

## THE ORIGIN OF MAGIC

BY JOSHUA C. GREGORY

THE vender of tortoises, who plucks them from a basket for sixpences, is probably no student of Pliny. If he were, he might know what some of his purchasers might think of magic. For Pliny, in his *Natural History*, after recommending tortoise fat as a cure for quartan fever, advises that the fat be gathered on the fifteenth day of the moon. The sedate tortoises do not regularly become fatter as the moon waxes, nor thin again as it wanes. But this mimetic subservience to the moon's phases is the preconception in Pliny's advice, or record of advice, and this magical notion has been a widespread, deeply indurated belief.

Mr. Fox has rescued a few facts for science from their disreputable connection with superstitious doctrines of lunar control. He does not confirm the preference of Tiberius for having his hair cut when the moon was on the wax. But, though the shorn locks of Tiberius did not grow in luxuriant sympathy with the increasing moon, some plants, because they use moonlight, or sensitively turn their stems towards the moon's rays, may rhythmically respond to the lunar period. No Egyptian fruits, however, responded sympathetically by growing more during increasing moons and less when the moon was waning, though beliefs in lunar influence on plant growth are world-wide and ancient. A reproductive cycle in some sea-urchins, corresponding to the lunar periodicity, has been discovered, with a few analogous instances, among many unfounded beliefs in the control of animal life by the moon. The tides may be the nexus, though this is not certain. If eels do not migrate against the moon's rays, and there is evidence that they do not, lunar changes do control some terrestrial events. But the belief in mimetic subservience to the moon's periods, that has touched almost everything on earth, is a magical phase of thought, though it has been universal enough to include some few facts—a net cast widely enough

must catch some fish. The faith is not yet dead, for many sheep are still shorn when the moon waxes, because their fleeces will grow in response to the lunar increase.<sup>1</sup>

The pervasiveness of the belief is expressed by superstitious relics and odd habits left in civilization, as the retreating tide leaves oddments behind it; we still, half-jestingly, turn silver coins at the new moon, and the insane are still "lunatics." Sir Francis Bacon suspected that the brain swells and the "humours in men's bodies" increase as the moon becomes full. In suspecting these, other, and some unrevealed effects of lunar influence,<sup>2</sup> Bacon hesitatingly retained an ancient conviction that had endured from antiquity, was still rampant, and was to continue tenaciously. The lunar influence, as long as belief in it flourished, was always double, for, as a waxing moon fostered, so a waning moon hindered. Anything that could be compared to growing or dying things could be, like them, subjected to sympathetic constraint from the changing moon. Thus projects, or any enterprises, could be undone by the lunar wane, and they could prosper under the lunar wax. This analogical wildness is a clear index of superstition, even if it is urged that many beliefs in lunar control may have contemplated a nexus, analogous to tidal mediation between moon and sea-urchin, though they were usually mistaken. A god of Lake Nyanza was believed by the Baganda of Central Africa to become incarnate in men or women. When an incarnation occurred the favored person retired from the lake to await the new moon, and he began to rule when the crescent appeared.<sup>3</sup> Authority and divinity, like all successes, and like all things that can visibly increase or decrease, are fostered by waxing moons, as waning moons may hinder or destroy them. The belief in mimetic subservience to lunar periodicity is thinking magically, though it has happened on some odd facts that have been verified.

The principle of mimetic subservience is one faith of operative magic. In 1577 a waxen image of Queen Elizabeth with pins in its breasts was found in Lincoln's Inn Fields. The discovery, through the persistence of a very ancient magical belief, resulted in a summons to John Dee.<sup>4</sup> This famous alchemist and astrologer was thus hurriedly consulted for a counter-magic against the menace of the pins. It is an old belief, extraordinarily widespread and

<sup>1</sup> Fox, in *Science Progress*, 1922, 17, Lunar Periodicity in Living Organisms, p. 261.

<sup>2</sup> Bacon, *Nat. Hist.*, IX, 894-7.

<sup>3</sup> Frazer, *The Golden Bough*, 1922, Abr. Ed., p. 98.

<sup>4</sup> Ponsonby, *English Diaries*, 1923, p. 63.

extraordinarily persistent, that an enemy can be wounded or killed by maltreating or piercing his effigy. Melting wax images to destroy their originals was known as a magical custom to Bacon: he observed that magical practitioners could thus refresh and exalt their imaginary revenge.<sup>5</sup> Now when an Ojebway Indian sticks a needle into the wooden image of his enemy to give him pain, or burries the puppet to cause his death,<sup>6</sup> his method is indubitably magical. When he shoots an arrow into his foe his method is as certainly rational or non-magical. A procedure may be magically or rationally applied according to the notions of the operator: a modern murderer who puts arsenic in his victim's food acts rationally; an Australian sorcerer who administers poison in the course of his rites and attributes its effect to his own magical power,<sup>7</sup> acts magically.

The distinction between "magical" and "scientific," or "rational," is not easy to define. If the adjective "superstitious" is attached to "magical" it does not complete the desired distinction, but it hints at a method of completion. Carveth Read includes under "superstition" beliefs both in spirits and in magical forces. Emphasis on the *falseness* of these beliefs does not justify the adjective "superstitious," nor does Read think it does.<sup>8</sup> Superstition, according to Hobbes, is the fear of invisible things when it is severed from right reason.<sup>9</sup> This severance from right reason was virtually Bacon's estimate in his essay "On Superstition," and the implication of utter irrationality still clings to the adjective "superstitious." The contrast between magic and science is not merely between false and true. A scientifically, or rationally, based belief may be disproved without any aspersion of irrationality or superstition. A magical belief is irrational, or superstitious, as well as false.

