BELIEF AND CREDULITY

The vital history of human development is to be sought in the history of beliefs. The inscriptions of Egypt or of Babylon, the records in modern tongues, speak an imperfect message until illuminated by some insight into the beliefs which those, cultures cherished. The amazing ruins of Copan, the serpent mound of Ohio, remain mute and inglorious until we can solve the riddle of the beliefs of their builders. Dead Pompeii becomes a living city when we peep into the streets with the hopes and fears, the beliefs and opinions of its last inhabitants. The history of the arts and the sciences, of society and of religion, specifically involves an account of the succession of beliefs and of the growth of belief-habits. The story of men’s doings is likewise, in large measure, a reflection of their beliefs; conduct, whether of individuals or of masses of men, remains an undeciphered record until interpreted as the concrete expression of definite beliefs. The spring of action is motive, and the intellectual impetus to motive is again, belief.

Of the outward and of the inward marks of the stages of learning, none are more notable than the beliefs which is the result of such learning come to be accepted and promulgated, and the attitude of inclination or disinclination which such beliefs foster in regard to the various and ever-enlarging problems which engage the interests of men. The possession of certain beliefs and a definite belief-attitude differentiates the educated from the uneducated, the scholar from the dilettante, the expert from the layman, the modern spirit from the medieval, the traits of this generation from those of its immediate predecessors. For those who would search out the motives and the justifications of their beliefs, it is of constant importance to realize the more potent and the more patent tendencies and influences by which are shaped the opinions alike of the many and of the few; to consider the characteristics which give to certain beliefs and belief-attitudes their logical cogency, their ethical worth, and their social power, and deprive other classes of beliefs from any possible participation in these desiderata. Such an inquiry naturally includes an outlook upon the regions of unwarranted belief, of error and prejudice and credulity.

A most attractive approach to the problem thus suggested may be found in a remarkable essay by Mr. C. S. Peirce. Belief is there presented as a mental trait possessing and developed by plain advantages of an evolutionary or adaptively useful kind. Such at least would be the case for all simple and practical matters upon which the incipient rationality of primitive man probably cut its teeth. Logicality, Mr. Peirce tells us—and by that is meant a habit of mind that leads to the detection of truth, to thinking about things as they are, to bringing our thoughts into agreement with reality—"logicality in regard to practical matters is the most useful quality an animal can possess, and might, therefore, result from the action of natural selection; but outside of these it is probably of more advantage to the animal to have his mind filled with pleasing and encouraging visions, independently of their truth; and thus, upon unpractical subjects, natural selection might occasion a fallacious tendency of thought." Natural selection certainly has not interfered with the maintenance of untruth and illogical beliefs; and while we may admit some truthward tendency as part of the natural endowments of homo sapiens, that tendency by no means dominates his mental habits. Indeed, it is brought to its fruition only after so much struggle and the learning of so many hard lessons of experience and the slow accumulations of ages of thinking, that it may be appropriately described as an artificial, weakly possessed, and imperfectly disseminated acquisition. We must also remember that practicality, like much else, is a matter of degree; groups of ideas and ways of thinking are more or less practical, and influence action more or less indirectly and by variously roundabout paths; and as the range of human thought widens and

"The fixation of belief," Popular science monthly, November, 1877.
diversifies, deepens and becomes more complex, an ever-enlarging circle of human interests and concerns comes to be of this indirectly practical kind. Precept and practice, instead of being connected by a short and straight, stout cord, are less effectively brought into mutual bondage by a complicated network of strands, many of them delicate in texture, elaborate in weave, and difficult to trace. For present-day purposes we may consider belief as characteristically of this type—complex in structure, subject to endlessly varying influences, immodifiable by diverse factors and circumstances, responsive to social, hereditary, educational, and transitory as well as to more permanent, natural, and logical influences.

A prominent result and indeed a purpose of belief is the concordant settlement of opinion. Yet this result may be brought about—has often been brought about—by other than logical processes; or, speaking with reference to the experience of history, it may be said that it proceeds by methods which are condemned by the most approved logical (and ethical) sanctions of more advanced stages of knowledge, tho it receives the endorsement of the crueler and less enlightened logic of the period. For every work of science—and something analogous is true of reformatory movements in other directions—"great enough to be remembered for a few generations, affords some exemplification of the defective state of the art of reasoning of the time when it was written; and each chief step in science has been a lesson in logic." (Peirce). Of distinctive methods of fixing belief Mr. Peirce describes four: the method of tenacity, of authority, of inclination, of scientific verifiability. The first, when stated baldly, seems devoid of all merit; yet it expresses in extreme form a tendency which the student of belief is certain to encounter. The man of tenacity proceeds upon a faith that the opinion which he holds is the truth, that it is his duty to affirm this conviction, to reiterate it and to cherish it, to refrain from entertaining any considerations which may tend to shake the belief, and to seek all the influences that may strengthen it. Naturally this does not remain a coldly intellectual process, but becomes suffused with an emotional intensity which leads the devotee to look with pity or contempt or horror upon any contrary opinion; even to scorn "weak and illusive reason," and to take refuge in the calm satisfaction of a firm and immutable faith. "When an ostrich buries its head in the sand as danger approaches, it very likely takes the happiest course. It hides the danger and then calmly says there is no danger; and if it feels perfectly sure there is none, why should it raise its head to see?" (Peirce.)

