) is employed, and whether gold be any more than credit for so much power?

427. Whether the wealth of the richest nations in Christendom doth not consist in paper, vastly more than in gold and silver?

428. Whether lord Clarendon doth not aver of his own knowledge, that the prince of Orange, with the best credit, and the assistance of the richest men in Amsterdam, was above ten days endeavouring to raise twenty thousand pounds in specie, without being able to raise half the sum in all that time? See Clarendon's History, b. 12.

429. Supposing there had been hitherto no such thing as a bank, and the question were now first proposed, whether it would be safer to circulate unlimited bills in a private credit, or bills to a limited value on the public credit of the community, what would men think?

430. Whether the maxim, "What is everybody's business is nobody's," prevails in any country under the sun more than in Ireland?

431. Whether the united stock of a nation be not the best security? And whether anything but the ruin of the state can produce a national bankruptcy?

432. Whether the total sum of the public treasure, power and wisdom, all co-operating, be not most likely to establish a bank of credit, sufficient to answer the ends, relieve the wants, and satisfy the scruples of all people?

433. Whether London is not to be considered as the metropolis of Ireland? And whether our wealth (such as it is) doth not circulate through London, and throughout all England, as freely as that of any part of his majesty's dominions?

434. Whether, therefore, it be not evidently the interest of the people of England to encourage rather than to oppose a national bank in this kingdom, as well as every other means for advancing our wealth, which shall not impair their own?

435. Whether it is not our interest to be useful to them rather than rival them; and whether in that case we may not be sure of their good offices?

436. Whether we can propose to thrive, so long as we entertain a wrongheaded distrust of England?

437. Whether, as a national bank would increase our industry and that our wealth, England may not be a proportionable gainer; and whether we should not consider the gains of our mother-country as some accession to our own?

438. Whether there be any difficulty in comprehending that the whole wealth of the nation is in truth the stock of a national bank? And whether any more than the right comprehension of this be necessary to make all men easy with regard to its credit?

439. Whether the prejudices about gold and silver are not strong, but whether they are not still prejudices?

440. Whether paper doth not, by its stamp and signature, acquire a local value, and become as precious and as scarce as gold? And whether it be not much fitter to circulate large sums, and therefore preferable to gold?

441. Whether it doth not much import to have a right conception of money? And whether its true and just idea be not that of a ticket, entitling to power and fitted to record and transfer such power?

442. Though the bank of Amsterdam doth very rarely, if at all, pay out money, yet whether every man possessed of specie be not ready to convert it into paper, and act as cashier to the bank? And whether, from the same motive, every monied man throughout this kingdom would not be cashier to our national bank?

443. Whether we may not obtain that as friends, which it is in vain to hope for as rivals?

444. Whether in every instance by which we prejudice England, we do not, in a greater degree, prejudice ourselves?

445. Whether, in the rude original of society, the first step was not the exchanging of commodities, the next a substituting of metals by weight as the common medium of circulation, after this the making use of coin, lastly a further refinement by the use of paper with proper marks and signatures? And whether this, as it is the last, so it be not the greatest improvement?

446. Whether we are not in fact the only people who may be said to starve in the midst of plenty?

447. Whether there can be a worse sign than that people should quit their country for a livelihood? Though men often leave their country for health, or pleasure, or riches, yet to leave it merely for a livelihood? Whether this be not exceeding bad, and showeth some peculiar mismanagement?

448. Whether, in order to redress our evils, artificial helps are not most wanted in a land where industry is most against the natural grain of the people?

449. Whether, although the prepossessions about gold and silver have taken deep root, yet the example of our colonies in America doth not make it as plain as daylight, that they are not so necessary to the wealth of a nation as the vulgar of all ranks imagine?

450 Whether it be not evident that we may maintain a much greater inward and outward commerce, and be five times richer than we are; nay, and our bills abroad be of far greater credit, though we had not one ounce of gold or silver in the whole island?

451. Whether wrongheaded maxims, customs, and fashions, are not sufficient to destroy any people which hath so few resources as the inhabitants of Ireland?