Relativity to the opinions of the distinguisher must be admitted in the distinction between rational truth or error and irrational or superstitious falsity in magic. "Superstition" may be merely an opprobrium attached by a disbeliever; a conservative clinging to disreputed beliefs tends to acquire the depreciatory nuance that distinguishes "superstition" from the merely false; old fashions of thought, because they are old-fashioned, attract the same nuance. But many estimates of possibility are reduced by time to irrational incredibilities. It seems legitimate to suspect "superstition," or mag-

<sup>5</sup> Bacon, *Nat. Hist.*, X, 949.

<sup>6</sup> Frazer, *The Golden Bough*, 1922, Abr. Ed., p. 13.

<sup>7</sup> Rivers, *Medicine, Magic, and Religion*, 1924, p. 65.

<sup>8</sup> Carveth Read, *The Origin of Man and of His Superstitions*, 1920, p. 37.

<sup>9</sup> Hobbes, *Rudiments Concerning Government and Society*, Ch. 16.

ical thinking, in the advice recorded by Pliny, in his *Natural History*, to prepare antimony by coating it with cow-flap before burning it in the furnace, and by quenching it in woman's milk. It seems distinctly superstitious to hope, as many alchemists did hope, that the positions and powers of the stars would influence their furnaces or alembics. There is a special sort of error, characteristically signified by "superstitious," pervading the body of beliefs and practices included under "magic." There is no natural connection, in our eyes, between piercing an effigy and wounding its original. Our rejection of such beliefs, not merely as errors but as travesties of possibility, is a function of our own estimates of the possible. This relativity is inseparable from a contrast of magic as reliance on irrelevantly conceived connections between events with science as reliance on connections that, though they may be wrongly conceived, are not hopelessly irrelevant. Such relativity, in any event, admits selective distinction between "magical" and "scientific," or "rational," beliefs or practices.

This irrelevance, this inexperienced inability to distinguish between significant and non-significant, seems distinctly evident in the magical efficacy often attributed to numbers. During the third millennium before our era the number seven occurred frequently in myth, religion, and magic; it was sacred, mystically potent, filled with virtue, and surrounded by sanctity, in Babylonia, in the Old Testament, in Hesiod, in the *Odyssey*, and in other early Greek sources. If this magical character was derived from the rule of the seven planets over the world,<sup>10</sup> the number seven had been irrelevantly elected to the position of a potent cause. The primitive failure to distinguish adequately between numbered objects and the number itself,<sup>11</sup> partly responsible for attributing causal efficacy to numerical quality, has also thrust honor on the number four. Four days is the usual period for medical treatment on Eddystone Island, and among the Cherokee Indians. The ancient Egyptians also had a four-day cure.<sup>12</sup> By crediting seven, four, and other numbers, with agency mankind has constantly agreed with Bacon that number is "one of the essential forms of things" and "causative in nature of a number of effects."<sup>13</sup>

Irrelevant and confused attribution of causal agency seems also

<sup>10</sup> Thorndike, *History of Magic and Experimental Science*, 1923, i. p. 1.

<sup>11</sup> Lévy-Bruhl, *Les Fonctions Mentales Dans Les Sociétés Inférieures*, 1910, Ch. 2.

<sup>12</sup> Rivers, *Medicine, Magic, and Religion*, 1924, pp. 88-9.

<sup>13</sup> Bacon, *Adv. Learn.*, Bk. II.

apparent in astrological superstitions. Every event depends for its occurrence, and every body depends for its existence, upon the whole universe. But, though an alchemist uses his furnace by a general permission from the whole cosmos, for a cosmic conspiracy might make the earth uninhabitable, the positions of the planets are too remote to be treated as conditions for his experiments. Beliefs in planetary influence upon human destinies and endeavors seem to originate in failure to distinguish relevant from irrelevant, and to wane as experience reveals the causal connections prescribed by nature.

But magic does not simply select wrong causal sequences, nor merely blunder over the connections between events. Human thought, in its magical phase, expects caprice where science looks for regular connection. Though these notions of caprice tend to subside before the establishment of the great periodicities, they do not vanish at once, and the first explanations of the routines in nature depend upon subjecting caprice to authority. The sun, said the Peruvian Inca of the fifteenth century, is regular because he is like an arrow that flies where it is shot:<sup>14</sup> servitude, or obedience, is implied in regularity of behavior. Now this restraint on caprice, here, and often elsewhere, read into the great cosmic periodicities, intimates that the faith of physical science in determinate connections between events does not characterize the earlier estimates of men. The longer cycles of nature are closely associated in primitive life with periodical ceremonies. These ceremonies are compulsive rituals, designed to bring the cycle round. Spring festivals, for instance, try to make things grow.<sup>15</sup> This might be uncertainty about connections between events that is slowly dispelled by experience. Analysis of primitive, or magical, causal notions, however, clearly exposes a defective sense of the connections among events that is the working faith of physical science. Science searches for causal routes, or regular connections; magic is not convinced of their existence, or readily believes that they can be broken.

The physiologist Verworn, who condemned the idea of "cause" to expulsion, and congratulated himself on writing a treatise without mentioning the word, provides a means of discriminating between "magical" and "scientific," or "rational," ideas on causation. He adopted a modern vogue, associated with the names of Kirchhoff, Mach, and others, of confining science to an inquiry into, and

<sup>14</sup> Carpenter, in *Hibbert J.*, 1923, 21, *Early Conceptions of Law in Nature*, p. 711.