Such an attitude is possible only to an intellectual recluse and, to be consistently maintained, must be kept remote from earthly realities. Even when reserved for non-practical considerations, it breaks down under the social impulse; man was not meant to live alone and neither feels, acts, nor thinks alone. "A common influence is necessary to fix men's beliefs alike, and the most expeditions method of producing a consensus of opinion has proved to be that of imposed authority. History is too full of the triumphs and the failures of this method—both equally sad to contemplate—to make it necessary to bring forward illustrations of its procedure. Dogma and manifesto, the trial for heresy and the Index Expurgatorius, the Inquisition and the stake, scholasticism and pedantry, the literalism of the expounders of the Scriptures or of the commentators of Aristotle, the refusal of the orthodox to look thru the telescope to see what they had no authority for observing, or the E pur si muore of Galileo—bring to mind realistically the heroic scenes of the drama for which the method of authority furnishes the common plot. The limitations of this method are certain to be irritatingly felt by the few, however lightly tolerated by the many. The saving remnant that enjoys a wider outlook, and penetrates the mist with which dogma has enveloped the atmosphere, realizes that infallibility is theoretically an idle dream, and practically an artificial fiction: and in so far as others use their eyes and look in forbidden places, they observe that many of the beliefs of men do not fall under the shadow of the pronunciamento, but thrive in the sunshine of common sense. And if this be true of some opinions, why not of others? Unless doubt and questioning and inquiry on all subjects be utterly suppressed, the error of authority will be suspected, the means whereby a sounder belief may be discov-
erel will be at least dimly realized, and some resort to other
methods of shaping belief be attempted.

But even when freed from the fetters imposed by authority,
the minds of the leaders of men have not always followed
in the footsteps of wisdom. They have been prone to overlook
the tyranny of their own organization and inheritance, and
have come to accept a more liberal and humane dictator and
one of their own seeking—b ut a dictator non the less. They
believed what was agreeable to reason; they accepted that to
which they naturally inclined; and the philosophers of culture
incline to beliefs that were plausible, or comforting, or
stimulating, or uplifting, or liberalizing. Congenial spirits
found one another or a common leader, and schools of opinion
came and went. The pendulum swung now this way and now
that; here a dominant leader impressed his personality strongly
upon his contemporaries; there a reaction from an extreme
doctrine induced attention to new lines of thought; everywhere
opinion came to be more responsive to influences from without
—from practice and experience, from custom and institution. But
whatever progress results under this régime is fitful, and
hazardous, and ill-defined; it is only when the causes of our
inclination are scrutinized and the objective worth, not the
agreeableness, of our reasoning comes to be regarded as of
primary import, that the pursuit of knowledge, and the fixation
of belief in which it results, realize their allegiance to a higher
power. Strange gods have been worshiped in strange ways by
the followers of their inclinations; the intuitionalists and the
mystics and those who believed themselves inspired—tho the
inspiration of one was folly and anathema to another—have therein
found exercise for their indefinable right to liberty and the
said to lie at the bottom of a well for the very reason, perhaps,
that whoever looks down in search of her sees his own image at
the bottom, and is persuaded not only that he has seen the
goddess, but that she is far better-looking than he had imagined.”

The method of scientific verification has been so wrought
into the fiber of our thinking that we find it difficult to realize
the power and dominion of other sovereigns; we the scientific-

ally minded are the Hellene s, and the others are the barbaroi.
And rightly so; for the credentials of our sovereignty are the
records of generations of patient study of the ways of nature,
sanctioned by the logical anticipation of natural events, by the
practical utilization of natural principles, by a conscientious,
impartial, and objective analysis of our own mental processes.
For the scepter in the hands of science is neither a symbol of
wanton authority, nor a badge of unearned privilege, nor a
license for extravagance and cuprice, but an emblem of law
and order—safeguarding to all the most cherished opportuni-
ties for right knowledge, right beliefs, and right actions, in
what measure each is wise enough to consent to be thus gov-
erned. It is the prerogative of the scientific method that it
enthrones the logical right—the true—as the moral law within
enthrones the ethical right—the good. The crowning virtue
becomes not conviction, nor the approval of authority, nor ac-
ceptability, nor general credence, but provability. The adoption
of this as our sovereign method alters our ideals, even
where it modifies but little our practices; it radically transforms
our belief-attitude and our outlook, even tho we cannot as yet
apply the one nor enter into possession of the other.

Yet we must not complacently assume that the advantages
are exclusively incorporated with the one method, or that its
adoption is unencumbered with conflict and sacrifice. We shall
continue to feel the natural proneness to shape our beliefs by
other and less strenuous standards; we are unwilling to, and
we need not, abate our appreciation of what the other methods
have accomplished in the trials and tribulations of the past.
We cannot lightly shake off the tenacity of our convictions,
however obtained, nor the inertia that easily, and the incapacity
that necessarily, appeals to authority; we shall continue to yearn
to believe what is agreeable and to resist unpleasant truths; we
may still reserve some corner of our belief-chamber which shall
be exempt from the intrusion of inquiry; but, on the whole,
however we may defend these tendencies, or apologize for them,
or struggle against them, we make some decent attempt to
clothe them with the semblance of plausibility and to present
them garbed in fashion scientific. “Yes,” Mr. Peirce admits,
the other methods do have their merits: a clear logical conscience costs something—just as any virtue, just as all that we cherish, costs us dear. But we should not desire it to be otherwise. The genius of a man’s logical method should be loved and revered as his bride, whom he has chosen from all the world. He need not condemn the others; on the contrary he may frown upon them deeply, and in so doing he only honors her the more. But she is the one that he has chosen, and he knows that he was right in making that choice. And having made it, he will work and fight for her, and will not complain that there are blows to take, hoping that there may be as many and as hard to give, and will strive to be the worthy knight and champion of her from the blaze of whose splendors he draws his inspiration and his courage.

