THE UNSHACKLING OF THE SPIRIT OF INQUIRY.¹

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IMPORTANT above all in the development we have been considering was the growing opposition which arose against the prevailing methods of philosophy. Concerning the relation of thought to being, and of the concepts which we form of things to the real nature of these things, the idealism introduced by Plato had hitherto prevailed; that is, the view that the general concepts (universalia) were actualities existing before and outside of the objects themselves, and were originally present in the Divine Mind as archetypes before their incorporation; and that from the Divine Mind they had emanated to the human mind, which is derived from it; whence it is possible through pure reason to find out the essence of things, that is, truth. These notions of the Idealists (who gave themselves the significant name of Realists), as we have seen, although they were somewhat limited by Aristotle, had been opposed from olden times by the Stoics, for they had quite correctly recognised the notions of genus and species as mere abstractions (nomina), and in contrast to the so-called Realists were called Nominalists. This had been merely an academic dispute until the Church took the part of the Realists, and in 1092 at the Synod of Soissons condemned the canon, John Roscellinus of Compiègne and his teaching, because he had ventured to apply the nominalistic views to the conception of God.

The dispute became especially warm, when the Franciscan, William of Occam, a pupil of Duns Scotus (doctor subtilis), who was the opponent of Thomas Aquinas, refused to concede to the operations of the mind anything but their subjective existence and truth. The Church felt how greatly its dogmas were endangered by

¹Conclusion of the article by the same author in the preceding Open Court.
this intellectual revolution, and from 1339 on, repeatedly forbade the use of the books of William of Occam, especially in France, whence his followers took refuge in the German universities, until in 1481 when the teachings of the Nominalists were allowed even in Paris. At bottom the issue in this controversy was the overthrow of the scholastic methods of teaching, and when Hugo Spitzer in recent times praised the Nominalists as "Darwinians before Darwin," his expression was appropriate in this respect only, that by eliminating the concepts of genus and species from the realm of reality they dealt the methods of scholasticism just such a blow as Darwin with his new explanation of the concepts of genus and species dealt to scholasticism in natural history. Their real influence was essentially critical and clarifying; of positively constructive contributions to knowledge, such as Darwin's, they made few.

Much more far-reaching was the doctrine emphasised by Roger Bacon (died 1292), called by his followers *doctor mirabilis*, that we cannot learn nature from the Bible and old books, nor interpret it from our inner consciousness, but that we must see with our own eyes and study the Creator in His works, and must even learn their significance by investigation and experiment. However, for these and other heresies he was kept in the dungeon of his monastery for years and punished with such severe fasts that he nearly died of hunger. Bacon's thought, that beside the old Scriptures there was a second source of knowledge of the greatness of God, was embraced with the greatest enthusiasm, especially by Raymond of Sabunde, who taught in Toulouse about 1436. Though a thoroughly devout Christian, he did not hesitate to say in his *Theologia naturalis seu liber creaturarum*, that of the two revelations ascribed to the same author the one found in nature was decidedly preferable to that of the Scriptures, for all men could read the former while the Bible was understood only by the clergy. Nature, therefore, must constitute the alphabet of all teachers, and must be studied first of all as the foundation and source of all the sciences. For it could be misunderstood by no one, not even by a heretic, which might easily occur in the case of the Scriptures, where moreover corruption of the text was not beyond the possibilities. Though the heathen had sometimes misunderstood nature, this could not be so with Christians, and they would find it everywhere in harmony with the Bible.

The Church did not at first pay to the nature-theology of this

1 H. Spitzer, *Nominalismus und Realismus*, Leipsic, 1875.
unquestionably pious teacher the attention which it certainly de-
served; for he professed many ideas wholly out of harmony with
the teachings of the Church, notably the theory of the central po-
sition of the sun. Only when the German Cardinal and Bishop,

![Image](Roger_Bacon.jpg)

**Roger Bacon.**

(1214–1292.)