452. Whether it would not be a horrible thing to see our matrons make dress and play their chief concern?

453. Whether our ladies might not as well endow monasteries as wear Flanders lace? And whether it be not true that popish nuns are maintained by protestant contributions?

454. Whether England, which hath a free trade, whatever she remits for foreign luxury with one hand, doth not with the other receive much more from abroad? Whether, nevertheless, this nation would not be a gainer, if our women would content themselves with the same moderation in point of expense as the English ladies?

455. But whether it be not a notorious truth, that our Irish ladies are on a foot, as to dress, with those of five times their fortune in England?

456. Whether it be not even certain, that the matrons of this forlorn country send out a greater proportion of its wealth for fine apparel, than any other females on the whole surface of this terraqueous globe?

457. Whether the expence, great as it is, be the greatest evil; but whether this folly may not produce many other follies, an entire derangement of domestic life, absurd manners, neglect of duties, bad mothers, a general corruption in both sexes?

458. Whether the first beginning of expedients do not always meet with prejudices? And whether even the prejudices of a people ought not to be respected?

459. Whether a national bank be not the true philosopher's stone in a state?

460. Whether all regulations of coin should not be made, with a view to encourage industry and a circulation of commerce, throughout the kingdom?

461. Whether to oil the wheel of commerce be not a common benefit? And whether this be not done by avoiding fractions and multiplying small silver?

462. Whether, all things considered, a general raising the value of gold and silver be not so far from bringing greater quantities thereof into the kingdom, that it would produce a direct contrary effect, inasmuch as less, in that case, would serve, and therefore less be wanted? And whether men do not import a commodity, in proportion to the demand or want of it?

463. Whether the lowering of our gold would not create a fever in the state? And whether a fever be not sometimes a cure, but whether it be not the last cure a man would choose?

464. Whether raising the value of a particular species will not tend to multiply such species, and to lessen others in proportion thereunto? And whether a much less quantity of cash in silver would not, in reality, enrich the nation more than a much greater in gold?

465. Whether, *cæteris paribus*, it be not true that the prices of things increase as the quantity of money increaseth, and are diminished as that is diminished? And whether, by the quantity of money, is not to be understood the amount of the denominations, all contracts being nominal for pounds, shillings, and pence, and not for weights of gold or silver?

466. Whether our exports do not consist of such necessaries as other countries cannot well be without?

467. Whether upon the circulation of a national bank more land would not be tilled, more hands employed, and consequently more commodities exported?

468. Whether silver and small money be not that which circulates the quickest, and passeth through all hands, on the road, in the market, at the shop?

469. Whether, all things considered, it would not be better for a kingdom that its cash consisted of half a million in small silver, than of five times that sum in gold?

470. Whether there be not every day five hundred lesser payments made for one that requires gold?

471. Whether Spain, where gold bears the highest value, be not the laziest; and China, where it bears the lowest, be not the most industrious country in the known world?

472. Whether it be not evidently the interest of every state, that its money should rather circulate than stagnate?

473. Whether the principal use of cash be not its ready passing from hand to hand to answer common occasions of the common people, and whether common occasions of all sorts of people are not small ones?

474. Whether business at fairs and markets is not often at a stand, and often hindered, even though the seller hath his commodities at hand and the purchaser his gold, yet for want of change?

475. As wealth is really power, and coin a ticket conveying power, whether those tickets which are the fittest for that use ought not to be preferred?

476. Whether those tickets which singly transfer small shares of power, and being multiplied large shares, are not fitter for common use than those which singly transfer large shares?

477. Whether the public is not more benefited by a shilling that circulates, than a pound that lies dead?

478. Whether sixpence twice paid, be not as good as a shilling once paid?

479. Whether the same shilling circulating in a village may not supply one man with bread, another with stockings, a third with a knife, a fourth with paper, a fifth with nails, and so answer many wants which must otherwise have remained unsatisfied?

