

Rashba's Attitude Towards Science and Its Limits¹

The title of this essay carries with it an intentional dual meaning, in view of the two distinct aims of this paper. Firstly, we wish to define the meaning of “science” according to R. Shlomo ben Avraham ibn Adret (Rashba, 1235–1310); how he understood which disciplines fall into that category. We are not concerned here with scientific *method*; the term “*science*” in the title refers, rather, to the subjects dealing with the natural world that Rashba felt could be classified under its rubric. Where did its boundaries lie? Could astrology, for example, be legitimately considered? Could medicine which apparently caused an effective cure although it violated the canons of “scientific medicine” be included?

The second meaning implicit in the title concerns Rashba's view regarding any contradiction between biblical or rabbinic laws and halakhic or aggadic statements concerning the natural universe on the one hand and scientific knowledge as understood during his time on the other. How was one to reconcile any differences? In this sense, the term *limits* is axiological. When may one accept scientific knowledge and reinterpret a talmudic text based upon the premises of science and when must one reject it in favor of the knowledge imparted by the Rabbis of the Talmud? Thematically, this second topic relates to the comparative value Rashba placed upon the study of physics and metaphysics and the study of Torah, an issue germane to the ban that Rashba imposed in the year 1305 upon the study of philosophy before the age of twenty-five. This celebrated issue has been discussed by quite a number of scholars;² we will refer to the ban in this essay only in passing.

Rashba's Attitude Toward Occult Virtue³

Galen, the celebrated physician and philosopher of antiquity, made contradictory pronouncements concerning the efficacy of cures not scientifically proven. On the one hand, he declared, "Physician, how can you cure, if you are ignorant of the cause?"⁴ On the other hand, he described instances where occult virtues effected cures, even though they did not involve any "natural principles," i.e., in spite of the fact that the reasons why these particular cures "worked" were unknown.⁵ According to the former view, medicine is defined as a subdivision of natural science; its cures, if legitimate, must necessarily, therefore, follow the rules of science. Any "cure" which is ostensibly based upon a principle that does not conform with the rules of science as currently understood is *ipso facto* fraudulent. According to the second view, medicine is simply any cure which "works"; its boundaries need not be exclusively those which form the contours of science. The fact that a cure does not conform to the rules of science (i.e., there is no perceived connection between a particular medicine administered to a patient and his recovery from illness) does not in any way, according to this latter approach, detract from its legitimacy.

The tension between these two views of medicine continued into the medieval period (and still continues today in areas such as acupuncture).⁶ Before we analyze Rashba's position, as recorded in R. Abba Mari of Lunel's *Minhat Qena'ot*,⁷ we must first describe the attitude of the medieval world toward the issues of astrology and occult virtue in the context of "science." We must also discuss the halakhic issues entailed, and how medieval halakhists viewed the relationship between the biblical imperative of healing and any prohibited practices related to it.

In his famous *Letter on Astrology*, Rambam vigorously denounced belief in any astrological influence over human life.⁸ He described the philosophical opposition to astrology as a thoroughly naturalistic one which did not allow for the influence of the stars. The correct Jewish belief, in his view, agreed with this and also accepted the notion of God's Providence, thereby utterly rejecting any astrological influences. Rambam declared that he had read all the extant astrological books, and decried the fact that people naturally give credence to any doctrine that is recorded in a text, even if it is nonsense.⁹ A number of Church Fathers also attacked belief in astrology as contradicting the theological doctrine of free will.¹⁰ Yet most medieval philosophers, including Jewish thinkers of note,¹¹ believed in astrological influences and even went so far as to claim that empirical evidence supported this belief.¹² No less a radical thinker than R. Levi ben Gershom (Ralbag), who had no qualms about deviating from the normative Jewish theological position on a number of

issues, was a firm believer in the effects of the stars upon human life, and based his position on empirical evidence.¹³

While Rambam superimposed his view of Divine Providence upon a naturalistic order that excluded any possibility of astrological influences, Rambam built his doctrine of “hidden miracles” upon an infrastructure of a world governed by the stars. “Nature,” according to this view, included astral influences.¹⁴ Ramban utilized the idea that the Jews are directly under God’s Providence and are therefore not subject to the celestial constellations as are other nations to explain a large variety of biblical verses and laws. Yet, he maintained that this idea also assumed an universe determined by the stars.¹⁵