English monk, philosopher, and heretic. Forerunner of the renaissance of science

Nikolaus of Cusa (from Kues on the Mosel, died 1464), the most
evident forerunner of Copernicus, openly challenged scholasticism
in his work upon *Learned Ignorance*, and taught the motion of the
earth and the plurality of inhabited worlds, did the Church gradu-
ally begin to recognise the threatening danger which was involved in the study of nature, so warmly recommended by Roger Bacon and Raymond of Sabunde. Therefore together with the more and more numerous religious heretics, those men were also summoned before the tribunal of the Inquisition whose non-conforming views and teachings were not directly concerned with religion but with the new astronomy and natural history. Pietro d'Abano, Cecco d'Ascoli, Giordano Bruno, Campanella, Galileo, Vanini and others suffered not so much for their actual religious heresies as for their scientific convictions, and several of those who refused to renounce their views were burned at the stake. For even in the case of heretics whose errors lay in the direction of natural history, the Church in her mildness and mercy shrank from the shedding of blood and preferred the purifying flame as a means of extermination.

Meanwhile, the art of printing, so destructive to belief on authority, had been invented. Thus heresies could spread with multiplied rapidity over distant lands, and Pope Paul IV. felt it necessary to establish in 1559 a special council, the congregation of the Index Expurgatorius, whose incumbents were occupied with the examination of recently composed as well as already published works, in order to condemn to strangulation before birth or to a subsequent death by fire those which contained truths hostile to Church dogma. The reopened Council of Trent (1562–1563) settled in detail what must be believed and what regarded as heresy; and the Pope, following the recommendation of Tertullian, forbade, under penalty of excommunication, every unauthorised discussion or interpretation of the decretales, as being the exclusive prerogative of the Papal See. In order to set a good example, he had one of his own writings placed in the Index. The progress of the Reformation had made these measures seem necessary; a definite boundary had to be set between what was to be truth, and that which must not be truth, and the list of forbidden books soon increased like an avalanche. The Theologia Naturalis of Raymond of Sabunde, translated into French in 1569 by Michel Montaigne, one hundred and fifty years after its publication, underwent a painful operation in the amputation of the introduction, which treated of the advantage of the study of nature over that of the Scriptures.

Indeed, the universe of Aristotle and the Church appeared to have suddenly become disjointed. The discovery of America had made untenable the formerly current views of the Church concerning the form of the earth and the impossibility of the antipodes. A canon of Frauenburg had dealt the death blow to the be.
lie in the central position of the earth. Then, as always when the current views of the universe are disturbed by great discoveries, and the opinions hitherto regarded as certain truths are shown to be groundless assumptions, reflexions on the danger of investigation and on the errors of human reason became prominent. The study of those processes is so much the more important, because we are to-day experiencing a similar intellectual revolution, beginning with the work of Darwin which shattered beyond repair the theory of creation advanced by Linnaeus and Cuvier, a theory which was still affected by the philosophy of Aristotle, and which had barely held its own up to that time as a thing of shreds and patches.

In that time, when men's minds were awaking and, to use the expression of Hutton, "it was a joy to live," every one thought he might believe what he considered reasonable without being obliged to heed the doctrines of the Church. The French jurist and political economist, Jean Bodin, in his Course in Historical Science (1566) made bold to attack the story of Paradise, and to retouch the Bible picture of the beginning of the human race, in the light of information from America. Ridicule and satire, such as the freethinkers, Rabelais above all others, poured out upon all things formerly believed and held sacred, grew at an alarming pace, and we can easily understand how even men of calm and sober minds were shaken in their inmost convictions by these attacks.

Of the greatest interest in this connexion is the attitude of the French nobleman, Michel Montaigne, a man of independent judgment and well read in the works of antiquity. He constantly vacillated between the faith of his fathers, the philosophers, the new views, and his own reason, and very fittingly selected for his device a pair of scales with the motto: "What do I know?" His attempts to justify the old views and at the same time take into account the new knowledge, seem indeed, as Jacob Fries recently attempted to show, to have been incorporated in the gloomy brooder, Hamlet, and to have had the greatest influence upon the conception of that character. In his longest essay, the Justification of Raymond of Sabunde, he professed (p. 2) to favor the view of the academician, Balbus, emphasising the idea, that animals fare better on the whole than men, in that nature has given them no more reason than they need for their existence, while man has received more than he can use to his profit, and yet not enough to overcome the errors arising from the excess.