480. Whether facilitating and quickening the circulation of power to supply wants, be not the promoting of wealth and industry among the lower people? And whether upon this the wealth of the great doth not depend?

481. Whether, without the proper means of circulation, it be not vain to hope for thriving manufactures and a busy people?

482. Whether four pounds in small cash may not circulate and enliven an Irish market, which many four pound pieces would permit to stagnate?*

483. Whether a man that could move nothing less than an hundred pound weight would not be much at a loss to supply his wants; and whether it would not be better for him to be less strong and more active?

484. Whether the natural body can be in a state of health and vigour, without a due circulation of the extremities, even in the fingers and toes? And whether the political body, any more than the natural, can thrive without a proportionable circulation through the minutest and most inconsiderable parts thereof?

485. If we had a mint for coining only shillings, sixpences, and copper money, whether the nation would not soon feel the good effects thereof?

486. Whether the greater waste by wearing of small coins would not be abundantly overbalanced by their usefulness?

487. Whether it be not the industry of common people that feeds the state, and whether it be possible to keep this industry alive without small money?

488. Whether the want of this be not a great bar to our employing the people in these manufactures which are open to us, and do not interfere with Great Britain?

489. Whether, therefore, such want doth not drive men into the lazy way of employing land under sheep walk?

490. Whether the running of wool from Ireland can so effectually be prevented, as by encouraging other business and manufactures among our people?

491. Whatever commodities Great Britain importeth, which we might supply, whether it be not her real interest to import them from us rather than from any other people?

492. Whether the apprehension of many among us (who for that very reason stick to their wool) that England may hereafter prohibit, limit, or discourage our linen trade, when it hath been once, with great pains and expense, thoroughly introduced and settled in this land, be not altogether groundless and unjust?

493. Whether it is possible for this country, which hath neither mines of gold nor a free trade, to support for any time the sending out of specie?

* In the year 1735, this country abounded with the large gold coins of Portugal, which being overrated, flowed in from all parts. But that evil is since remedied.

494. Whether, in fact, our payments are not made by bills? And whether our foreign credit doth not depend on our domestic industry, and our bills on that credit?

495. Whether, in order to mend it, we ought not first to know the peculiar wretchedness of our state? And whether there be any knowing of this but by comparison?

496. Whether there are not single market towns in England that turn more money in buying and selling than whole counties, perhaps provinces, with us?

497. Whether the small town of Birmingham alone doth not, upon an average, circulate every week one way or other, to the value of fifty thousand pounds? But whether the same crown may not be often paid?

498. Whether any kingdom in Europe be so good a customer at Bordeaux as Ireland?

499. Whether the police and economy of France be not governed by wise councils? And whether any one from this country, who sees their towns, and manufactures, and commerce, will not wonder what our senators have been doing?

500. What variety and number of excellent manufactures are to be met with throughout the whole kingdom of France?

501. Whether there are not every where some or other mills for many uses, forges and furnaces for iron-work, looms for tapestry, glass houses, and so forth?

502. What quantities of paper, stockings, hats, what manufactures of wool, silk, linen, hemp, leather, wax, earthernware, brass, lead, tin, &c.?

503. Whether the manufactures and commerce of the single town of Lyons do not amount to a greater value than all the manufactures and all the trade of this kingdom taken together?

504. Whether in the anniversary fair at the small town of Beaucair, upon the Rhone, there be not as much money laid out as the current cash of this kingdom amounts to?

505. Whether the very shreds shorn from woollen-cloth, which are thrown away in Ireland, do not make a beautiful tapestry in France?

506. Whether there be not French towns subsisted merely by making pins?

507. Whether the coarse fingers of those very women, those same peasants, who one part of the year till the ground and dress the vineyards, are not another employed in making the finest French point?

508. Whether there is not a great number of idle fingers among the wives and daughters of our peasants?

509. Whether the French do not raise a trade from saffron, dying drugs and the like products, which may do with us as well as with them?

510. Whether we may not have materials of our own growth to supply all manufactures, as well as France, except silk; and whether the bulk of what silk, even France manufactures, be not imported?