We should not see the position of Jewish thinkers who affirmed the existence of astrological forces as a simple restatement of the talmudic position on the matter in spite of philosophically-minded assertions to the contrary. In his *History of Magic and Experimental Science*, Lynn Thorndike conclusively demonstrated the extent to which learned men of the Christian world in the twelfth and thirteenth centuries perceived of astrology as a noble science.¹⁶ The twelfth century witnessed both the translation of many Arabic astronomical and astrological works into Latin and the rise of Marseilles, the rabbis of which were addressed by Rambam in his *Letter on Astrology*, as a center of astrological activity.¹⁷ The thirteenth-century work, *Speculum Astronomiae*, “one of the most important single treatises in the history of medieval astronomy,” delineated four subdivisions of astrology and attempted to reconcile the theological issue of free will with the fact of celestial influence.¹⁸ The book’s resolution of the issue, that “the celestial influences make impressions according to the fitness of matter to receive them and that man, by using his intellect, can to a considerable degree be master of his fate,”¹⁹ underscored the basic infrastructure of a star-ordered universe. Thus, the Jewish thinkers who believed in astrology were in the company of those who were in the forefront of contemporary medieval scientific thought.

Although astrology and occult virtue are distinct categories,²⁰ in many (though not all) instances, belief in astrology was a necessary, if not sufficient, condition for belief in occult virtue regarding medicine. Specific talismans corresponded to each sign of the zodiac, and these talismans were alleged to cure illnesses only at the specific times when the particular zodiacal sign was in ascendancy.²¹ Thorndike also documented the extent to which medieval scientists and physicians pursued the study and practice of occult virtue. The thirteenth-century scholar, Michael Scot, gave a historical description of the development of astronomy and the invention of such instruments as the astrolabe, yet his *Introduction to Astrology* combined such information with detailed discussions of the occult powers of words, herbs and stones. The *Picatrix* was a widely influential text that dealt at length with magic and gave

explicit directions for the applications of astrologically-based cures.²² Even Peter Abano, whom some historians have seen as a comparatively “modern” figure, presented a summary of occult science in his work entitled *Conciliator*.²³ Moreover, the pursuit of alchemy and magic was associated with Platonic and Hermetic philosophical beliefs such as the existence of hidden powers (affinities and antipathies) that objects possessed. Thus, from a broader “history of ideas” perspective, belief in occult virtue was but one manifestation of the Neoplatonic tradition that pervaded philosophical thought of the Middle Ages and re-emerged during the Renaissance.²⁴

In his letter to Rashba that opens *Minḥat Qena’ot*, R. Abba Mari of Lunel posed a query concerning the halakhic validity of using an image of a lion without a tongue as a cure for a kidney ailment.²⁵ It should come as no surprise that both R. Abba Mari and Rashba assumed the efficacy of this type of an occult cure based upon astrological influences. The disagreement between them concerned the relationship of this cure to various halakhic prohibitions, whose general contours we will investigate before we discuss the relevant responsa themselves.

The Talmud (*Sarhedrin* 65b) quotes the biblical prohibition of divination (*me’onen*, Deut. 18:10) and states:

This (a diviner) is one who calculates times and hours and says, “Today is a good day to leave.” . . .

Did this prohibition assume the efficacy of astrological predictions but just not allow it, or did it deny the validity of such a procedure even from a scientific point of view as well? Rambam adopted the second view, and in his *Mishneh Torah* insisted that repudiation of all magical practices be motivated by the rational conviction that such practices are worthless:

Whoever believes in these and similar things and in his heart holds them to be true and scientific and only forbidden by the Torah, is nothing but a fool, deficient in understanding, who belongs in the same class with women and children whose intellects are immature. Sensible people, however, who possess sound mental faculties, know by clear proofs that all these practices which the Torah has prohibited have no scientific basis but are chimerical and inane, and that only those deficient in knowledge are attracted by these follies and for their sake leave the ways of truth. The Torah, therefore, in forbidding all these follies, exhorts us, *Thou shalt be wholehearted [tamim] with the Lord thy God* (Deut. 18:13).²⁶