From this survey of the methods by which opinion comes to be established and disseminated, we emerge with an appreciation of how it arises that the history of belief—not unlike history in general—is an affair of war and peace; that it deals, on the one hand, with the accounts of the warfare of the scientific method with its rivals, and, on the other, with the internal development, the institutional absorption, and the colonization of its own spirit among outlying cultures. “Logic.” Mr. White reminds us, “is not history. History is full of interferences which have cost the earth dear. Strangest of all, some of the direct of them have been made by the best of men, actuated by the purest of motives, and seeking the noblest results.” And in the same strain Mr. Morley: “It is surely the midsummer madness of philosophic complacency to think that we have come by the shortest and easiest of all imaginable routes to our present point in the march; to suppose that we have wasted nothing, lost nothing, cruelly destroyed nothing on the road.” “Benevolent assimilation” has always been, as it still appears to be, a difficult art.

From a consideration of the principles by which belief may be rightly and rationally fixed, we proceed to a contemplation of these principles in action. Counsel may be wise, but not practical. We know that the actual formation of true belief is beset with serious difficulties; that the process is likely to be
ley aptly notes of personal companionship—that its painful element is not difference of opinion, but discord of temperament—is equally opposite of intellectual pursuits in general. "Harmony of aim, not identity of conclusion, is the secret of the sympathetic life." Such differences of opinion fall within the range of valid beliefs: those that do not—and many of them fall beyond the pale because of their discord of temperament, their alliance with other methods of fixing belief—may be variously characterized as error, fallacy, superstition, extravagance; and for the habits of mind that tend to the acceptance of false beliefs the terms illogicality and credulity are opposite. The former is commonly understood as referring to the priciness when confronted with the premises to draw false conclusions therefrom; the latter as a too great readiness to accept the premises on insufficient evidence. Yet in practice they are often found as close companions and appear at the summons of prejudice, ignorance, inertia, and of that weakness of judgment and vacillation of standards of belief that flourish, weed-like, when the scientific habit of mind is not assiduously cultivated.

It is important to illustrate that the forces that have been most productive of error in the past are not wholly shorn of their strength in the present; that these tendencies to act upon data credulously, with perverted logic and distorted evidence, however different the fashion of the garments in which they are paraded, are still recognizable as the same persistent human frailties that detract from the complete appropriateness of the definition of man as a rational animal. It is further to be noted that quite too many of these misdemeanors are laid to the charge of ignorance; in truth ignorance cannot usually prove an alibi, but it remains to discover the influences that prevented the dispersal of the ignorance, and therein will be found the vera causa of the credulity. Mr. Lecky reminds those who would investigate the causes of existing beliefs that a change of opinion is apt to imply, more than anything else, a change in the habits of thinking. "Definite arguments are the symptoms and pretexts, but seldom the causes of the change." "Reasoning which in one age would make no impression whatever, in the next age is received with enthusiastic applause." As we travel in retrospect along the stepping-stones from myth to science, from credulity to logicality, we find rather little disproof and very much ought with. It is because we have a more appropriate, that is, a truer way of regarding a certain cluster of phenomena, that we discard the old way; and this truer conception, reached partly by new fact, partly by new argument, partly by new insight, partly by new applications of method, is the logical legacy which the successive "heirs of all the ages"—each in turn "in the foremost ranks of time"—bequeath to their descendants.

The word-learning of the scholastics is reflected in their explanation of the existence of fossils by recourse to a "stone-making force," or a "lapidific juice," or a "seminal air," or a "tumultuous movement of terrestrial exhalations"; the theologizing proclivities of the upholders of scriptural literalism appear in their accounting for fossils as "sports of nature," as models made by the Creator before he had decided upon the most suitable forms for the animals to assume, or as tokens hidden by the Almighty to tempt the unorthodox. Voltaire argued that "fossil fishes were the remains of fishes intended for food, but spoiled and thrown away by travelers; that the fossil shells were accidentally dropped by Crusaders and pilgrims returning from the Holy Land," and one Beringer insulted pious tombs to prove that they were "stones of a peculiar sort, hidden by the Author of nature for his own pleasure." Beringer's work deserves a prominent place in the museum of credulity; for it is related...
that some of his mischievous students prepared baked-clay fossils of flesh and fowl, most fearfully and wonderfully made—and even specimens with Hebrew and Syriac inscriptions upon them—and buried them in the professor's favorite digging places. Illustrations of the miraculous fossils appear on the plates of his curious work, which the author was very zealous in suppressing when the deception became known; but what was the fate of the students history telleth not. Now these fossil views seem to us not merely disproved, but absurd; not merely weakly supported, but distorted. We cannot without serious effort assume the point of view under which they might be considered as remotely plausible. The prepossessions that opened men's ears to such hypotheses are not only foreign to present-day conceptions, but—and this has been frequently overlooked—are antagonistic to the essential spirit of scientific verifiability. The philosophers to whom Charles II. propounded his problem—why a bowl filled with water to the brim would not overflow when a live fish was put into it—were not merely credulous, but were innocent of the habit of thinking that resorts promptly and naturally to verification. It is not easy to reach a decision in regard to the erroneous views of the past, as to how far prepossessions blinded men to actual evidence, how far decisive facts were not available, how far logical methods were weakly handled; each of these was frequently present and acted both as cause and effect. This, however, is deserving of emphasis: that when the method of science is put in the first place, significant facts will be observed and looked for, arguments pro and con will be weighed, the dangers of prepossession will be realized. Not that this will always be done wisely and well, nor that error will necessarily be avoided; but that the steps that are taken, even tho they be small and tentative and meandering, are more likely than on any other method to be in the right direction. Our scales may be crude, our weights only approximate; but even so, the result is more likely to be trustworthy than if we abandon them and resort to guesswork, or, retaining them, put down our own fist on one end of the beam.