511. Whether it be possible for this country to grow rich, so long as what is made by domestic industry is spent in foreign luxury?

512. Whether our natural Irish are not partly Spaniards and partly Tartars; and whether they do not bear signatures of their descent from both these nations, which is also confirmed by all their histories?

513. Whether the Tartar progeny is not numerous in this land? And whether there is an idler occupation under the sun than to attend flocks and herds of cattle?

514. Whether the wisdom of the state should not wrestle with this hereditary disposition of our Tartars, and with a high hand introduce agriculture?

515. Whether once upon a time France did not, by her linen alone, draw yearly from Spain about eight millions of livres?

516. Whether the French have not suffered in their linen trade with Spain, by not making their cloth of due breadth; and whether any other people have suffered, and are still likely to suffer, through the same prevarication?*

517. Whether the Spaniards are not rich and lazy, and whether they have not a particular inclination and favour for the inhabitants of this island? But whether a punctual people do not love punctual dealers?

518. Whether about fourteen years ago we had not come into a considerable share of the linen trade with Spain; and what put a stop to this?

519. Whether if the linen manufacture were carried on in the other provinces, as well as in the north, the merchants of Cork, Limerick, and Galway, would not soon find the way to Spain?

520. Whether the woollen manufacture of England is not divided into several parts or branches, appropriated to particular places, where they are only or principally manufactured; fine cloths in Somersetshire, coarse in Yorkshire, long ells at Exeter, saies at Sudbury, crapes at Norwich, linseys at Kendal, blankets at Whitney, and so forth?

521. Whether the united skill, industry, and emulation of many together on the same work, be not the way to advance it? And whether it had been otherwise possible for England to have carried on her woollen-manufacture to so great perfection?

522. Whether it would not on many accounts be right, if we observed the same course with respect to our linen-manufacture;

* Things, we hear, are in a way of being mended with us in this respect.

and that diapers were made in one town or district, damasks in another, sheeting in a third, fine wearing linen in a fourth, coarse in a fifth, in another cambrics, in another thread and stockings, in others stamped linen, or striped linen, or tickings, or dyed linen, of which last kinds there is so great a consumption among the seafaring men of all nations?

523. Whether it may not be worth while to inform ourselves of the different sorts of linen which are in request among different people?

524. Whether we do not yearly consume of French wines about a thousand tun more than either Sweden or Denmark; and yet, whether those nations pay ready money as we do?

525. Whether it be not a custom for some thousands of Frenchmen to go about the beginning of March into Spain, and having tilled the lands and gathered the harvest of Spain, to return home with money in their pockets about the end of November?

526. Whether of late years our Irish labourers do not carry on the same business in England, to the great discontent of many there? But whether we have not much more reason than the people of England to be displeased at this commerce?

527. Whether, notwithstanding the cash supposed to be brought into it, any nation is, in truth, a gainer by such traffic?

528. Whether the industry of our people employed in foreign land, while our own is left uncultivated, be not a great loss to the country?

529. Whether it would not be much better for us, if, instead of sending our men abroad, we could draw men from the neighbouring countries to cultivate our own?

530. Whether, nevertheless, we are not apt to think the money imported by our labourers to be so much clear gains to this country; but whether a little reflection and a little political arithmetic, may not show us our mistake?

531. Whether our prejudices about gold and silver are not very apt to infect or misguide our judgments and reasonings about the public weal?

532. Whether it be not a good rule whereby to judge of the trade of any city, and its usefulness, to observe whether there is a circulation through the extremities, and whether the people round about are busy and warm?

533. Whether we had not, some years since, a manufacture of hats at Athlone, and of earthenware at Arklow; and what became of those manufactures?

534. Why do we not make tiles of our own, for flooring and roofing, rather than bring them from Holland?

535. What manufactures are there in France and Venice of gilt-leather, how cheap and how splendid a furniture?

536. Whether we may not for the same use, manufacture divers things at home, of more beauty and variety than wainscot, which is imported at such expense from Norway?