1 Shakespeare and Montaigne. An Endeavour to Explain the Tendency of Hamlet. London, 1886.
With the free use of our reason and the ability to govern our actions according to our discretion and judgment, he says, there fell also to our lot "inconstancy, indecision, uncertainty, anxiety,

superstition, worry about what the future may bring, even though it be not until after our death, arrogance, jealousy, avarice, envy, evil and untamable passions, quarrelsome ness, falsehood, faithless-
ness, abusiveness, and curiosity.” The simple-minded man, he says, lives without thought of the morrow, happy and content with his lot, without hoping or fearing much from the future; and he would therefore already possess that peace of mind which philosophers praise as the most desirable good without ever being able to attain it.

**Michel Eyquem de Montaigne.**
(1533-1592.)

French essayist and philosopher. (From an engraving by Th. de Leu.)

He says in another passage: “In my day I have seen hundreds of artisans and laborers, who lived more wisely and more happily than the rectors of the university, and whom therefore I should rather resemble than the latter.” Much thinking, he said, is in its very nature not conducive to the health of the body.
“Animals, by their health, teach us plainly enough how often mental agitation causes illness. What we are told of the inhabitants of Brazil, to wit, that they die only of old age, and which is ascribed to the purity and calmness of their climate, I ascribe rather to the peace and serenity of their minds, free from all emotions and reflexions, from all intense or disagreeable activity, as being people who pass their lives in admirable simplicity and ignorance, without science, without law, without a king, and without any religion whatever. How much suffering is caused by our intensely morbid imagination alone! In order to realise the difference, one need only compare the life of a hypochondriac, constantly tortured by the belief that he is ill or may become ill, with that of a laborer who follows his natural impulses and judges things only according to the momentary impression, without knowledge and forethought, feeling disease only when it exists, while the former often carries the stone about in his mind before he has it in his kidneys; as if it were not enough to endure the evil when it comes, he anticipates it in fancy and even runs to meet it.”

The unfortunate singer of Jerusalem Delivered whom Montaigne visited in a madhouse at Ferrara, likewise serves him as an example of the pernicious influence of the mind on the body. “Were not his sufferings to be ascribed to this quickly consuming fire, this brightness which blinded him, this acute and intense application of the mind which deprived him of his reason, and this anxious and diligent pursuit of the sciences which has reduced him to a level with the brutes?”

Then Montaigne proceeds to declaim especially against the ever-increasing arrogance and pride of the human reason. Since we have received from nature the faculties of discrimination and free-will, we must use them; but, in doing so, we must never forget the proper caution and reserve. “Our innate defect is self-conceit. Of all creatures man is the weakest and frailest, and yet the most conceited. Although he finds himself lodged in the filth and foulness of this world, in the meanest, most sluggish and most rotten part of the universe, in the lowest story and farthest from the vault of heaven, and although he feels himself bound to the ground in the company of crawling beasts, yet by the power of his imagination he sweeps out beyond the path of the moon and leaves the heavens at his feet.” Finally, man thinks that the earth was created only for him, the sun and moon to give him light, nay, even that God himself exists only to create and care for him. From
this same conceit arises the mania for finding out the connexion of all things, and that worst of all misuses of reason, philosophy.

"The first temptation," he says, "which was devised for the human race by the devil, his first poison, appealed to us through the promise which he made with reference to knowledge and understanding, 'Ye shall be as gods, knowing good and evil.' "According to Homer, the Sirens in this same fashion attempted to entice Ulysses into their fatal toils by offering him the gift of their knowledge. His hope of mastering all knowledge is the curse of man. This is the reason why, in our religion, ignorance is declared absolutely necessary for faith and obedience." Montaigne closes these exhortations with a summary of what philosophy has revealed up to his time. He finds that all its efforts have accomplished nothing except to make plainer what Socrates already knew, that we know nothing and can know nothing, but that there is no folly so great as not to be called truth by some philosopher.¹

Moreover, it is not to be supposed that these tirades against the use of knowledge were heard only from the Catholic camp, whence also Agrippa of Nettesheim wrote his book De vanitate scientiarum, and Erasmus of Rotterdam, a half-heretic, to be sure, his Praise of Folly. Luther himself, who on January 17, 1546, ascended the pulpit to preach against "the accursed harlot, Reason," regarded philosophy in the same light, although, of course, the favorite philosopher of Rome fared the worst. He exclaimed: "This doubly accursed Aristotle is a very devil, a dreadful slanderer, an infamous sycophant, a prince of darkness, a real Apollyon, a beast, a vile deceiver of mankind, almost wholly destitute of philosophy, an open and confessed liar, a salacious ram, a confirmed Epicurean." The scholastics Luther characterised with somewhat more deserved abhorrence by the epithets, "grasshoppers, caterpillars, frogs, lice," and so forth. Other reformers, Melanchthon and Calvin, for instance, sympathised with this hatred on the whole, even though they did not give it such vigorous expression.²