<sup>15</sup> Harrison, *Ancient Art and Ritual*, 1918, pp. 65 and 18.

record of, uniformities or sequences.<sup>16</sup> Guncotton—blow—explosion is a sequence to be recorded without implying any compulsion on the explosion to occur. Modern science *can* dispense with the notion of coerciveness, and restrict itself to chronicling routines. It is sufficient for its purposes to note that A occurs when B, C, D, E, and others have been assembled, without adding that A is “caused” by them. This power to dispense is no disproof of causal efficacy, for a poker *may* be *made* red by the heat of the fire, though the reddening can be merely described as an inevitable incident in the routine of placing it among hot coals, but it does imply that events occur when their proper conditions are assembled, and that results are obtained by appropriately arranged precursors. Thus the modern notion of causation in science is engrossed with specific regularities, and, in its extreme moments, implies this engrossment by denying causal or coercive ties between the elements of these regularities.

But the coerciveness thus slighted, which is the essential element in the notion of *cause*, dominates primitive thinking, and is essential to the magical character that pervades it. For, though it is too complex to be defined in a phrase, magic is, through all its manifestations, *making* things happen—*compelling* them to occur. The submergence of efficacy, of coercion, in regularized routine is one distinct mark of the evolution of physical science. In Western thinking this submergence is expressed by the contrast between Aristotelian notions of cause and such a definition as that of John Stuart Mill. Aristotelian causation has been succinctly expressed as “a matter on which an agent impresses a form in order to express and end and purpose.”<sup>17</sup> Aristotle, though he varied his main theme analyzed causation into material, formal, final, and efficient causes. In his *Metaphysics* he distinguished in causality, the substratum, the essence, the purpose, and the source of the change.<sup>18</sup> The efficacy, the agency, implied in Aristotle’s analyses, and expressed in Carr’s paraphrase, has disappeared in Mill’s definition: “We may define therefore, the cause of a phenomenon to be the antecedent, or the concurrence of antecedents, on which it is invariably and unconditionally consequent.”<sup>19</sup> Thus physical science steadily exiles the notion of coerciveness in favor of regularized sequence, and threatens to make the exile absolute by banishing efficacy from the physi-

<sup>16</sup> Verworn, *Irritability*, 1913, Ch. 2.

<sup>17</sup> Carr, in *Nature*, 1922, 110, *The New Way of Thinking Physical Reality*, p. 471.

<sup>18</sup> Aristotle, *Metaphysics*, 1908, transl. Smith & Ross, I, 3.

<sup>19</sup> Mill, *Logic*, III, v. 6.

cal universe. A parallel expulsion appears to have occurred in Indian thought. One Hindu school of philosophy, like Mill, affirmed the necessity of unconditionality and invariability for the cause and effect relation. It also affirmed that an unseen power resides in the cause. Another school, preoccupied with molar or molecular motions, dissolved this copartnery of sequent routine and coerciveness by rejecting the notion of any mysterious causal power or efficiency.<sup>20</sup> The reverse of this expulsive exposition leads to the heart of magic. For magic, in contradistinction to science, searches for the coercive, rather than for the ordained routine. Masterful compulsion is the characteristic of magical forces; fulfilment of regularized routine is the characteristic of modern scientific causal sequences.

The emphasis of physical science falls on determinate connection; the emphasis of magic falls on compulsive powers.

Science finally subdues the sense of efficacy, power, or force, in a regularized connection of events; magic, in its extreme limit, swamps determinate causal routine in over-mastering powers. But though magic is no longer merely identified with misapplied notions of cause and effect,<sup>21</sup> it does not so completely withdraw subjection to prescribed routines from its powers, as Karl Pearson withdraws efficacy from prescribed routines when he condemns origination or enforcing causes to voidness of meaning.<sup>22</sup> When Wundt says that primitive men had magic causality, and no causality in our sense,<sup>23</sup> he is describing an ideal limit in which routine connections have been as completely dismissed as science has attempted to dismiss efficacy. Sumner's identification of magic with a nexus between events that was not cause and effect<sup>24</sup> also seems to contemplate a coerciveness independent of causal routes.

A rule of magic, however, according to Carveth Read, describes a uniform connection of events, for some postulate of uniformity, though it may be unformulated, is necessary for expectation and confidence. Impersonal forces control these connections. Causal, though striking coincidences, are confused with causal sequences, and the resulting miscellany of notions promotes a disposition "to regard anything as a possible cause of anything else." The magical habit of mind, he adds, which is the antithesis of the scientific, was

<sup>20</sup> Dasgupta, *A History of Indian Philosophy*, 1922, pp. 320-1.

<sup>21</sup> Halliday, *Greek Divination*, 1913, Ch. 2.

<sup>22</sup> Karl Pearson, *The Grammar of Science*, Ch. 4.

<sup>23</sup> Wundt, *Elements of Folk Psychology*, 1916, transl. Schaub, Ch. 1.

<sup>24</sup> Sumner, *Folkways*, 1918, sect. 6.

probably a coalescence of beliefs in imaginary operations by charms, spells, and various rites. These operations were all connections of events due to mysterious and imaginary forces.<sup>25</sup> If the uniform sequences of modern scientific explanation, purified from causal efficacies, are converted into bizarre connections between events, and filled with coercive links, the result seems to be Read's conception of magical causality. The suffusion of stereotyped ritual with magical power in the Vedic Brahmanas seems to correspond to this. For Brahman seems to be a mysterious power derived from appropriate ceremonial performance, and its magical force to issue from orderly co-operation among, hymns, chants, and sacrifices.<sup>26</sup> The Vedic insistence on correctness of ritual, and its fear of failure through lapse of *minutiæ* in its elaborate ceremonies, seems to indicate that magic is as sensible of uniform sequences as science, though it believes in eccentrically conceived connections, and may link events by compulsions. This seems to conflict with the opposite view that magic lays its emphasis on power, and not on uniformities.<sup>27</sup> For if Read is right, and the Vedic evidence is conclusive, magic differs from science only in its interpolation of occult forces into uniform connections. Its uniformities are bizarre, or irrational, but it believes in uniformities, though it suffuses them with coercive powers.

