## Newton and the Counterfeiter

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Newton was a smart man. Intelligence is seldom specialized. It is not the case that excess or deficiency in one respect is compensated by the opposite in another. This is just wishful thinking to support the idea that everyone is of equal worth. This might be true in some abstract exalted sense, but when it comes down to particulars, the usefulness of men differ dramatically. And Newton was head and shoulders above anyone else in his circles.

That Newton was one of the greatest natural philosophers ever is now such a wellknown and established fact that it does not need any elaboration. The author of the book may be excused anyway in not resisting to at least recapitulate for the general reader the bare outlines of his biography and why he was so great. Newton had penetrating insight of a very abstract nature, this is the basis for his greatness; but in addition he was a practical dexterous man, who as a boy delighted in constructing machinery, and as an adult was a most exacting experimentalist, not content with taking the advice and the information of others, but insisting of doing everything on first principles. This is of course timeconsuming, and Newton consumed his time to the hilt. He never married, kept his level of socializing low, and slept and ate little, so obsessed he was with his various projects. In addition to a sharp mind, a nimble finger, he also had incredible physical stamina, blessed as he was with robust health, and awesome powers of sustained mental concentration. All of this was of course interrelated, without any of those components of his gifted nature, the others would not be possible. A man can be strong and healthy and have an untapped potential for work; but unless he has something to feed that mill, that mill will not till. Furthermore each of the components were no doubt abetted by the others. A good healthy constitution is not worn down by hard work, as long as it is voluntary, meaningful and a touch obsessive, on the contrary, nothing is more conducive to health than hard work. He was lucky, maybe even happy as long as he did not reflect on it, because after all where is true happiness to be found except in hard relentless work serving your deepest needs and most fervent curiosity. But the sad thing, and that we can only understand and discover from the outside, is that the same passion that brought us Principia also was wasted on al-chemistry and obscure Bible studies. He brought to all of them the same relentlessness. The author tries to make the case that all of his projects emanated from the same spring, namely the desire to find out the inscrutable ways of God. If so, who of all mortals, may have been better equipped to guess and sense the secrets of the inaccessible. Had he not himself brought down the heavens to the earth, and encompassed for his own intellect the entire realm of the universe. His thoughts had as much bearing on the proverbial apple that fell on his lawn, as on distant stars. If ever there was a figure more suitable to reification of the secular religion that the Enlightenment constituted it was Newton. He if any was the light emanating from the human intellect. Voltaire saw that and hailed him. That was in the beginning of the 18th century, but as Keynes so persuasively argued. Newton was not of the Enlightenment, although he prepared for it. He was of the old magical school,

deeply immersed in medieval thinking.

He had a kind of mental break-down. For a few months of his life he was unable to work. The cause for this unprecedented calamity has never been convincingly identified, although one could of course come up with any number of causes, which single or in combination, would provide more than plausible explanations, save for their inevitable conflicts with each other. The author certainly provides one, namely that Newton had been infatuated with a young man and suffered his rejection cruelly. When evidences for an argument are piled on top of each other, it makes for spurious persuasion. In fact in this way one may easily argue almost anything. But the author backs down at the last moment after having convincingly built his case, admitting that it might after all mean nothing at all, that all the extant letters of Newton bearing on the case were decorous and complying to the standards of the day.

But he regained himself, although he never attained the greatness of his youth, and engaged himself in other fields. The book is about his activity as a Warden of the Mint. To appoint him was a stroke of great luck for Britain, and one which hardly could have been anticipated. Unlike the other appointments to the Mint Newton took his duties seriously. Modern psychologists no doubt will see in that a sign of mild autism. Did Newton not realize that it was meant to be a sine-cure, that no one had reproached him had he just gotten rich on it. Rich he became, but that was far from the whole story. His task was to oversee the production of an extensive recoinage, in which badly produced coins, often submitted to clippings, would be completely exchanged for a more exacting automatically produced one, which would not be as easy to counterfeit or otherwise compromise. There were technical problems, at the present state of production, the whole process might take up to a decade. Newton saw to that. As a first Taylorist he made careful studies and concluded that if the various steps were conducted at a rhythm just below that of the beat of a human heart, the worker would not get exhausted after a minute, but would be able to sustain the work for hours. More improvements were made and the task was met in a year or so, instead of the projected ten. But that was not the end of the trouble, counterfeiting was rampant, and due to the severity of the punishment, meaning death, jurors were often reluctant to convict suspects, even if the evidence against them were strong.

Newton was a quick study. Also in the matter of police work. He caught on what was needed, and he soon financed and run a large army of informers. He even met shady characters in dingy pubs, as well as personally holding interrogations. Whether he used or sanctioned torture is something most commentators would prefer not to know. If so it would sully our conception of the man. Maybe Newton was smart enough to understand that testimony that was given under duress was unreliable. Under pain most men are willing to say anything. Still one can put a man under duress even if there is no physical pain involved. In fact, just as force is most efficiently wielded when only the threat of it is used, so fear can be an effective way of loosening the tongue of a reluctant witness.

The bulk of the book is devoted to an entertaining reconstruction of Newton's relentless efforts to frame and convict a notorious counterfeiter who had crossed his path and even made fun of him, or at least cast asperations on his honesty and competence. The name of then man was William Chaloner, who was a con-man of great ambition and resource, who had almost been able to worm himself into a position of authority in the Mint itself. Newton stymied his plans and turned everybody against him, in the end amassing such an amount of circumstantial evidence to overwhelm any set of jurors.

Was Newton fully disinterested in his pursuit? Was he not to some extent driven by a personal vendetta? If so it its not very laudable if human. The judicial system was not the greatest. Judges were often prejudiced, especially in the case of Chaloner, and there was no professional counsel for the defence. And above all time was short, and Chaloner had only a few minutes to present his case. He was doomed. And being doomed he was sentences to death, and he was not lucky to have his sentence commuted, but was sent to the gallows where he was slowly strangled to death hanging from his noose. Chaloner was destitute, he could not pay the hangman to hasten his demise, as richer men could do. Now one may be a bit scandalized by all of this, but one wonders whether the automatic sentencing to death that is going on in the States is done in any more professional and thoughtful way. Impatient judges, indifferent legal counsel, prejudiced jurors.

Newton survived into old age. He understood the abstract nature of money, more than his contemporaries. But, he was not above of falling victim to the oldest of scams, the pyramid scheme, on which most economic speculation rests. He lost heavily, but suffered probably more to his ego than to his material wealth, which remained robust. He had no issue, but nephews and nieces and was a welcome fixture at weddings and other family occasions, no doubt because of his willingness as well as ability to present monetary gifts.

It is reported that he kept all his teeth, that he did not get bald, nor ever require the use of glasses. And above all his mind seems to have been sharp to the end. No trace of dotage that so often make the old infirm and ridiculous. Had he lived now the medical condition that brought him down could probably be easily fixed. Maybe he would have lived for another decade. This is idle and pointless speculation. He lived when he lived.

Many autobiographies have been written on Newton, and the present book does not have the ambition of adding to the list. It has but one purpose to highlight a little-known incident in his life, showing incidentally how much of the past we are after all able to reconstruct in the manner of a forensic exercise.

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