In the course of time this aversion for science gradually relaxed in the Protestant Church, and since this Church lacked from the beginning such violent means of repression as the Index and Inquisition, it was able occasionally to offer philosophers a refuge, and the whole development of philosophy from Descartes to Spinoza,


² Cf. Draper, History of the Conflict Between Science and Religion.
from Leibnitz to Kant, Fichte, and Hegel took place exclusively in Protestant states. To be sure, Descartes was a Catholic, and at times decorated his hat with effigies of the saints in order to remain unmolested; but in order to cultivate philosophy unhampered he had, like Giordano Bruno, to seek refuge in Protestant states. Thus even the philosophy of Descartes, in spite of its concessions touching the nature of the soul, and in spite of the efforts of Malebranche, entirely failed to influence Catholic doctrines. The philosophy of this Church still rests upon the principles of Aristotle, and independent thinkers, such as J. C. Baltzer and Frohschammer, who show the least inclination to depart in their psychology from the views of Thomas Aquinas, are immediately called before the pope, and their writings placed on the Index.

The consequence of this proceeding has been that free investigation and science could not prosper under the scepter of Church authority; and that by far the greatest part of the scientific work of recent centuries had to be done by open or disguised heretics. True, the Church has often boasted that it could show famous scientists in the ranks of its priests, such as the Jesuit fathers Scheiner, Kircher, and Secchi; but on closer inspection the works of these heroes of the faith are of little value. As in the case of Secchi, they had to profess the duty of the sacrifice of the intellect and stoop to dissimulation, and can in no way compete with such Catholic investigators as Copernicus and Galileo, whose works the Church had condemned. And yet this Church has at last been obliged to admit, although with every possible reservation, that it was wrong; and what formerly caused their representatives to curse science has been for the most part taken up and digested by the present generation without harm to body or soul. The heresies of Copernicus and Galileo no longer rob anybody of his peace of mind. When in the year 1820 in connexion with the examination of an astronomical work of Settele, after a long deliberation in Rome, the author was permitted to teach the theory of the motion of the earth as no longer opposed to Catholic doctrine, the condition was nevertheless imposed upon him that he should add in a note that the statements of Galileo had been condemned because opposed to the general views of that time, and in their sensational form harmful to the masses, who were not yet ready for them.1

This is the ever repeated song of those who believe with Joseph de Maistre that people can and must be kept stupid, in order that they may be easily ruled and kept from rebellion. It is with man-

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kind as with children, whose curiosity especially regarding their origin is gratified for a long time with fairy tales, until the truth can no longer harm them. But as for the great questions of life and humanity, the wise say that most men will remain forever children, and will never be mature enough to understand them. Then they cite the verses of Schiller about the man forever blind to whom one must not give the celestial torch of light, and think that they have thus forever disposed of this question. When in the preceding century, the "Age of Enlightenment," people gradually began to see that the Bible account of the six days of creation and of the flood, despite all the efforts of Burnet, Whiston, Woodward, Scheuchzer, and others, could no longer be reconciled with the investigation of the earth's crust and its contents, they felt anew with full force the difficulty of harmonising the Bible with nature. The Berlin Academy of Science in the year 1779 chose as the theme for a prize essay the question, S'il est utile au peuple d'être trompé? (Whether it be beneficial for the masses to be deceived?) Not less than thirty-three different treatments of this question were submitted, of which, according to Bartholomess, in his History of the Prussian Academy, twenty took the negative side and thirteen the affirmative. The judges were evidently greatly embarrassed, for they themselves did not know which side to favor, and gave a decision which earned much derision for their "impartiality," awarding two prizes, one to the best argument for the affirmative, the other to the strongest presentation of the negative.¹