Read hints at a reconciliation between the opposing opinions in his "even magical practices presuppose a sane perception of the central facts." The savage, he adds, trusts in magic and keeps his bowstring dry. Now, without assuming, with Read, a state of mental dissociation, in which the system of magical ideas and the scheme of rational notions are isolated in compartments,<sup>28</sup> we may note that experience soon impresses upon men that they must conform to nature's ordained routines. They croon charms over their spears or invigorate their weapons with the superior spells of the sorcerer. Their spears kill because spells endow them with the power of death, but they learn to sharpen them, to throw them straight, perhaps to poison their points, and to use mechanical aids, such as bows. Magical methods usually combine some rational procedure with reliance on magical powers: nature compels the combination. They often, also, rely on uniformities that are not rational. When an Australian native points the bone of a dead man towards the hut of his enemy

<sup>25</sup> Carveth Read, *The Origin of Man and of His Superstitions*, 1920, pp. 111, 113, 119, 124-5, 326, 233.

<sup>26</sup> Dasgupta, *A History of Indian Philosophy*, 1922, i, p. 36.

<sup>27</sup> Goldenweiser, *Early Civilization*, 1922, p. 345.

<sup>28</sup> Carveth Read, *The Origin of Man and of His Superstitions*, 1920, pp. 8t, 91.

and sings over it to charm him to death, he admits a compliance with prescribed routine into his magical method. The routine depends upon the magical communication of death from the dead bone, stimulated by the power of the charm: prescribed sources of magical power involve prescribed routines of procedure. Thus the magical emphasis on sources of power is compelled to conform to some regularities of connection. The insistent physical world enforces some deference to nature's uniformities; the supplies of power involve some definite procedure. The pointing of the potent bone towards the hut to direct the magical influence is like pointing a spear and throwing it at its mark: the methods imposed by the physical world suffuse the more magically conceived connections between events. So magic, though its sense of making things happen is keener than its sense of defined routes for the travel of efficacy, always combines some prescribed procedure with its reliance on powers. As in the Brahmanas, elaborate prescriptive ritual may harden into an apparent imitation of the scientific sense of nature's uniformities. The recognition of certain uniformities, therefore, is usually common to magic and science,<sup>29</sup> because physical obstinacy imposes conditions on success, because the sources of power involve some procedure, and because the irrational connections of magical habit are regarded as if they were like rational connections.

Successes often confirm magical beliefs, and encourage them to persist. The spear that kills because a skilled throw makes its point pierce *seems* to have been well charmed. Magical powers are confirmed, because trust in them is verified, though obedience to prescribed connections is the real source of success. This verificatory stabilization of magical beliefs by apparent efficacy in magical forces through concurrent rational procedure is enormously increased by the action of suggestion. For suggestion can compensate for errors in method. An Australian man died in twenty-four hours when he knew that a dead man's bone had been pointed at his hut and activated by incantations. Savages often succumb to *news* of evil magical practices against them.<sup>30</sup> Suggestion can compensate for imperfect causal connections, and without this compensation it would be useless to punish a thief by beating the coat he had dropped during his flight. The method would be useless if the thief did not know his lost coat was being beaten. But a Berend thief, who had stolen money, died when he heard that his coat was being mauled. This

<sup>29</sup> Hobson, *The Domain of Natural Science*, 1921, p. 9.

<sup>30</sup> Spencer, *Native Tribes of the Northern Territory of Australia*, 1914, p. 38.

“fatal power of the imagination working through superstitious terrors” seems “to be common among savages,”<sup>31</sup> and effectively conceals the errors in magical notions of causation: beating the coat *seems* to kill the thief. Suggestion may work down by producing disease, or up by curing it, when patients know that medicine-men are at work.<sup>32</sup> Sir Francis Bacon knew that a ring worn as an amulet or talisman can actually ward off danger or make its wearer prevail, by making him, through belief in its virtue, more active, confident and persistent.<sup>33</sup> Roger Bacon, some three centuries before, had noted the good effects of figures and charms by inspiring confidence without “prevalency” in themselves.<sup>34</sup>

Suggestion can properly compensate for defective causal notions when the object is a human being, but inanimate things cannot respond to suggestion. Though Sir Francis Bacon contemplated the possibility of boiling an egg by suggestion (the actual example is not his), he prudently decided that “strong imagination” has “less force” upon the “merely inanimate” than “upon things living.”<sup>35</sup> Thus inanimate things were important correctors of magical notions: the alchemist who could not “suggest” his baser metals into gold was more likely to discover his errors than the physician who was deceived because “suggestion” complicated the actions of his drugs.

Suggestion seems to be specially powerful in primitive communities and in the magical phase of thought: the rapid deaths so often reported, like the Maoris who died of fright when they realized they had lit their pipes with the sacred tinder-box of a chief,<sup>36</sup> or the men of Banks Islands who died in two days when the sorcerer filled a slender bamboo with leaves, dead men’s bones, and other magical oddments, and directed the evil influence of his “ghost-shooter” at them,<sup>37</sup> have this significance. Since emotion favors suggestibility, the powerful suggestiveness of magical forces implies an emotional impress. There is a touch of the daemonic in most magical forces, and this daemonic sense, impregnated with “uncanniness,” is often at a white heat.<sup>38</sup> Magic relies on irrelevant causal connections, it is swept into this reliance by a sense of occult forces, and is awed by these forces into a sense of the supernatural.

<sup>31</sup> Frazer, *Golden Bough*, 1922, Abr. Ed., pp. 44, 205.