1 The affair Beringer is described in White, A History of the war flush of science with theology, 1:216.
may belong to the class to which Huxley refers when he speaks of "the downright lying of people whose word it is impossible to doubt"; he may be more or less consciously or subconsciously misled by his imagination; he may be hopelessly deficient in his powers of observation, or in his knowledge of fact, or in his capacity to handle evidence and argument; and none of these ethical or logical shortcomings seems to interfere at all in certain persons with their powers of holding and publishing opinions on all manner of subjects—even on those on which no human soul has the possibility of possessing knowledge. To Clifford's dual conditions of logical responsibility must be added another pair; namely the distinction as to how far the issue involved is a matter of fact or of the interpretation of fact. Both facts and their interpretation, arguments, appear as prominently on the side of error as of truth; yet, the not reducible to anthropomorphic measurements, the physiognomies of the two are recognizably different to the trained observer.

It seems ludicrously easy to collect facts of any desired quality and to point them in any desired direction. Dr. Holmes effectively describes these abuses: "Foremost of all, emblazoned at the head of every column, loudest shouted by every triumphant disputant, held up as paramount to all other considerations, stretched like an impenetrable shield to protect the weakest advocate of the great cause against the weapons of the adversary, was that omnipotent monosyllable which has been the patrimony of cheats and the currency of dupes from time immemorial.—Facts! Facts! Facts!" Yet in the crucible of logic it is possible to separate the dross from the gold. The arguments employed have a like suspicions appearance; they "have been so long bruised and battered round in the cause of every doctrine and pretension, new, monstrous, or deliriously impossible, that each of them is as odiously familiar to the scientific scholar as the faces of so many old acquaintances, among the less reputable classes, to the officers of police." The former type of credulity—the rash acceptance of facts—is the more simple and the more usually considered; the latter type—the rash acceptance of explanations of interpretations of facts—is frequently the more vital and instructive. Ingenious and successful lying is doubtless a fine art; yet the more difficult part of it is the gaining of credence for one's inventions. That depends largely upon the belief attitude of the public and upon the psychological climate in which they live. It is quite obvious that the conscienceless prevaricator or charlatan must play upon the prejudices and vanities and ignorance and cupidity of his clientele. He presents what they wish to believe, appeals to their passions and emotional weaknesses, and when necessary berates his opponents with no gentle hand, and indulges in what Huxley speaks of as "vanishing the fair face of truth with that pestilent cosmetic, rhetoric." But the psychologist's interest is predominately on the other side, with the duped rather than with the knave; especially if it be a case in which contagion has a fair field and all judgment becomes lost in a psychic epidemic of credulity. Such we are apt to associate with dark ages and ignorant communities, with isolated cultures and inhospitable mental climates. A few instances from the days of the telegraph and the omnipresent daily paper may accordingly be the more instructive.

The name of Leo Taxil—a pseudonym for Gabriel Jorgand—may be unknown to many readers; it should not remain so, for the judgment which has been pronounced upon him by

"Dr. Holmes's Homoeopathy and its kindred delusions, first published about sixty years ago, was substantially a study of credulity as applied to medical matters. Readers of this will recall that besides the minute exposure of the baselessness of the Homoeopathic cult, there are there considered (1) the royal cure of the King's Evil; (2) the Water Ointment and the Sympathetic Powder, the first rather deviously considered by Bacon, the latter brought into notoriety by Sir Kenelm Digby; (3) the Tar-water mania of Bishop Berkeley; (4) the history of the Metallic Tractors, or Percussion. These are thus summarized: 'The first thus illustrate the case with which numerous facts are accumulated to prove the most fanciful and senseless extravagances. 'The third' exhibits the entire insufficiency of excited wisdom, immaculate honesty, and vast, general requirements to make a good physician of a great bishop. The fourth shows us the intimate machinery of an extinct delusion, which flourished only forty years ago; drawn in all its details, as being a rich and comparatively recent illustration of the pretensions, the arguments, the patronage, by means of which windy errors have long.
vatsley—also a modern of the moderns—may with modifications be applied to Taxil; that he "has achieved a title to permanent remembrance as one of the most accomplished, ingenious, and interesting impostors in history." Only Taxil's accomplishments were of a rather gross order; his boldness surpassed his ingenuity; and the interest is centered in his deeds rather than in his personality. Like most disciples of Cagliostro, his career was a checkered one. In 1885, at the age of thirty-one, he was engaged upon his *magnum opus*, having already appeared as a violent radical in politics—he is a product of France—a rabid anti-clerical, and the author of a libelous pamphlet on the *Secret amours of Pius IX*. The suggestion for his *chef d'œuvre* was the encyclical of Leo XIII (1884) directed against the Freemasons, who with others were placed under the ban as subjects of the realms of Satan. After a full confession of the errors of his former ways, Taxil was received back with rejoicing into the bosom of the Church, and thereupon published four volumes of wholly imaginary revelations, revealing the sacrilegious orgies and devil-worship of the Masonic mysteries. For this he received in person the solemn benediction of the Vatican, as well as the material rewards of the sale of one hundred thousand copies of his work and the honor of its translation into English, German, Italian, and Spanish. If it be stated that the German version omitted the volume on the "Masonic sisters," for the reason that it was not thought proper to outrage the moral sense of the community by recounting the "filthiness of the hellish crew," the character of the work may be surmised. Taxil extended the sphere of influence of his imaginary demonologists to all parts of the world—even from Singapore to Charleston, at which latter point the Masonic Grand Master figures as a Satanic Pope, who has at his disposal a telephone, invented and operated by devils, whereby he Dictionary round about the earth in forty seconds, and a magic bracelet by which he summons been, and will continue to be, swollen into transient consequences. All display in superficial abundance the boundless credulity and excitability of mankind upon subjects connected with medicine." The account of Petrus and his Metallie Francis falls in well with the instances here considered.