Formerly the prevalent opinion of philosophers affirmed this question with Plato, and even Rousseau, 1762, replied to the Economical Society in Bern that he would take the affirmative of the question whether there be sacred prejudices which should be respected. Even to-day there are still many anxious souls who decide, though unwillingly, in favor of deception. Almost as questionable a proposition is that of the physiologist, Rudolph Wagner, to suffer religion and science to grow independently side by side and for the sake of peace of mind to adopt what he calls "double-entry bookkeeping," or, in plain words, duplicity. Others have recommended concealing one's inmost convictions, which are based on their investigations, as soon as they prove to be opposed to the statutes of State and Church; still others would carry out the proposition of Renan, who would teach an esoteric doctrine, a more spiritualised religion for the educated (as the Greeks are said to have done in the Eleusinian Mysteries), and an exoteric and more

¹ Cf. John Morley's Fidelity to One's Convictions.
earthly religion for the masses. There can be no doubt what the answer to these propositions should be; for they advocate in place of truth a system of scientific hypocrisy, and forget moreover that in our age of printer's ink it would be wholly impossible for the temple guardians to preserve such a secret doctrine.

One may concede without hesitation that the positiveness of the promises of religion are more satisfying to the soul of the uneducated man, than the results of science, which never represent a totum, and have no answer to final questions. The light of knowledge may be painful to those unaccustomed to it, as unmodified sunlight is to the eyes, and many may prefer to spend their days in boudoirs with latticed windows and colored lights, but science, to which we owe such far-reaching material and intellectual advancement, the glory of our generation, cannot stop on their account, and no demand of this sort has any prospect of winning general approval. What is it, then, that makes the results of modern investigation appear dangerous in the eyes of so many men? Can the truth, as such, be harmful, and therefore objectionable, supposing that we had the truth, and that it opposed all traditions?

The answer will be, no; but the remark will be added that the truth is no staff for halting souls, and that dazzled eyes cannot endure it. Consequently, the harm lies not in scientific knowledge, but in the weakness of souls and eyes. Here, then, is where the mistake lies, and where relief must be administered. It is not the new truth which threatens danger, but the old error, in which the human mind has been kept so long, and which some would like to retain longer. The danger is that all our institutions, home, school, church, public life, social order, and systems of government, being based on and adapted to these old errors, should fail to perceive that it is their business gradually to adapt themselves to the better knowledge. Only on condition that they do this can the widening of the chasm and the violent collapse of what has become antiquated be avoided. Attempts to bridge the chasm, which are the order of the day in France and England, where they are still trying to harmonise the Bible with scientific investigation and to make the days of creation correspond to the geological ages, only win for those who make them the suspicion of hypocrisy and a purpose to deceive the people, while they render the inevitable collapse more dangerous.

In this connexion the excellent proposals of Condorcet should not be forgotten: "The transition from error to truth," he wrote over a century ago, "may bring with it certain evils. Every great
change has several such evils in its train, and even if they are collectively less than the evil against which the change is directed, yet the utmost should be done to diminish them. One must not only do good, but must do it in a good way. Certainly we are to remove old errors, but since they cannot all be removed in an instant we should do as a good builder does in pulling down a house: he knows how the separate parts are joined together, and directs the tearing down so that a dangerous collapse is avoided."

It would be too much to affirm that no progress can be noted in this direction. Truths which were considered so dangerous several hundred years ago as to be combated with the Inquisition and the stake, may be fearlessly expressed to-day, and are even taught in the schools. To be sure, those investigators who add to the general conception of the universe new points of view, and fearlessly express their convictions, will have to submit as formerly to excommunication by the temple guards. The French Church Journal wrote of Alexander von Humboldt, as he himself good-humouredly reports:¹ "They say the assassin of souls has literary merit. This will be no excuse. Satan has more wit than M. de Humboldt."

But upon the whole no one longer doubts that every one has his incontestable right to assert and announce as truth all that he has recognised as correct, and that it should be the duty of the Church willingly to surrender those doctrines which are opposed to the general world-views of the time,—especially if they in no way affect the essence of religion,—and to acknowledge that they are a part of an ancient metaphorical language of human origin. On the other hand investigators, to meet this concession, must frankly and honestly recognise their limitations, and in the matter of final causes, which elude the reach and grasp of human reason, give religious feeling its rights, lest they render the mission of the Church more difficult by an unscientific negation. Only a science, which recognises its own limitations, while vindicating its real right in the matter of definite knowledge, can boast of having done its duty in both directions, and can look calmly into the future. The ideals of mankind will of course change somewhat, for the better condition of humanity must no longer be sought in the mists and errors of the past, but, according to the principles of the doctrine of evolution, in a more enlightened future.