<sup>32</sup> Rivers, *Medicine, Magic, and Religion*, 1924, p. 50.

<sup>33</sup> Bacon, *Nat. Hist.*, X, 902.

<sup>34</sup> Muir, *Roger Bacon, Essays*, 1914, Ed. Little, pp. 295-6.

<sup>35</sup> Bacon, *Nat. Hist.*, X.

<sup>36</sup> Frazer, *Golden Bough*, 1922, Abr. Ed., p. 204.

<sup>37</sup> Rivers, *Medicine, Magic, and Religion*, 1924, p. 13.

<sup>38</sup> Vide Otto, *The Idea of the Holy*, 1923, transl. Harvey, pp. 121-3.

"It is very natural for those who are unacquainted with the cause of anything extraordinary, to be astonished at the effect, and to consider it a kind of magic."<sup>39</sup> The chick stepping from the shell, the peal and flash of the storm, the fiery trail of the meteor, the stroke of lightning, and the endless transformations ever proceeding in nature, touch the mind shrewdly through its ignorance into a sense of the magical. The baffling unusual has been credited with the special power of suggesting magical forces. Ordinary events accumulatively result in common sense estimates. When unusual events, baffling and mysterious, strike wonder into the mind, the notion of magical force arises. Though magic, according to Carveth Read, appeals to the sense of mystery, and does not spring from it,<sup>40</sup> the sense of awe has often been supposed, as by Schopenhauer, to originate in puzzlement.<sup>41</sup> A mind both puzzled and aghast before a display of force, as before a flaming, devastating volcano, might sense a daemonic, awesome magic in the manifestation. The unusual is always stimulative because it contradicts or startles anticipation. It has been very commonly observed that only the rare or sudden can strongly strike or affect us.<sup>42</sup> "As an indescribable feeling of terror attacks him who is surprised by an earthquake, when he feels that undulating like the sea, which custom and reflection has taught him to regard as the most fixed and immoveable . . ." <sup>43</sup> so the magical sense, with its persuasion of power, its supernatural dread, and its feeling of the weird, may rise in momentous instants, when the stars seem to start from their courses.

If before the civilization of Egypt and Western Asia germinated rationalistic explanations had not been invaded by magic,<sup>44</sup> and if momentous moments of emotional experience are the stimulator of magic, many experiences had to occur, that, by cumulative repetition, could star the daemonic sense of occult powers. Durkheim thought that the idea of mystery is not of primitive origin.<sup>45</sup> But Lévy-Bruhl is clear that what we call causes are, for the primitive mind, at most, opportunities for occult powers. The primitive, he also adds, at the very moment when he perceives something unexpected, recognizes a manifestation of occult forces, and represents

<sup>39</sup> Sir Joshua Reynolds, *Sixth Discourse*.

<sup>40</sup> Carveth Read, *The Origin of Man and of His Superstitions*, 1920, pp. 122-6.

<sup>41</sup> Schopenhauer, *The World as Will and Idea*.

<sup>42</sup> Johnson, *The Rambler*, No. 78.

<sup>43</sup> Liebig, *Letters on Chemistry*, No. 4.

<sup>44</sup> Elliot Smith, *The Evolution of Man*, 1924, pp. 128ff.

<sup>45</sup> Durkheim, *The Elementary Forms of the Religious Life*, 1915, transl. Swain, Ch. 1.

the *mystic* power to himself.<sup>46</sup> Too much stress must not be laid, however, upon the unusual. Marett suggests that, in many experiences, an awefulness, like that of a corpse, strikes home first, and rouses the sense of potency.<sup>47</sup> A daemonic sense, aroused by emotional experience, which may not depend specially upon the unusual, seems to be the source of many beliefs in magical forces. The magical dealer of death often uses a bone, or other part of a corpse: death is a daemonic occurrence, and the dead body, on which the sense of occult power drops, becomes magically potent. Otto's description of magic as a suppressed and blurred form of the sense of the divine, need not, whether it is believed or not, deter us from accepting his insight into the nature of the magical. Magic endeavors to appropriate the prodigious force of the potent thing for natural ends. There is a natural magic that may spring from such spontaneous sympathetic movements as the wriggles of a player, who has thrown at the skittles, expressing his desire for the course of the ball. Such naive analogical actions doubtless underly much of the elaborate system of mimetic magic. But a sense of the daemonic is also present in properly magical beliefs. This daemonic sense is present in poetry and music, though they may be more than magical, inexplicable events are daemonic, so are many animals, so was Napoleon. The gigantism in primitive building may have encouraged the notion that magical power was preserved in it, by rousing the daemonic amazement that is not a mere degree of natural astonishment.<sup>48</sup>

Magic is swept into irrational connections by its daemonic sense of occult powers. But in its naked primality only is it the sharp antithesis of the scientific version of the world as a quiet procession of events in determinate connections. Its daemonic sense subsides, and may vanish; it depends less upon occult virtue and more upon experienced orders in the world. These changes steadily, though often slowly, proceed as the magical gives way to what we call the "rational" or "scientific." But to understand the magical phase that precedes scientific thought and is gradually merged in it, magical rites must be clearly understood to endeavor to appropriate efficacies in men, objects, or processes.<sup>49</sup> Various experiences of these stir a sense of magical potency. The powers of occult forces, and methods of using them, are the primary objects of magic. A sense of dae-

<sup>46</sup> Lévy-Bruhl, *Primitive Mentality*, 1923, transl. Clare, pp. 37, 58-40.

<sup>47</sup> Marett, *The Threshold of Religion*, 1914.

<sup>48</sup> Otto, *The Idea of the Holy*, 1923, transl. Harvey, pp. 33, 121-3, 155-7. 68, 28.