Isadore Twersky has shown the symmetry between Rambam’s “unconditionally negative attitude to assorted magical practices” and his “uncompromisingly positive attitude toward medical practice.”²⁷ For example, the Mishnah in *Pesahim* mentions a “book of cures” that was hidden by King Hezekiah.²⁸ Rambam polemicized strongly against the view that Hezekiah hid the book because people were putting their faith

in medical books and not in God as the ultimate Healer. He maintained that the book that Hezekiah hid contained magical cures based upon the use of amulets. The author of the book had intended only that readers of his work study the phenomena described in it and not apply the procedures suggested therein to real situations. However, when people began to make practical use of the text, Hezekiah decided to hide it.²⁹ Rambam's refusal to countenance the thought that the Rabbis would ever delimit the scope of beneficial remedies, and his declaration that the Torah is interested in the well-being of the human body supplement his disavowal of sham magical cures.³⁰

Rambam did concede the validity of empirical medicine, i.e., cures that "worked" even though their causes remained unknown, and did not advocate the position of the Dogmatic physicians of antiquity who exclusively based their cures upon "principles" (i.e., treatments whose causes were fully understood in light of contemporary science) alone.³¹ In *Moreh Nevukhim* (III:37) he stated:

You must not consider as a difficulty certain things that they [the Rabbis] have permitted, as for instance the nail of one who is crucified and a fox's tooth. For in those times these things were considered to derive from experience and accordingly *pertained to medicine*³² and entered into the same class as the hanging of a peony upon an epileptic and the giving of a dog's excrements in cases of the swelling of the throat and fumigation with vinegar and marcasite in cases of hard swelling of the tendons. For it is allowed to use all remedies similar to those that experience has shown to be valid even if reasoning does not require them. For they *pertain to medicine* and their efficacy may be ranged together with the purgative action of aperient medicines.³³

Three categories of cures existed according to Rambam: effective ones based upon the laws of natural science, sham cures of occult virtue, and the nebulous category of "empirical medicine," a category which itself exists only due to our current imperfect knowledge concerning the science of medicine. Any cure that is part of the third category which truly "works" would be permitted, and ultimately, with advancement of scientific thought, will also be classified with cures of natural science.³⁴ If a supposed cure would be shown in reality not to work, it would immediately fall into the second category above and, from a halakhic perspective, would be subsumed under the prohibited rubric of *darkhei Emori* (Amorite usages). Thus the general rule that "anything which pertains to medicine does not pertain to Amorite usages" remains constant, even as the class of specific cures may not. Hence Rambam could state³⁵ that the fox's tooth, which the talmudic Rabbis assumed "worked," in fact did not.³⁶

In light of Rambam's categories of cures and in view of his attack in *Moreh Nevukhim* against the use of amulets³⁷ his codification in

Mishneh Torah of the law that permits one to wear an amulet on *Shabbat*³⁸ poses a difficult problem. One may only wear an amulet, according to the Mishnah, which has been proven effective; since it has a legitimate purpose, the wearer would not violate the prohibition of carrying on *Shabbat*. In this sense, an amulet may be compared to apparel. Yet Rambam himself forcefully delegitimized all use of amulets, as he claimed that they did not cause any effect. How, then, could he allow one to be worn on *Shabbat*?

Writing in Provence in the beginning of the fourteenth century, R. Menaḥem ha-Me'iri formulated the doctrine that amulets “work,” not because of any intrinsic property they possess, but because people *believe* that they can cure. In his view, amulets are, in effect, placebos effecting psychosomatic cures.³⁹ Although the amulets are not intrinsically effective, and only objectively work because one subjectively thinks that they do, this is irrelevant with regard to the law of carrying on *Shabbat*. If one’s subjective point of view is that he is wearing a “tried and true” amulet, this fact, which itself generates the objective efficacy of the charm, suffices to place the amulet into the category of apparel and other objects that may be worn on *Shabbat*. If one assumes that Me’iri’s view was Rambam’s unarticulated assumption as well, the problem in *Hilkhot Shabbat* is solved. In any event, this issue does not alter Rambam’s general perspective upon the matter.⁴⁰

Ramban’s halakhic position *vis-a-vis* occult virtue was diametrically opposed to that of Rambam. He believed in the power of demons, and claimed that the passage in Deuteronomy that prohibited various forms of divination was promulgated *in spite* of their usefulness. “*Thou shalt be wholehearted with the Lord thy God*” (Deut. 18:13) was, in his view, an exhortation not to bother with astrologers or necromancers, for ultimately, in spite of their power, God can override their decrees.⁴¹