Lucifer at his pleasure. Intoxicated by his success and the credulity of his adherents, Taxil's invention runs riot; and he tells the story of a serpent inditing prophecies on the back of a demon who "in order to marry a Freewoman, transformed himself into a young lady, and played the piano, evenings, in the form of a crocodile." Taxil gained confederates in other countries, who contributed to the movement according to their several needs and talents. One of the most interesting figures in the story is the fictitious personage, Diana Vaughan—the *précieuse* of the drama and of its dénouement. She was given out to be the descendant of Thomas Vaughan, the seventeenth-century mystic, and the goddess Astarte; her Luciferian origin and principles were shown by her horror of all religious observances, by the devils who attended her, and thru whose aid she made excursions to Mars, where she "rode on Schiaparelli's canals, sailed on the Sea of the Sirens, and strolled among the gigantic inhabitants of the planet." Many remarkable incidents of her curious personality are related for the benefit of the believers: while poetic justice is appeased by her final conversion to the Church thru the instrumentation of the spirit of Jeannette d'Arc.

When it became necessary to materialize Diana Vaughan for the benefit of the privileged few and to satisfy the skepticism of others, she was cleverly impersonated by "a bright American girl, employed as a typeset in a Parisian typewriter establishment, who wrote all the letters at Taxil's dictation and received a monthly salary of one hundred and fifty francs for her services." This was hardly a fair appreciation of American talent, considering that the money remitted to Diana Vaughan in ten years amounted to more than half a million francs. In 1896 Taxil was a prominent figure in a great anti-masonic congress held at Trent, where indeed he was treated as a hero and a saint. On April 19, 1897, in Paris, there was a held by invitation of Diana Vaughan a highly sensational function, at which it had been announced that the miraculous lady would appear. When the moment arrived, Taxil stepped forward and said: "Reverend Sirs, ladies and gentlemen! you wish to see Diana Vaughan. Look at me! I myself am that..."
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A plum tree by their odor at a distance at which others could hardly see the trees; he was overcome by the exhalations of a graveyard several streets off; he could distinguish metals by their different attractions for his fingers, while the vicinity of a hardware shop brought on convictions; when examined by a homoeopathist, he proved in his own person the truth of homoeopathy. As to the speculations as to who he might have been, it is enough to say that the gossips and the scholars were equally busy and, with characteristic Titon thoroughness, a bibliography of nearly three hundred numbers was accumulated, recounting the various versions of the story of Kaspar Hauser.

The sifted facts out of which, or in spite of which, the various myths sprouted and flourished, are few and luminous. The boy appeared on the streets of Nuremberg with a letter in his hand, which he had doubtless written, and was put in prison as a helpless wayfarer. The original protocol shows that he walked a mile on that day, recited the Lord's prayer, spoke with dialectical peculiarities, said that he had gone to school, showed his fondness for horses, and admitted that the object of the letter, addressed to a captain of cavalry, was to secure him a post in the service. He seemed to feign simple-mindedness and to avoid answering questions. In the one letter was another purporting to have been written sixteen years previously by the mother of the boy, but obviously a forgery. This started the story to which the Burgomaster gave wings by a proclamation elaborating the "wild boy of nature" theory, and embellishing it with fantastic "details calculated to give verisimilitude to an otherwise improbable tale." Learned ignorance in the person of a Professor Danner—to whom Kaspar was intrusted for his education—still further distorted the simple facts. Tho at first the boy, could not speak (this is Danner's story) and could only understand those who treated him as an infant, this helpless and untutored babe, after three days, performed on the piano, soon after knitted a stocking, and in four weeks was able to entertain the Burgomaster with an account of his years of solitary confinement. Within a month this worthy, but mentally blind, professor had transformed the wild boy into a model of social elegance, who

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lady." Then followed an explicit account of the twelve years of imposture and an impudent expression of thanks to the clergy for the unwitting aid in his devilltries; a forced retreat to a neighboring café to escape the vengeance of the crowd; a momentary furore, some discussion pro and con; and then, so far as can be learned, the world wagged on and the story ends. 

Surely, this is a remarkable instance of feu-de-foe credibility, and one that will hardly suffer by comparison with medieval superstition. Its importance in the present connection lies in the illustration which it furnishes of what may happen in extreme cases when verifiability and scientific-mindedness are wholly ignored, and the methods that appeal to authority and to prepossessions are allowed to run riot. Then standards of probability, as well as the critical attitude, are wholly absent or hopelessly distorted, and credulity has the open door.

Prepossessions are not always so prominent in the evolution of myths that gain acceptance by preying upon credulity. The presence of an indolent atmosphere and of a sympathetic milieu is all that is necessary. Of this the story of Kaspar Hauser, the "wild boy of Nuremberg" furnishes a fairly modern instance; for the Nestors of our generation may easily remember the interest which his case aroused throughout Europe.

The commonly accepted tale made him out as an abandoned child, cruelly confined in a dark cell, cut off from all association except with the monster who gave him his daily bread. He became the classic example of the condition of a human being in the absence of all education; he was heralded as a child of nature, as an example of the innocence of man before the fall, as a realization in the flesh of Rousseau's Émile. It was proposed to adopt him as the child of Europe, and he was actually adopted as a son by the Earl of Stanhope. The interest in his case was maintained by the accounts of his marvelous psychic powers, as also by the speculations as to his origin, which brought slander upon many a noble house. He could see a gnat in a spider's web a long distance off, and after twilight; he could distinguish between a pear and an apple and

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Footnotes:

4 The account of Tazil is derived from E. P. Evans, "Survival of medieval credulity," Popular Science Monthly, March and April, 1900.
carried on witty conversations, made graceful allusions to the ancient Romans, and played checkers and chess. The story is too full of detail to be further considered; but enough has been given to show the glaring inconsistency of the theory of explanation either with the real facts, which almost no one knew, or even with the alleged facts, which were widely circulated. Kaspar's lot simply chanced to fall in pleasant places, and, by accepting the part which the credulity of his surroundings thrust upon him, he was buoyed into fame and made the subject of a neugeschichtliche Legende. It is proper enough to add that the backward stage of a practical psychology seventy years ago alone made possible the acceptance of any such caricature of an untutored child of nature. Doubtless many gave no credence to the tale; but its ready acceptance in almost all circles gives it a permanent place in the history of credulity. In contrast with the affaire Taxil, the Kaspar incident appeals more to the intellectual than to the emotional weaknesses, and involves a larger share of misinterpretation of fact; while the lack of proper standards to estimate the improbability of what is given out for fact is glaringly obvious in both cases. This personal characteristic of the duped is often more forcibly described as gullibility.