<sup>49</sup> Rivers, *Medicine, Magic, and Religion*, 1924, p. 4.

monism pervades the beliefs in these forces, and magic, impressed by this daemonism and stirred by a sense of power, is often driven into disregard of those natural connections that control rationally conceived occurrences and rationally contrived endeavor.

"When we see the changes of day and night," said a Sioux Indian, "the sun, moon, and stars in the sky, and the changing seasons upon the earth, with their ripening fruits, anyone must realize that it is the work of someone more powerful than man. Greatest of all is the sun, without which we could not live. The birds and the beasts, the trees and the rocks, are the work of some great power."<sup>50</sup> This reads like homage to a personal artificer, and may be, but the "great power" of many primitive tribes is a diffused force, or pervasive potency: a reservoir of magical efficacy. The Ila-speaking peoples believe in vaguely defined, pervasive forces. When these forces are liberated by certain actions they come into contact with people who become taboo, or isolated from common intercourse, lest they transmit the dangerous contact to others. These forces are dangerous, but "the secret of manipulation" can bring them under control.<sup>51</sup> The Melanesian *Mana* is a diffused power that is not fixed in anything, and can be conveyed by nearly anything. It becomes attached to persons and things; it operates in events beyond the ordinary powers of men or outside the common processes of nature. Wizards, doctors, weather-mongers, prophets, diviners and dreamers all work by this power. The word "mana" has become classical since Codrington's *The Melanesians*, and is used as a general term to denote the similar powers, or forces, among primitive peoples. For "mana" is a very universal primitive concept, and an important directive influence on the development of thought. The belief in a power, distributed, in varying degrees of intensity, among various objects, men, and supernatural beings, occurs among many peoples. This power is differently named and somewhat differently conceived by different races. It is now more materially, now more spiritually, conceived; some races think of it as personal, others as impersonal, and others again as partaking of both.<sup>52</sup> This primitive "mana," where civilization sufficiently advances, seems to provide an important idea for science and philosophy. In Greece "mana" became the mother-stuff, the teeming, liv-

<sup>50</sup> Densmore, in *Nature*, 1920, 104, The Sun Dance of the Teton Sioux, p. 437.

<sup>51</sup> Bartlett, *Psychology and Primitive Culture*, 1923, p. 108.

<sup>52</sup> Hartland, *Ritual and Belief*, 1914.

ing, potent source of all things;<sup>53</sup> in India it became the mysterious forces Brahman and Atman. If the Melanesian "mana" is just power, magical potency,<sup>54</sup> Brahman, or Atman, seems to have intensified the daemonic sense of magical power into a deep religious mysticism. For Brahman does what goblins and magical creatures do, and Atman is properly a marvel, indefinable, and alien to understanding.<sup>55</sup> Brahman cannot be defined; Atman is silence:<sup>56</sup> the daemonic magical power has become the object of silent reverence. The original "mana," ever and always, has its daemonic aspect, which is emphasized in the mysticized Atman.

Mana is magical potency conceived as a *thing*. The primitive would not agree with Kames that beauty of color and utility exist in the mind. He does not even regard his headaches as private, for an Australian will wear his wife's head-rings when his head aches and fling them, after they have absorbed the evil magic, into the bush.<sup>57</sup> Qualities, powers, anything that can be distinguished or named, are things, and usually things that can travel, like the harpoon in *Moby-Dick* which, entering the whale near the tail, glided, as a needle is restless in a man's body, into the hump. The soul, for the primitive, is a very casual occupant of the body. It wanders in dreams, absents itself during sickness, leaves suddenly in swoon, may lie concealed in a tree, and is permanently exiled at death. This vagrant soul is an indubitable witness to the primitive habit of conceiving everything as a thing that can travel or flow or be transferred. Mana, distributed magical efficacy, is a power thought of as a thing, and magical forces, whether appropriations of mana, or separate centers of power, are *things*, though they are specially potent, specially mystic, and specially elusive things.

But mana, or magical forces are not only things. The ripe maize-cob is a mosaic offered by nature for imitation, and Mexican incrustated work is controlled by this primary model. Now the maize-cob, the primary model in control of thought, during the magical phase of thinking, and even for long after, is the social group of personal beings. The group is a thing, as each human being is a thing, for the body has physical properties; it has also an inner life of thought, feeling, and will. Mana, and magical forces in general are the efficacies sensed in human life or intercourse. These effica-

<sup>53</sup> Cornford, *From Religion to Philosophy*, 1912.

<sup>54</sup> Goldenweiser, *Early Civilization*, 1922, p. 197.

<sup>55</sup> Otto, *The Idea of the Holy*, 1923, transl. Harvey, pp. 197ff.

<sup>56</sup> Dasgupta, *A History of Indian Philosophy*, 1922, i, pp. 44-5.

<sup>57</sup> Spencer, *Native Tribes of the Northern Territories of Australia*, 1914, p. 37.

cies are objectified into things that can travel, though they may be fixed. We may be free agents, or the veriest deluded puppets, but we have a sense of self-efficacy. Mana is partly this sense of self-efficacy externalized into the world. *Partly*, because the group, as well as the single individual, is a source of the notion of efficacy. In a crude physical sense, by blows, by forcible restraint, or by wounding weapons, one man appreciates the efficacy of another. He also appreciates it more spiritually or psychically. He appreciates it as he quails before the bitter cursing of an enraged enemy, and the power of suggestion fills him with a sense of power in the curse. Extend this instance to the constant mental interplay between men, with their mutual compulsions upon one another, friendly or strained. Add to this the felt impacts between personalities, and the prestige of great men. Add all the modes of human intercourse. Then the group is seen to be the source of magically conceived forces, and of the manas of the world.