Elsewhere, Ramban discussed the halakhic imperative for a physician to heal. He understood the Talmudic statement שאין דרכן של בני אדם ברפואות (it is not in the manner of people to use medicines [*Berakhot* 60a]) to mean that the pursuit of medicinal aids was once a deviation from the norm. The ideal procedure that was followed in Israel during prophetic times was for a sick man to realize that his illness was a punishment from God (one of His manifold “hidden miracles”) and to respond by consulting a prophet. Eventually, however, the deviation became the norm, and the populace in general began to consult doctors. Responding in kind, God left the Jewish people to the vicissitudes of the elements. The responsibility of a doctor to heal came, therefore, only as a result of the inability of the ill to possess the faith to seek prophets.⁴²

Hence, when Ramban discussed whether or not one could receive medical assistance from demons, he operated with assumptions that were vastly different from those held by Rambam. Can a potent supernatural agent with whom the Torah has forbidden consultation be used in the context of medicine, a pursuit itself advocated only as a concession to human nature? In *Torat ha-Adam* he permitted such activity, as long as the sorcerer did not invoke the names of other gods.⁴³

Rashba recorded that Ramban personally used the lion-amulet, an example of an astrologically based talisman. Ramban's action dovetailed with his position that as long as no idolatrous practice takes place, one may employ means of divination or sorcery to effect a cure, even in a case where one's life is not threatened.⁴⁴

Rashba first defended the use of the lion-amulet in the face of two halakhic rulings which seemed to prohibit it: the law against making forms similar to those that Ezekiel beheld in his Vision of the Chariot⁴⁵ and the prohibition of *darkhei Emori*, which encompassed numerous types of amulets. He maintained that the prohibition of making forms applies only if one makes images of all four figures of the Chariot, and that since the amulet does cure, the talmudic principle that "anything which pertains to medicine does not pertain to Amorite usages" (*Shabbat* 67a) applies.

R. Abba Mari received word of Rashba's responsum, and in the letter that opens *Minhat Qena'ot* posed his queries concerning Rashba's ruling. He wholeheartedly accepted the efficacy of the lion-amulet. He quoted a *hibbur meyuhad* (unique compilation), which in a subsequent letter he identified as *Sefer ha-Zurot*, a text that gave instructions as to the proper use of the amulets.⁴⁶ He opposed use of the amulet, however, because its connection with the zodiac placed it among the acts prohibited by the biblical injunction against divination and by the talmudic laws against *darkhei Emori*. He suggested that the amulets that the Rabbis permitted one to wear on Shabbat, such as wearing the nail of one who was crucified, operated on a special principle (*segulah*). These cures, however, were not associated with astrology. R. Abba Mari concluded his letter with the assertion that as sick people turn to amulets in time of illness they will no longer turn to God, and stated that since some of the practices mentioned in the occult book included the idolatrous act of burning incense, *all* the cures in the book, which are based upon the same astrological principles, would be prohibited.⁴⁷

In his reply, Rashba admitted that idolatrous activities such as the burning of incense cannot be permitted in the context of a cure, but went on to declare that Jewish law permits *anything* not idolatrous that is effective. He then launched into a discussion of Rambam's position

which, as formulated in the *Moreh Nevukhim*, R. Abba Mari had praised. He stated that Rambam's sweeping declaration in *Hilkhot 'Avodah Zarah*⁴⁸ clearly assumed that the Torah did not prohibit actions in spite of their effectiveness, as R. Abba Mari (and Ramban) held. Yet, wrote Rashba, even Rambam did not limit the scope of permissible cures to those based upon scientific principles alone, as the passage in *Moreh Nevukhim* that allowed for empirical medicine would seem to indicate.⁴⁹ By the same token, one would be allowed to use any contemporary cure proven by experience to be effective. Rashba was aware that Rambam had declared in a subsequent passage in the *Moreh* that cures not based upon scientific causality only appear to work according to the (wrong) opinions of those who engage in such activities, and as a result should be prohibited.⁵⁰ Rashba suggested that Rambam distinguished between *segulot* mentioned in the Talmud, which would be permitted, and those found only in "foreign books" which would remain prohibited.⁵¹

Rashba proceeded to confront the essential issue that separated Rambam from other Jewish authorities: the plain fact that the Talmud consistently assumed the power of occult incantations, amulets and demons, which indicated that Amoraim apparently had no qualms about engaging in these activities in certain situations.⁵² Rashba's hypothesis of the place of such forces in the cosmos was as follows:

ושם הכוחות האלה בעצם הדברים הנמצאים בטבע מושג בעין, כסמים ועשבים
הידועים לחכמי הרפואות, או בטבע (ה) מסוגל לא ישיג אורו העין . . . ואין מן הנמנע
שיהיה כזה גם בדברים כענין הקמיעין והדומה לזה. . . .