To complete the collection of types of credulity, we should have an instance in which a system of interpretation of facts—a mere narrative—in itself startling and contradictory to ordinary experience, gains widespread credence, and that in spite of pronounced inconsistency with verifiable observation and common sense. These conditions are remarkably well satisfied by the recent promulgation of the doctrines of Christian Science. Even in this field of intellectual effort the hand of the free and the home of the brave has contributed an article worthy to compete with the foreign product. Eagle-like, this system spreads its wings and soars free from the bonds of sense or earth-bound realities, free from human logic and the errors of mortal mind, free from the material impediments which the Author of Nature has inconsiderately set in our paths, free to make things so by thinking them so, free to set method and learning and experience at nought. And surely it calls for bravery of no common order to resist the seductive appeals of eye and ear, to sail steadily on heedless of the calls of the siren of rationality, convinced at the outset that things cannot be as they are, and refusing the nod of recognition to the phoebian idols of the ills of flesh. It is not necessary in this connection to recount the beliefs of this system; it is sufficient to point out that when thousands of intelligent persons give practical adherence to, and enroll themselves under the banner of, one who teaches that a lunation would be an adequate cause of insanity, if only we held the same belief about the lunation as we do about congestion of the brain; that smallpox is contagious by reason of the same agencies as make weeping or yawning contagious; that fear may be reflected in the body as fractured bones, just as shame is seen rising to the cheek; that anatomy and physiology and hygiene are the husbards of sickness and disease, while the reading of a text-book of Christian Science is equally effective in producing health; or that when a healthy horse takes cold without his blanket, it is on account of the poor creature's knowledge of physiology—then such persons can hardly complain if they are cited as instances of modern credulity.

IV

Such, then, is the background against which logical belief shines forth with contrasted splendor; such are, admittedly in their extreme form, the results of following after strange gods and deserting the narrow path of strenuous rationality, of critically trained judgment, of adherence to verifiable standards of belief. The tale needs no adornment, and the moral is sufficiently pointed to require no hard blows to drive it home. It will be profitable in continuation to survey, the perforce briefly, the middle distance, the practical field of compromise and of the necessity for action, in which we must needs travel up hill and down dale and cannot take the level road which we wish were possible, in which we must risk error constantly if we would move at all.
In entering the practical arena the philosopher is indeed insensitive or unobservant who does not become conscious of a decided climatic change. He is probably already familiar with various uncomplimentary remarks concerning his unsuitability to assume a due share of the responsibilities of life, from the tribute of Frederick the Great ("If," he said, "I wanted to ruin one of my provinces, I would make over its government to the philosophers") to the fashionable jibes against the scholar in politics. There is certainly much exaggeration in the current notions of the incompatibility of the reflective and the directive (perhaps it would be unwise to say the active) temperaments; and there is much reason for the claim that the science-molded philosopher may say, " Non avons change, tout cela." Indeed a recent writer has forcibly maintained that the nearest analogue of the man of science is the "so-called man of business, and the chief distinction between the two is that the one deals with the unfamiliar, the other with familiar things." This significant difference was long ago presented by De Morgan as one of the advantages that a logical training secures. "I maintain that logic tends to make the power of reason over the unusual and the unfamiliar more nearly equal to the power over the usual and familiar than it would otherwise be. The second is increased; but the first is almost created." This is but one of the differences in training, interest, thought-habit, and temperament that estrange the scholar from the man of affairs. Yet much of this unfamiliarity is a matter of technique, and as such belongs equally to the arts of life and to the sciences; the ignorance of one another's techniques is no cause for lack of sympathy and comprehension of the aims and efforts of practical and scientific specialists. A further contrast is emphasized by philosophical historians. "In practical life, the wisest and soundest men avoid speculation, and insure success because, by limiting their range, they increase the tenacity by which they grasp events; while in speculative life the course is exactly the reverse, since in that department the greater the range, the greater the command, and the object of the philosopher is to have as large a

*F. W. Clarke, Popular science monthly, February, 1900.

generalization as possible"—this is Buckle's formulation. "Nothing can be more fatal in politics than a preponderance of the philosophical, or in philosophy than a preponderance of the political spirit," says Lecky. Mr. Fiske, in commenting upon the relations of Huxley and Gladstone (whom Huxley himself spoke of as a "copious chaffter"), says: "One could no more expect a prime minister, as such, to understand Huxley's attitude in presence of a scientific problem, than a deaf-mute to comprehend a symphony of Beethoven.