The Mealesian mana is an impersonal power, but its invariable connection with a person who directs it<sup>58</sup> is significant. For if spirits always, ghosts usually, and men sometimes, possess it, this suggests that mana is simply, in its essence, the sense of self-efficacy and of group-efficacy, heightened, magnified, and distributed among potent personalities.

In primitive societies, and so long as primitive magical notions endure with their original power, men can be handled, well or ill, by using their names, as effectively as they can be swung over a cliff by seizing their arms.<sup>59</sup> A name is a handle on the person, a veritable thing attached to him, just as all qualities, like anything nameable, are objectified into things. The power of the spell, the efficacy of words, is a recurrent, typical magical belief. Among the Egyptians, remarks Budge, words could do almost anything, and they were used to control almost every event of life. This Egyptian reliance on the spell, the control of events by speech, illustrates the sense of prescribed connections that tends to suffuse magical reliance on powers. For the compulsive words should be properly intoned by qualified men, or, if they were written, inscribed on proper materials.<sup>60</sup> This reliance also illustrates the centering of magical powers on personal efficacies. When the child is suckled in answer to its cries the world appears to be subservient to its desires. This is an earnest, suggests Forsyth, of the volitional control that men

<sup>58</sup> Cornford, *From Religion to Philosophy*, 1912.

<sup>59</sup> Vide Clodd, *Magic in Names and in Other Things*, 1920.

<sup>60</sup> Budge, *Egyptian Magic*, 1899, pp. xi, 4, 170-1.

seek in magical practices.<sup>61</sup> For the efficacy of words is, finally, the efficacy of desires. The violent compulsiveness of the spell is a magical exaggeration of something real. Words do control men, and human beings do impress their desires upon one another by them. Magic ascribes power to the spell by solidifying the moral suasion, emotional urge, logical convictiveness, and suggestive potency of words into a physical, or pseudo-physical, compulsion: the word is very like a bullet, or like a lever, as the name is very like a handle. So words, the controllers of human thoughts or actions, like cries, those inciters of human beings, have an extended magical control that grips both human beings and physical events, as if spells were veritable hands or ropes

The spell, a typically magical practice, insists on the personal origin of the magical notion of power. Its power is usually greater in the mouth of a specially qualified sorcerer. Prescribed forms, magical formulae conventionally stereotyped to achieve maximum potency, and words of power, like the familiar "abracadabra," also intimate a lodgment of power in the spell itself. Magic is based on the fundamental acceptance of the human body as the typical physical object. This body can pull, and push, and strike, and move. It has also a more internal source of suggestive and volitional powers.<sup>62</sup> A group of such bodies in interaction is the fundamental mental model that, amongst other items, has prompted magic. The solidification of power in a thing, read off from the human body, has its parallel in the spell. For the potent magical word, or formula, is an effective personal desire combined with, at least, some of the effective physical properties of a thing. In this the spell is typical, for the magical force is doubly modelled on the sense of efficacy in human beings and on the physical performances of human bodies. Magic solidifies human volitions, in varying degrees, into physical efficacies, and it reads the compulsive virtues discerned in human groups into the events of nature. In the magical phase there are not things and thought, but thought-things. Thoughts, and especially dynamic desires and volitions, are modelled into physical things: physical objects and events are penetrated by desires and volitions. Animism believes in performances by personal agents. Magic believes in forces that are, so to speak, objectified volitions, desires, or suggestions. The two are closely connected and often conjoined. But magic proper, especially in so far as it is "the physics

<sup>61</sup> Forsyth, in *Brit. J. Psych.*, 1920-1, 11, The Infantile Psyche, pp. 271ff

<sup>62</sup> Vide Broad, *Scientific Thought*, 1923, 442ff.

of the savage," is appropriation of, or disturbance by, forces, or occult powers, that are modelled on self-or group-efficacies, and, in varying degrees, solidified as though they were physical entities.

The prejudice of Newton and his successors against action at a distance usually invades thought when mechanical interpretations of nature, characteristic of physical science, arise, or are vigorous. Empedocles, in whose four unchanging intermingling elements, earth, air, fire, and water, mechanical notions may be discerned, though he may not have drawn the modern sharp distinction between inanimate physical processes and vital or conscious actions, insisted that action needs contact.<sup>63</sup> The Greek atomists, whose corpuscular theories, if they did not entirely exclude notions still based on the animate thing as primary model, leant on physical conceptions, insisted that all influence is directly applied.<sup>64</sup> The doctrine of action based on mechanical conceptions and derived from physical phenomena, accommodates apparent exceptions by transmissive media, like the ether, or by travelling corpuscular projectiles. Pervasive media, like air and ether, were only adequately recognized in historic times.<sup>65</sup> Projectile theories of perception, like the succession of images inferred by Lucretius to travel from the seen object to the seeing eye,<sup>66</sup> arise as rational interpretations endeavor to supersede magical notions. When Democritus, inverting projectile perception, referred the power of the "evil eye" to images proceeding from envious eyes and troubling their objects,<sup>67</sup> he rationalized a magical efficacy. For the "evil eye," represented in classical legend by the glare of Medusa that turned men to stone, and richly endowed by magical belief with powers, could act from a distance. Now, before mechanical conceptions disturb the notion, action at a distance *seems* to characterize human group interaction. Communication and suggestive powers *seem* to operate from afar. Even in quite modern times preoccupation with psychical communication discards the need for contact and openly invokes distant action. Telepathy is said to occur without any medium of transmission,<sup>68</sup> and to be the psychical analogue of gravitation.<sup>69</sup> Thus the notion of action at a distance comes easy to magic because its eye is fixed on the internal efficacies of human beings. It is, writes Thorndike,

<sup>63</sup> Brett, *A History of Psychology*, 1912, p. 33.