537. Whether the use and the fashion will not soon make a manufacture?

538. Whether if our gentry used to drink mead and cider, we should not soon have those liquors in the utmost perfection and plenty?

539. Whether it be not wonderful, that with such pastures, and so many black cattle, we do not find ourselves in cheese?

540. Whether great profits may not be made by fisheries; but whether those of our Irish who live by that business, do not contrive to be drunk and unemployed one half of the year?

541. Whether it be not folly to think, an inward commerce cannot enrich a state, because it doth not increase its quantity of gold and silver? And whether it is possible a country should not thrive, while wants are supplied, and business goes on?

542. Whether plenty of all the necessaries and comforts of life be not real wealth?

543. Whether Lyons, by the advantage of her midland situation and the rivers Rhone and Sone, be not a great magazine, or mart for inward commerce? And whether she doth not maintain a constant trade with most parts of France; with Provence for oils and dried fruits, for wines and Languedoc, for stuffs with Champaign, for linen with Picardy, Normandy, and Bretagne, for corn with Burgundy?

544. Whether she doth not receive and utter all those commodities, and raise a profit from the distribution thereof, as well as of her own manufactures, throughout the kingdom of France?

545. Whether the charge of making good roads and navigable rivers across the country, would not be really repaid by an inward commerce?

546. Whether as our trade and manufactures increased, magazines should not be established in proper places, fitted by their situation, near great roads and navigable rivers, lakes, or canals, for the ready reception and distribution of all sorts of commodities, from and to the several parts of the kingdom; and whether the town of Athlone, for instance, may not be fitly situated for such a magazine, or centre of domestic commerce?

547. Whether an inward trade would not cause industry to flourish, and multiply the circulation of our coin, and whether this may not do as well as multiplying the coin itself?

548. Whether the benefits of a domestic commerce are sufficiently understood and attended to, and whether the cause thereof be not the prejudiced and narrow way of thinking about gold and silver?

549. Whether there be any other more easy and unenvied method of increasing the wealth of a people?

550. Whether we of this island are not from our peculiar circumstances determined to this very commerce above any other, from the number of necessaries and good things that we possess within ourselves, from the extent and variety of our soil, from the navigable rivers and good roads which we have or may have at a less expense than any people in Europe, from our great plenty of materials for manufactures, and particularly from the restraints we lie under with regard to our foreign trade?

551. Whether annual inventories should not be published of the fairs throughout the kingdom, in order to judge of the growth of its commerce?

552. Whether there be not every year more cash circulated at the card-tables of Dublin, than at all the fairs of Ireland?

553. Whether the wealth of a country will not bear proportion to the skill and industry of its inhabitants?

554. Whether foreign imports that tend to promote industry should not be encouraged, and such as have a tendency to promote luxury should not be discouraged?

555. Whether the annual balance of trade between Italy and Lyons be not about four millions in favour of the former, and yet, whether Lyons be not a gainer by this trade?

556. Whether the general rule, of determining the profit of a commerce by its balance, doth not, like other general rules, admit of exceptions?

557. Whether it would not be a monstrous folly to import nothing but gold and silver, supposing we might do it, from every foreign part to which we trade? And yet, whether some men may not think this foolish circumstance a very happy one?

558. But whether we do not all see the ridicule of the mogul's subjects, who take from us nothing but our silver, and bury it under ground, in order to make sure thereof against the resurrection?

559. Whether he must not be a wrongheaded patriot or politician, whose ultimate view was drawing money into a country, and keeping it there?

560. Whether it be not evident, that not gold but industry causeth a country to flourish?

561. Whether it would not be a silly project in any nation, to hope to grow rich by prohibiting the exportation of gold and silver?

562. Whether there can be a greater mistake in politics, than to measure the wealth of the nation by its gold and silver?

563. Whether gold and silver be not a drug, where they do not promote industry? Whether they be not even the bane and undoing of an idle people?