And He (God) placed these forces in the essences of the existence of nature (which can be) discerned by enquiry, such as drugs and herbs which are known to learned doctors, or in particular natures (*teva' ha-mesugal*), which enquiry cannot discern. . . . And it is not impossible that such should be the case with incantations such as there are in matters of amulets and the like. . . .⁵³

Although from a practical perspective, Rashba arrived at the same result as Ramban, we can discern from his remarks a different approach to the issues. Ramban did not divest the acts of divination recorded in Deuteronomy 18:11–12 of their supernatural character. Although Rashba accepted the reality of these practices, he attempted to integrate *segulot* into the larger order. Hence his term *teva' ha-mesugal*. His phrase *ve-en min ha-nimna'* (it is not impossible) also shows a sensitivity to philosophically untenable positions.⁵⁴

Rashba's theoretical underpinning made his defense of the use of amulets much easier.⁵⁵ Although Ramban had also allowed sorcery in the context of a cure, we note that an "uncompromisingly positive attitude" was not expressed. Even though the Torah stated that a physician may heal, there remains in Ramban a slight underlying uneasiness

about using an unnatural agent whose intervention would otherwise be prohibited. We suggest that according to Rashba's structure, as acts of divination are subsumed under the larger rubric of "particular nature," the problem is, to an extent, mitigated.

According to Rashba, why did the Torah forbid divination at all? He addressed this issue as well and wrote:

"תמים תהיה עם ה' אלקיך" פירושו אצלי כולל האזהרה וההבטחה שהזהיר שכל נשתבש ונחוש בהבלי הגוים הקוטמים והמנחשים . . . רק להיות תמים עם ה' . . . והבטיחו אם יעשה מצותיו, ועבודתו יהיה תמים, לא יגע בו רעה. . . .

"Thou shalt be whole(hearted) with the Lord thy God" means to me, both an injunction and a promise. He has warned us not to err and divine with the vanities of the nations who practice divination and observe signs . . . but rather to be wholehearted with the Lord . . . , and he has promised that one who pursues His commandments and His service will be whole, i.e., no evil will befall him. . . .

Rashba's remarks were similar in tone to Ramban's comments to Deuteronomy 18:13. He emphasized that Jews are commanded to engage in a special relationship with God, and that this command precludes activities associated with divination. Of course, if a person "slipped" from God's special gaze and became sick, any means of cure that would restore him to health would be permitted.

ומי שהשיגו החולי אינו סומך על הגם שלא לשאול ברופאים ולהתעסק בדברים המועילים, בין בדברים טבעיים, בין בטגולות, והוא אמרו "ורפא ירפא".

And he who has contracted a sickness (should) not rely upon a miracle, desisting from calling upon doctors, but should engage in constructive remedies, whether they are natural items or segulot, and this is the meaning of *rapo yerape* (he [the doctor] shall surely heal. . . . [Exodus 21:19])⁵⁶

Rashba concluded his letter with his quotation from Ramban's responsum concerning interrogations of demons. However, before signing the letter, he confessed his lack of certainty in analyzing these matters.

In R. Abba Mari's second letter to Rashba, he provided more information concerning *Sefer ha-Zurot*. He claimed that one who used astrologically-minded amulets was, in effect, according recognition to the power of the star referred to in the specific amulet and giving it thanks.⁵⁷ The fact that the stars receive their power from God is no defense, he claimed, for such a rationale could be advanced for actual worship of the stars as well. Just as Jewish law prohibits worship of the stars in any event, it does not allow for acts that, in any way, recognize their power. He divided cures into three classes: scientific cures, amulets and occult incantations, and *segulot*. It is concerning this latter category that Abbaye and Rava declared "Anything which pertains to medicine does not pertain to Amorite usages." They never, however, included in their

statement cures based upon the zodiac. R. Abba Mari concluded with a citation of Rambam's remarks in *Perush ha-Mishnah* in *Pesahim*.⁵⁸