<sup>64</sup> Zeller, *A History of Greek Philosophy*, 1881, transl. Alleyne, ii, p. 230.

<sup>65</sup> Broad, *Scientific Thought*, 1923, p. 311.

<sup>66</sup> Masson, *The Atomic Theory of Lucretius, etc.*, 1884, p. 16.

<sup>67</sup> Zeller, *A History of Greek Philosophy*, 1881, transl. Alleyne, ii, p. 292.

<sup>68</sup> G. W. Balfour, in *Hibb. J.*, 1913, ii, Telepathy and Metaphysics, p. 55.

<sup>69</sup> Myers, *Human Personality*, 1918, Abr. Ed., p. 31.

“a common characteristic of magic force and occult virtue” that “it will often act at a distance or without any physical contact or direct application.”<sup>70</sup> According to Frazer, “belief in the sympathetic influence exerted on each other by persons or things at a distance is of the essence of magic.”<sup>71</sup> *Sympathetic* influences, with a distant operation, between persons or *things*, are forces based on a sense of personal efficacies, whether in the self or in the group, and extended to all objects. The invisible influences magically projected in Melanesia seem to be assimilated tentatively to corpuscular projection. Since they are often carried by material objects,<sup>72</sup> the influence of the physical object has distinctly affected the original sense of distantly operative human efficacy.

But magical compulsion from afar operates in Imitative or Mimetic Magic. Frazer prefers the term “Homeopathic” to denote beliefs and practices that, like the burial of an effigy by an Ojebway Indian to kill its original, depend on mimetic subservience.<sup>73</sup> For, though a personal agent may execute the mimetic process, and even augment its power by his private magical efficacy, there may be mimetic subservience between any two things, or events, as when the tortoise grows fat with the waxing moon.

Substances, particularly human bodies, tend to remain mimetically subservient to their separated parts. When a Basuto loses a tooth to the forceps he hides it to prevent magic wrought on the tooth from harming himself.<sup>74</sup> They may also be mimetically subservient to any objects once in contact with them. “Contagious Magic” depends upon the belief that what is done to any object is also done to the person with whom it was formerly in contact.<sup>75</sup> Contagious magic emphasizes the physical significance of contact, though the mimetic subservience still seems to be compelled through distance. Rivers does not seem to escape from distantly exerted compulsion by observing that a sorcerer who operates on detached portions of his victim’s bodies, such as their hair, also operates on an isolated part of the soul, which permeates the whole organism.<sup>76</sup> For whether the “soul” or the incarnating bodily part is touched by the magic, it is still “isolated” from the original body and acts on it from a distance.

<sup>70</sup> Thorndike, *A History of Magic and Experimental Science*, 1923, i, p. 89.

<sup>71</sup> Frazer, *The Golden Bough*, 1922, Abr. Ed., p. 22.

<sup>72</sup> Rivers, *Medicine, Magic, and Religion*, 1924, p. 13.

<sup>73</sup> Frazer, loc. cit., p. 11.

<sup>74</sup> Frazer, *The Golden Bough*, 1922, Abr. Ed., p. 38.

<sup>75</sup> Frazer, loc. cit., p. 11.

<sup>76</sup> Rivers, *Medicine, Magic, and Religion*, 1924, p. 19.

Lévy-Bruhl's *Law of Participation*<sup>77</sup> is intended to include such sympathetic influences as the participation of the Basuto in a blow to his separated tooth, the participation of the Ojebway's victim in the fate of his effigy, or the participation of the shorn locks of Tiberius in the increase of the moon. It includes also the communication or transmission of qualities that, according to Bacon, "writers of natural magic have brought into an art or precept." The dead man's bone, pointed at the victim's hut and enlivened by a charm, discharges its quality, or power, into the object of the magical rite. Contact makes the same exertion of power, which now appears more as a participation in quality, very effective. Many persons in the seventeenth century still hung coral round their necks to stop bleeding, to purify their blood, and to fortify their hearts. The curious, perhaps somewhat mysterious coral, because it was red, seemed to be able to communicate the virtues of blood to the wearer.<sup>78</sup> This characteristic magical method, that gives an important cue to many magical recipes, is clear in an instance from Bacon. The writers of natural magic, he says, give a recipe to "superinduce courage and fortitude." By wearing the heart of a lion, or the spur of a cock, courage animates the wearer. The superinduction is doubled if the parts are taken from animals that have just "been in fight."<sup>79</sup>

Such participation through contact is an extraordinarily persistent magical method, and significant for much alchemistic reliance on magic. As one man acts with his group, or responds to the demands of another, so one event is constrained to imitate the happening of another.<sup>80</sup> Participation in the courage of the cock, transmitted through its spur, the natural symbol and vehicle of its pluck, is less emphatic on the compulsion of the subject. But all magic ultimately depends upon compulsive forces that are modelled on the sensed efficacies of selves and human groups. In participatory contact the original psychical model, which is always somewhat physically conceived, is considerably controlled by notions derived from physical objects and events, especially by notions derived from physical contact.

This reliance of participatory transmission through contact is a hint at the future supersession of magically conceived forces by the more rationally conceived connections of science.

<sup>77</sup> Lévy-Bruhl, *Les Fonctions Mentales Dans Les Sociétés Inférieures*, 1910.

<sup>78</sup> Lemery, *A Course of Chemistry*, 1686, transl. Harris, p. 271.

<sup>79</sup> Bacon, *Nat. Hist.*, X, 910.

Ch. 2; *Primitive Mentality*, 1923, transl. Clare, pp. 55ff.

<sup>80</sup> Gregory, in *Science Progress*, 1923, 17, The Doctrine of Lunar Sympathy, p. 647.