564. Whether gold will not cause either industry or vice to flourish? And whether a country, where it flowed in without

labour, must not be wretched and dissolute like an island inhabited by buccaneers?

565. Whether arts and virtue are not likely to thrive, where money is made a means to industry? But whether money without this would be a blessing to any people?

566. Whether keeping cash at home, or sending it abroad, just as it most serves to promote industry, be not the real interest of every nation?

567. Whether commodities of all kinds do not naturally flow where there is the greatest demand? Whether the greatest demand for a thing be not where it is of most use? Whether money, like other things, hath not its proper use? Whether this use be not to circulate? Whether therefore there must not of course be money where there is a circulation of industry?

568. Whether it is not a great point to know what we would be at? And whether whole states, as well as private persons, do not often fluctuate for want of this knowledge?

569. Whether gold may not be compared to Sejanus's horse, if we consider its passage through the world, and the fate of those nations which have been successively possessed thereof?

570. Whether means are not so far useful as they answer the end? And whether, in different circumstances, the same ends are not obtained by different means?

571. If we are a poor nation, abounding with very poor people, will it not follow, that a far greater proportion of our stock should be in the smallest and lowest species, than would suit with England?

572. Whether, therefore, it would not be highly expedient, if our money were coined of peculiar values, best fitted to the circumstances and uses of our own country; and whether any other people could take umbrage at our consulting our own convenience in an affair entirely domestic, and that lies within ourselves?

573. Whether every man doth not know, and hath long known, that the want of a mint causeth many other wants in this kingdom?

574. What harm did England sustain about three centuries ago, when silver was coined in this kingdom?

575. What harm was it to Spain that her provinces of Naples and Sicily had all along mints of their own?

576. Whether it may not be presumed, that our not having a privilege, which every other kingdom in the world enjoys, be not owing to our own want of diligence and unanimity in soliciting for it?

577. Whether it be not the interest of England, that we should cultivate a domestic commerce among ourselves? And whether it could give them any possible jealousy, if our small sum of cash was contrived to go a little further, if there was a little more life in our markets, a little more buying and selling in our shops,

a little better provision for the backs and bellies of so many forlorn wretches throughout the towns and villages of this island?

578. Whether Great Britain ought not to promote the prosperity of her colonies, by all methods consistent with her own? And whether the colonies themselves ought to wish or aim at it by others?

579. Whether the remotest parts from the metropolis, and the lowest of the people, are not to be regarded as the extremities and capillaries of the political body?

580. Whether, although the capillary vessels are small, yet obstructions in them do not produce great chronical diseases?

581. Whether faculties are not enlarged and improved by exercise?

582. Whether the sum of the faculties put into act, or in other words, the united action of a whole people doth not constitute the momentum of a state?

583. Whether such momentum be not the real stock or wealth of a state; and whether its credit be not proportional thereunto?

584. Whether in every wise state the faculties of the mind are not most considered?

585. Whether the momentum of a state doth not imply the whole exertion of its faculties, intellectual and corporeal; and whether the latter without the former could act in concert?

586. Whether the divided force of men, acting singly, would not be a rope of sand?

587. Whether the particular motions of the members of a state, in opposite directions, will not destroy each other, and lessen the momentum of the whole; but whether they must not conspire to produce a great effect?

588. Whether the ready means to put spirit into this state, to fortify and increase its momentum, would not be a national bank and plenty of small cash?

589. Whether that which employs and exerts the force of a community, deserves not to be well considered and well understood?

590. Whether the immediate mover, the blood and spirits, be not money, paper or metal, and whether the soul or will of the community, which is the prime mover that governs and directs the whole, be not the legislature?

591. Supposing the inhabitants of a country quite sunk in sloth, or even fast asleep, whether upon the gradual awakening and exertion, first, of the sensitive and locomotive faculties, next of reason and reflection, then of justice and piety, the momentum of such country or state, would not, in proportion thereunto, become still more and more considerable?

592. Whether that which in the growth is last attained, and is the finishing perfection of a people, be not the first thing lost in their declension?