The fact that R. Abba Mari advocated a limit to medicinal practices proved to be the Achilles' heel of his argument. Rashba had already mentioned the imperative of seeking any possible means of cure. Whereas the thrust of R. Abba Mari's remarks centered around the definition of prohibited practices, the upshot of Rashba's words was an affirmation of the halakhic obligation that Jews have to maintain their health.⁵⁹

In his second letter to R. Abba Mari, Rashba merely reiterated the fact that the Talmud had recognized that certain times are more propitious than others, and had advised people to act in accordance with their favored "hour." Rashba closed his second response with the pointed comment that R. Abba Mari was picking and choosing among the doctrines of Rambam, and that he himself was surprised by some of Rambam's statements. Yet the lenient decision, based upon the imperative to heal the sick, remained valid.⁶⁰

Why did R. Abba Mari choose to include his debate with Rashba concerning amulets in the collection of letters concerning the ban on philosophy? Joseph Shatzmiller suggested that his purpose was a strategic one designed to undercut philosophical studies in general. If one studied contemporary scientific texts, he would inevitably be led to practices of divination that the Torah has forbidden. In effect, R. Abba Mari was saying, "Look what such studies lead to!"⁶¹

Although this might have indeed been R. Abba Mari's personal position, it is not necessarily the reason for his inclusion of this debate in the collection of letters which makes up *Minhat Qena'ot*. Not every part of their dialogue was connected to the controversy; for example, along with his letters decrying the spread of radical philosophies and questions concerning amulets, R. Abba Mari also included a query to Rashba concerning admixtures of permissible and prohibited foods, a question surely unrelated to the larger theme of philosophical studies. Another issue that R. Abba Mari took the opportunity to ask Rashba in these first letters concerned the difficult position of Rambam regarding the first-born animal whose birth takes place outside the land of Israel. The inquiries concerning the lion-amulet were part of letters that dealt with the philosophical-studies issue as well, and R. Abba Mari simply included the entire text of these letters in his collection.⁶²

Yet, the discussion concerning amulets contains a passage by Rashba that sheds light upon his personal integration of philosophical principles into his worldview, as distinct from his ban on its study before one reached the age of twenty-five. He stated:

וכן אירע לנו בספרי הפילוסופים . . . זמורה ודאי יצא להם בטול האותות כקריעת ים סוף . . . וחדוש העולם . . . דבין שכן, נאמר שכל מה שבספריהם שקר, ואסור להאמין

ולעשות שום דבר שאמרוהו ושכללו בספריהם, אלא כל הספרים אם יש בהם דברים של שקר ויש בהם דבר אסור ברובן, אפשר שיש בהם דבר יוצא מכללן, והני ספרים כרמונים שזרקין הקליפות ואוכלים הגרעינים היפים . . .

. . . and such occurs to us with regard to books of philosophy . . . and from this (premise of the immutability of nature) they (philosophers) reached the conclusion of the impossibility of miracles such as the splitting of the Red Sea . . . and of the creation of the world . . . should we say because of this that all that is in their books is false and it is forbidden to believe and to follow anything that they have said or have written in their books? Rather, if all books contain some falsity and if most contain a prohibited belief, perhaps they contain matters that are exceptions to this rule (of falsity) and these books are as pomegranates, that people throw away the shells and eat the beautiful seeds.⁶³

Rashba declared that contemporary medical and philosophical texts contain potentially harmful material, but both can also provide valuable and useful information. With regard to philosophy, he could not himself construct a model that would be able to supersede the contemporary Aristotelian one, and although he recognized that the existing foundations negated the basics of Jewish theology, he accepted the premise of an ordered world and used philosophical categories to interpret phenomena. By the same token, he advocated use of contemporary medical knowledge to maintain and preserve his co-religionists' health.

In concluding this section we note that the ban on philosophical studies that Rashba signed in 1305 did *not* include the study of medicine. As one of the positive results of scientific inquiry, medicine, presumably with all its concomitant astrological studies and occult cures, should be studied in earnest according to Rashba. The irony of such a position, as seen from Rambam's perspective, is manifest. Yet from the perspective of one who knew the Talmud's position on the issue of amulets and knew as well what scientists of his own day thought, such a conclusion was eminently logical.