And yet these occupations are not mutually exclusive; philosophy and politics are not December and May, and the temperate zone, in which (in theory at least) we pass our existence, is a composite of the two. Indeed, a divorce of theory and practice is disastrous to both parties of the alliance; theory is the more real and vital for its consideration of and adaptation to tangible conditions; and practice is more rational and more liberal, embraces a larger expediency than if responsive only to the status quo. Learning dissociated from doing is threatened with the decadence of mere erudition, pedantry and disputatious. Exercise is equally good for mind and body; but there is danger of falling in love with the mere mechanism of thought—the absorption in the feeling of one's mental muscles contracting and of plodding in treadmill routine, ever moving, but never advancing. The danger of practice dissociated from principle is that of becoming time-serving, narrow, partisan, short-sighted; it tacks for every wind, loses its bearings, and sacrifices larger for smaller gains. Emerson said of the English some fifty years ago: "They are impious in their skepticism of a theory, but kiss the dust before a fact"; and Emerson's own countrymen are curiously like and curiously unlike the people whose traits he characterizes. Mr. Morley depletes the same tendency from a more modern point of view. He notes the inclination to reply to an advocate of improvement by some sagacious silliness about recognizing the limits of the practical in politics, and seeing the necessity of adapting theories to facts. As if the fact of taking a broader and wiser view than the common crowd disqualifies a man from knowing what the view
of the common crowd happens to be, and from estimating it at the proper value for practical purposes." These various opinions, when judiciously strained, leave a weighty deposit of truth; and they have a direct bearing upon the issues of right and wrong belief. They make it abundantly clear that the relations of right knowing to right doing as urgently demand illumination to-day as when Socrates mystified the Athenian youth by maintaining that no man would willingly do wrong or wittingly hold to error. On the one hand, we are told that for wild speculation and rash credulity the practical man takes the lead, whether he be by subscribing in coin to schemes for extracting gold from sea water, or "backing" the rain-makers or the "Keeley motor"; or in subscribing in faith to the reality of curative mental vibrations, the accounts of signaling with the inhabitants of Mars, the depositing of gray matter in Helen Keller's finger-tips, or to any other of the items of the progress of science with which newspaper paragraphers regale their readers when copy is scarce. On the other hand, the men of books and apparatus are charged with the pursuit of fads, of a contempt for journals and ledgers, of an ignorance of business ways, and an incapacity to deal effectively with men and things. The truth is that there are all shades and grades of men in both careers; and the important things to be observed are tendencies and their causes, not individuals and their peculiarities. It is these tendencies that are reflected in opinion and conduct indirectly, and directly in the relations that are entertained and acted upon, of theory to practice.

This relation—between the theoretical and the practical factors in the progress of knowledge—may be pictured as similar to that pertaining between master and dog. The dog runs ahead of the master, takes short excursions on its own account, comes to a turn of the road and wanders hesitatingly about until he detects the direction in which his master turns; then dashes confidently onward with an air of having intended to go that way all along, and probably imagines—and the appearances are in his favor—that he is leading the man. Yet the wise dog does not wander far out of scenting distance, is on the alert for the call of the master, and quickly retraces his steps when he finds that his master has turned the other way. It is doubtless true that the dog may light upon valuable discoveries; and the master will do well to heed any unusual signs of alarm or excitement on the part of his keen-scented companion; and if it happens that the shades of night close in upon him so that his own sight grows dim, he that walks in darkness is fortunate in having so trustworthy a guide. From which we may learn that the formation of belief in practical affairs, while seemingly independent of theory and indeed running ahead of theory for short stretches in a restless striving to enrich experience, is none the less directed by theory, and prospers best when following, tho with judgment and self-reliance, the indications of principles and formula.

The mutual recognition of the functions of theorist and practitioner is one of the desired and not improbable consummations of modern civilization, and upon it depends in considerable measure the practical fate of right and wrong beliefs. It is still pertinent to repeat Buckle's complaint that "a theorist is actually a term of reproach instead of being, as it ought to be, a term of honor; for to theorize is the highest function of genius, and the greatest philosophers must always be the greatest theorists"; yet, in so doing, we may add the condition that the philosophers shall theorize wisely and with appreciation of the actualities of existence, not dogmatically or capriciously. In brief, there is scientific theorizing, as there is scientific practice; belief and credulity, truth and error, economy and waste, profit and loss, are possible in each. Yet in the end, rational progress in belief and practice, tho truly a question of proportion, must take its illumination not diffusely from countless scattered sources, but directly from a central luminous principle. "The devotion to the practical aspect of truth"—to cite again from Mr. Morley—"is in such excess as to make people habitually deny that it can be worth while to formulate an opinion, when it happens at the moment to be incapable of realization for the reason that there is no direct prospect of inducing a sufficient number of persons to share it." "As if the mere possibility of the view being a right one did not obviously entitle it to a discussion." "The evil... comes of not see-
ing the great truth that it is worth while to take pains to find
out the best way of doing a given task, even if you have strong
grounds for suspecting that it will ultimately be done in a
worse way. " It makes all the difference in the world, " says
Whately, " whether we put Truth in the first place or in the
second place. " Mr. Morley thus protests against what he calls
the House of Commons view of life, which subordinates prin-
ciple to expedience—which may be unfortunate, but necessary
—but in so doing sacrifices the paramount significance of prin-
ciple—which is both unnecessary and pernicious.

The practical arena wherein truth and error, right and
wrong, the better and the worse cause, principle and expedi-
eney, are engaged in combat is obviously too complex to ad-
mit of ready description or analysis; the few groups of com-
bating influences that have been brought within the field of
view occupy but a modest corner of the arena. Other equally
important contests are going on at the same time; the ethical
aspects of belief are nearly as complex as the intellectual, and
as worthy of consideration; and people still find an interest in
discussing how far truth should be disseminated when it under-
mines traditional convictions seemingly essential to happiness
or even to virtue; how far, in Clifford’s words, “Truth is a
thing to be shouted from the housetops, not to be whispered
over rose-water after dinner; when the ladies are gone away," and
how far the dissemination of right belief is itself controlled
by considerations of practical as well as of theoretical morality.