593. Whether force be not of consequence, as it is exerted; and whether great force without great wisdom may not be a nuisance?

594. Whether the force of a child applied with art, may not produce greater effects than that of a giant? And whether a small stock in the hands of a wise state, may not go further, and produce more considerable effects, than immense sums in the hands of a foolish one?

595. Whose fault is it if poor Ireland still continues poor?

# A PROPOSAL

FOR THE BETTER SUPPLYING OF

## CHURCHES IN OUR FOREIGN PLANTATIONS,

AND FOR

CONVERTING THE SAVAGE AMERICANS TO CHRISTIANITY,

BY A COLLEGE TO BE ERECTED ON THE SUMMER ISLANDS, OTHERWISE CALLED THE ISLES OF BERMUDA.

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ALTHOUGH there are several excellent persons of the Church of England, whose good intentions and endeavours have not been wanting to propagate the gospel in foreign parts, who have even combined into societies for that very purpose, and given great encouragement, not only for English missionaries in the West Indies, but also, for the reformed of other nations, led by their example, to propagate Christianity in the east: it is nevertheless acknowledged, that there is at this day, but little sense of religion, and a most notorious corruption of manners in the English colonies settled on the continent of America, and the islands. It is also acknowledged, that the gospel hath hitherto made but a very inconsiderable progress among the neighbouring Americans, who still continue in much the same ignorance and barbarism, in which we found them above a hundred years ago.

I shall therefore venture to submit my thoughts upon a point, that I have long considered, to better judgments, in hopes that any expedient will be favourably hearkened to, which is proposed for the remedy of these evils. Now, in order to effect this, it should seem the natural proper method to provide, in the first place, a constant supply of worthy clergymen for the English churches in those parts; and in the second place, a like constant supply of zealous missionaries, well fitted for propagating Christianity among the savages.

For though the surest means to reform the morals, and soften the behaviour of men, be, to preach to them the pure uncorrupt doctrine of the gospel, yet it cannot be denied, that the success of preaching dependeth in good measure on the character and

skill of the preacher: forasmuch as mankind are more apt to copy characters than to practise precepts, and forasmuch as argument, to attain its full strength, doth not less require the life of zeal than the weight of reason; and the same doctrine, which maketh great impression, when delivered with decency and address, loseth very much of its force by passing through awkward or unskilful hands.

Now the clergy sent over to America have proved, too many of them, very meanly qualified both in learning and morals for the discharge of their office. And indeed little can be expected from the example or instruction of those, who quit their native country on no other motive, than that they are not able to procure a livelihood in it, which is known to be often the case.

To this may be imputed the small care that hath been taken to convert the negroes of our plantations, who to the infamy of England and scandal of the world, continue heathen under Christian masters, and in Christian countries. Which could never be if our planters were rightly instructed and made sensible, that they disappointed their own baptism by denying it to those who belong to them: that it would be of advantage to their affairs to have slaves who should "obey in all things their masters according to the flesh, not with eye-service as men-pleasers, but in singleness of heart as fearing God:" that gospel liberty consists with temporal servitude; and that their slaves would only become better slaves by being Christian.

And though it be allowed that some of the clergy in our colonies have approved themselves men of merit, it will at the same time be allowed, that the most zealous and able missionary from England must find himself but ill qualified for converting the American heathen, if we consider the difference of language, their wild way of living, and above all, the great jealousy and prejudice which savage nations have towards foreigners, or innovations introduced by them.

These considerations make it evident, that a college or seminary in those parts is very much wanted; and therefore the providing such a seminary is earnestly proposed and recommended to all those, who have it in their power, to contribute to so good a work. By this, two ends would be obtained.

First, the youth of our English plantations might be themselves fitted for the ministry; and men of merit would be then glad to fill the churches of their native country, which are now a drain for the very dregs and refuse of ours.

At present there are, I am told, many churches vacant in our plantations, and many very ill supplied; nor can all the vigilance and wisdom of that great prelate, whose peculiar care it is, prevent this, so long as the aforesaid churches are supplied from England.