Blessings and Curses

It is possible to draw a clear analogy between Rashba's approach to occult virtue and his position *vis-a-vis* the efficacy of human blessings and curses. Rambam had stated that there is no tangible result of a blessing or curse that a man utters; the reason why the Torah forbids one to engage in such activities is to instill proper modes of behavior and discipline in people.⁶⁴ He explained that lashes was the punishment for cursing one's fellow man (by use of the Divine Name) because "according to the opinion of the multitude" such curses have a deleterious effect.⁶⁵ Rationalists such as R. Joseph ibn Kaspi and R. Yedaiah ha-

Penini adopted this view, and expanded the concept that the Torah formulated the language of certain doctrines according to the erroneous beliefs of the masses to other instances as well.⁶⁶

Kabbalists, on the other hand, not only assumed that there were actual ontological results of human speech, but taught that manipulation of the “Names of God” could cause magical effects.⁶⁷ They were not the only group, however, that maintained that speech could cause an external reality to occur. The philosopher Avicenna had formulated an “anthropological theory of miracles” which posited man’s ability to perform wonders in conjunction with the Active Intellect.⁶⁸ This idea was adopted by R. Abraham ibn Ezra, and a recent article has argued that quite a number of other Jewish thinkers utilized this doctrine as well.⁶⁹ Rashba was one of them, and his formulation of this idea showed a desire to subsume “unnatural” phenomena such as “the evil eye” under a natural rubric.⁷⁰

In a responsum that dealt with the talmudic remark that Bar Hedyah, through his formulation of the meaning of a dream, caused precisely the result he had forecast, Rashba claimed that the Bible and Jewish tradition assert that “this is (the reason for) the prohibition of cursing.” His view that blessings and curses *do* have tangible effects set him squarely against Rambam. He stressed the fact that natural philosophers possessed no explanation for the anomaly of magnetism, another phenomenon which contradicted the laws of Aristotelian physics, either. Rashba suggested that the factor which gave speech (in this case, the verbal expression of how a dream was to be interpreted) the ability to cause real effects may be a *segulah* or may be a hidden matter.⁷¹

Jewish medieval philosophers had construed the anthropological theory of miracles in two ways. One approach, the more prevalent one, postulated that only one with the requisite intellectual traits could cause external phenomena to change.⁷² Rashba, and subsequently R. Isaac Pulgar, on the other hand, stated that only the pious individual, as distinct from the intellectually able, possessed the ability to produce such wonders.⁷³ Rashba’s shift in terminology is fully in line with his view that the pious individual, *not* the philosopher, is the one for whom the world was created.⁷⁴ Even with this *caveat*, however, the fact remained that such miracles were part of a pre-ordained structure of causality, and not *ad hoc* actions that contradicted the very notion of nature.

In *Minhat Qena’ot*, Rashba addressed this issue in the course of formulating his doctrine of *segulot*.⁷⁵ Along with actions that seem to be efficacious even though there is no apparent scientific principle involved, words also seem, at times, to work wonders. Indeed, the question formulated by Rashba in another responsum on the matter was not how blessings can work in principle, but how a *hedyot* (commoner) can give a blessing of any import.⁷⁶ Before referring to the kabbalistic idea of

blessings in general, Rashba explained that *hedyot* is a relative term, comparing the status of the party who gives the blessing with that of the recipient; it is not an absolute term denoting ignorance.⁷⁷

Rashba's Position Concerning the Pursuit of Knowledge

Aristotle had distinguished between theoretical and practical sciences, and this division was recognized by Jewish medieval thinkers as well. The exact classification of the sciences that different Jewish philosophers employed is a fascinating topic in its own right.⁷⁸ R. Abba Mari of Lunel mentioned three out of the four subjects of the *quadrivium* (arithmetic, geometry, astronomy) and emphasized that these subjects were preparatory disciplines that were prerequisites for the understanding of physics and metaphysics.⁷⁹ Jewish thinkers maintained that these disciplines possessed value inasmuch as they could be utilized for the goal of knowing God and obeying His laws and commandments.⁸⁰ Indeed, as preparatory disciplines, these subjects did not pose the threat to traditional Jewish beliefs that physics and metaphysics did. Thus, in the ban on philosophy that was promulgated in 1305, astronomical works and other related books were excluded.⁸¹ Although Rashba did not himself write any scientific works, he possessed a good deal of scientific knowledge. We will now cite several instances where he demonstrated an awareness of such concepts.