Philosophers of opposite a calling as a Harvard psychologist
and a Parliamentary leader 8 unite in telling us that, in the last
analysis, with regard to disputed questions of a not-too prac-
tical sort, men do and have a right to believe, at their own risk,
that which seems to them most elevating, fitting, satisfying,
and rational; that in this process we all follow custom and
temperamental impulse, tho we cover our retreat with argu-
ments. Into these enticing ramifications of the central prob-
lem of right and wrong belief, however germane to the com-
prehension of the forces that make for truth and error, it is not
feasible at present to enter. The issues in which these various
factors—and especially the aspects just presented of the rela-
tions of theory to practice—culminate is that of the forma-
tion of belief-standards. It is in the common possession of
these that the logical man of theory and the logical man of
practice should find their sympathetic companionship; and to
the appreciation of this underlying requisite for harmonious
and profitable intercourse, nothing will contribute more di-
rectly and effectively than a comprehension of the relations that
do and should exist between the guiding principles of belief and
their wise embodiment in conduct. If the leaders of men,
leaders of small companies and of large ones, those who are
listened to and likewise listen to others, can be induced to ab-
sorb somewhat of the spirit and the sensitiveness to real distinc-
tions that result from the successful devotion to the aims of
science, the danger of the ready acceptance of false beliefs, the
fostering of credulity, would be materially lessened.

In an age when many marvelous things have been accom-
plished, some of them on the surface as unexpected and as
unconnected with other knowledge, indeed as seemingly con-
dictory of such knowledge, as the ostensible miracles and start-
ing paradoxes that are paraded as demonstrable truth, it is
natural enough that the man in the street should be bewildered
and not know what to believe nor whom to believe. Between
the Scylla of ignorant and obstinate skepticism and the Charyb-
dis of ignorant and rash credulity, the channel seems perplex-
ingly narrow; nor is it always possible to assume the expertise
and disinterestedness of those who offer themselves as pilots.
The possibility of seeing one’s bones thru the skin seems as re-
nerate as the possibility of perpetual motion: telepathy no more
wonderful than wireless telegraphy; the predictions of the
astrological almanac as credible as the determination by the
spectroscope of the physical conditions of other planets; the
phrenological faculties as satisfying as the results of the physi-
ological study of brain-localizations; the mental vibrations of the
“ absent treatment " healer as fairly supported by the results
as the therapeutic action of drugs; the presentation of the
mathematical triturations and the homeopathic potencies as
learned and convincing as the enigmatic formulae and manipu-
lations of the chemist. And yet these resemblances are quite superficial, the analogies of their likeness quite misleading: On the one shore lies the orderly kingdom of rational belief; across the border the chaotic realm of credulity.

Anyone who cares to take the trouble of examining the literature (sic) of the propaganda of logical unorthodoxy can readily satisfy himself of the reality and the character of the realm over which credulity holds sway. He will observe the truly unbalanced, the cranks, those possessed with what has been described as the "unconquerable determination of the human race to believe what it knows is not so," the innocently and naively deluded, the faddists and extremists, the seemingly normal and wholly intelligent. The shades and grades of believers are as pronounced as on the other shore. And yet to the man of sturdy intellectual virtue theses distorted, tho not wholly valueless, beliefs offer no temptation. And equally true is it that the logically molded thinker knows that it is useless to demand any ready-made prescription which shall save all men from credulity, not only in extreme cases—which most people do not really fear—but in the intermediate and more frequent and actual perplexities of the practical life.

The nature of the antidote which most is worth the seeking it has been the purpose of this essay to set forth. And last as first should it be emphasized that there is in many of the vital and typical problems of knowing and doing, an objectively best method of fixing belief to which we may reasonably approximate in practice. Neither the logical requirements of philosophical thought nor the actualities of the practical life, when rightly interpreted, appear to be seriously antagonistic to—indeed are wholly compatible with—the absorption of the principles rooted in the scientific analysis of belief. This infusion of the blood of science permeates the organic structure of the belief-attitude, and creates a sturdy affinity for right belief and a deep-seated aversion for the intellectual manners that error, attractive to credulity, is apt to bear. In truth this protecting agis is in some measure an aesthetic trait—a certain intellectual fastidiousness, which, as is also true of the ethical life, becomes a potent ally of virtue. And this logical virtue becomes

recognizable in the ability to guide action and belief by reference to fundamental principles; it requires the quality of mind that easily holds the impress of an argument, whose beliefs are deep-rooted in the soil of human experience critically interpreted.

When confronted with the noisy demonstrations of some new revolutionary claimant for public favor, the well-bred mind, tho plastic to worldly formative influences, is not easily disturbed in its convictions, nor readily affected by the contagion of popular approval. Even tho unable to explain fully the status of the ambitious aspirant, it does, not become panic-stricken and lightly transfer its allegiance, nor madly follow a fashionable prestige, however brilliantly heralded. Rather is comfort sought in the reflection that often before have meteors flashed across the sky and disappeared, and still the stars shine fixedly. Across a gap of twenty centuries it finds the touch of nature that renders the whole world kin, and repeats approvingly the sentiment of Lucian: "To defend one's mind against these follies a man must have an adamantine faith, so that, even if he is not able to detect the precise trick by which the illusion is produced, he at any rate retains his conception that the whole thing is a lie and an impossibility." Sue! a man knows full well that the laser metals cannot be converted into gold; and tho at credulity's

"looth are all things sold,
Each ounce of brass costs its ounce of gold,"

he realizes, too, the potent reality of truth: that truth is neither a metaphysical abstraction nor a matter of taste, and least of all a matter of expediency. While judiciously responsive to the practical demands of the conditions under which belief must be wrought out and expressed, he is assured with Lowell that "compromise makes a good umbrella, but a poor roof"; while sympathetic with the more ultimate discussion of the belief process, he holds clearly in mind the functional utility and categorical imperative of right belief. Das Wahre fördert.

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