And supplied they must be, with such as can be picked up in England or Ireland, until a nursery of learning for the education of the natives is founded. This indeed might provide a constant succession of learned and exemplary pastors; and what effect this must be supposed to have on their flocks, I need not say.

Secondly, the children of savage Americans, brought up in such a seminary, and well instructed in religion and learning, might make the ablest and properest missionaries for spreading the gospel among their countrymen; who would be less apt, to suspect, and readier to embrace a doctrine recommended by neighbours or relations, men of their own blood and language, than if it were proposed by foreigners, who would not improbably be thought to have designs on the liberty or property of their converts.

The young Americans necessary for this purpose may in the beginning be procured, either by peaceable methods from those savage nations which border on our colonies and are in friendship with us, or by taking captive the children of our enemies.

It is proposed to admit into the aforesaid college only such savages as are under ten years of age, before evil habits have taken a deep root; and yet not so early as to prevent retaining their mother tongue, which should be preserved by intercourse among themselves.

It is further proposed to ground these young Americans thoroughly in religion and morality, and to give them a good tincture of other learning; particularly of eloquence, history, and practical mathematics; to which it may not be improper to add some skill in physic.

If there were a yearly supply of ten or a dozen such missionaries sent abroad into their respective countries, after they had received the degree of master of arts in the aforesaid college, and holy orders in England, (till such time as episcopacy be established in those parts) it is hardly to be doubted, but in a little time the world would see good and great effects thereof.

For, to any considering man, the employing American missionaries for the conversion of America, will, of all others, appear the most likely method to succeed; especially if care be taken that, during the whole course of their education, an eye should be had to their mission; that they should be taught betimes to consider themselves as trained up in that sole view, without any other prospect of provision or employment; that a zeal for religion and love of their country should be early and constantly instilled into their minds by repeated lectures and admonitions; that they should not only be incited by the common topics of religion and nature, but further animated and inflamed by the great examples in past ages, of public spirit and

virtue, to rescue their countrymen from their savage manners to a life of civility and religion.

If his majesty would graciously please to grant a charter for a college to be erected in a proper place for these uses, it is to be hoped that a fund may be soon raised, by the contribution of well-disposed persons, sufficient for building and endowing the same. For as the necessary expense would be small, so there are men of religion and humanity in England who would be pleased to see any design set forward for the glory of God and the good of mankind.

A small expense would suffice to subsist and educate the American missionaries in a plain simple manner, such as might make it easy for them to return to the coarse and poor methods of life in use among their countrymen; and nothing can contribute more to lessen this expense, than a judicious choice of the situation, where the seminary is to stand.

Many things ought to be considered in the choice of a situation. It should be in a good air; in a place where provisions are cheap and plenty; where an intercourse might easily be kept up with all parts of America and the islands; in a place of security, not exposed to the insults of pirates, savages, or other enemies; where there is no great trade which might tempt the readers or fellows of the college to become merchants, to the neglect of their proper business; where there are neither riches nor luxury to divert, or lessen their application, or to make them uneasy and dissatisfied with a homely frugal subsistence; lastly, where the inhabitants, if such a place may be found, are noted for innocence and simplicity of manners. I need not say of how great importance this point would be toward forming the morals of young students, and what mighty influence it must have on the mission.

It is evident the college, long since projected in Barbadoes, would be defective in many of these particulars; for though it may have its use among the inhabitants, yet a place of so high trade, so much wealth and luxury, and such dissolute morals (not to mention the great price and scarcity of provisions), must at first sight seem a very improper situation for a general seminary intended for the forming missionaries, and educating youth in religion and sobriety of manners. The same objections lie against the neighbouring islands.

And if we consider the accounts given of their avarice and licentiousness, their coldness in the practice of religion, and their aversion from propagating it (which appears in the withholding their slaves from baptism), it is to be feared that the inhabitants in the populous parts of our plantations on the continent are not much fitter than those in the islands above mentioned, to influence or assist such a design. And as to the more remote and