In his commentary to *'Avodah Zarah* 75b,⁸² Rashba dealt with the issue of *noten ta'am lifgam* (a foreign taste which, when introduced, spoils the quality of the original substrate). The specific circumstance involved utensils that had absorbed *yein nesekh* (Gentile wine). According to the standard law of *noten ta'am lifgam*, if a utensil absorbed a prohibited substance, once a certain amount of time had elapsed, the remaining taste of that substance would automatically become *lifgam*, and would not, upon its emission, halakhically invalidate any other substance. Medieval halakhic authorities differed as to whether the time needed to establish the taste of *yein nesekh* as *lifgam* was the same as that of other prohibited foods. Rashba felt that logic dictated that a longer time was needed before the wine could be considered *lifgam*. He asked: "How can it be that the cause is spoiled and its effect excellent?"⁸³ יהיה הפועל פגום ופעלו משובח?

As A. Rosenthal noted, although "spoiled" (פגום) and "excellent" (משובח) are terms derived from the talmudic discussion that Rashba was commenting upon, "cause" (פועל) and "effect" (פעל) are familiar philosophic terms which have parallels in the works of Aquinas.⁸⁴ Rosenthal deduces that since Rashba wrote his commentary to *'Avodah Zarah* when he was twenty-two years old, he must have already studied philoso-

phy by that time. To my mind, one should not make too much of this passage. One need not have studied a discipline rigorously in order to achieve a certain familiarity with phrases associated with it. What can be maintained, however, is that Rashba was part of a culture whose *ambiance* included free and easy discussion and use of such terminology.

In his commentary upon the Aggadah, Rashba analyzed a passage dealing with the phenomena of thunder and lightning, and wrote: "It is known that the rainbow in a cloud is a natural phenomenon that is formed by moist air due to the light of the sun."⁸⁵ Here Rashba followed Ramban who, in his commentary to Genesis 9:12, quoted the same explanation.⁸⁶ Yet, whereas Ramban wrote "and whether the rainbow was (created) now or whether it was always in nature," Rashba simply presented the view of the Greeks. He then proceeded to apply the theological principle indicated by the appearance or absence of the rainbow to the issue of thunder and lightning. Refusing to accept the simple meaning of the talmudic passage (*Berakhot* 59a) that thunder is God's cry of pain at the destruction of the Temple, he pointed out that not only did biblical verses mention such phenomena,⁸⁷ but as '*olam ke-minhago noheg*, God would not create any new scientific phenomena after He created the world. From the time of creation, God had ordained that whenever the Jews would follow Him, rain would fall without thunder and lightning. When they would disobey Him, however, thunder and lightning would accompany the rain. The situation that has prevailed since the destruction of the Temple (i.e., the increased preponderance of thunder and lightning) was not, according to the view of Rashba, a *new* fact of nature that God had now inserted. Rather, at the time when he created the world, God had built thunder and lightning into nature as phenomena which would, however, automatically be *activated* as the of any spiritual backsliding by the Jewish people. Since the destruction of the Temple, this has happened to be the case.⁸⁸ Rashba's comments here not only underscore his affirmation (post-creation) of '*olam ke-minhago noheg*, but demonstrates his willingness to reinterpret an Aggadah related to that phenomenon, as a consequence of his view.⁸⁹

In his *Perushei ha-Haggadot*, Rashba advanced the interpretation that the statement that Korah's sons were "set aside in *Gehinnom*" meant that they survived the earthquake, interpreting *Gehinnom* allegorically to mean pain and punishment. He wrote: "As sometimes happens in places that are split (by earthquakes), that some ground that was not split remains and people (in those areas) are saved."⁹⁰ This passage demonstrates an awareness of the practical effects of earthquakes, a subject treated in many contemporary scientific tracts.⁹¹

Rashba himself, as we mentioned, did not write any scientific tracts. Being first and foremost a Talmudist, he did not, for example, compose astronomical works. Yet, as we have noted, this discipline was not

included in the ban on philosophical studies. At the turn of the fourteenth century, all parties to the dispute over the study of philosophy agreed that the scientific disciplines (albeit, in their proper form) had at one time been Jewish disciplines. The knowledge that the Jews once possessed was lost, however, and had to be retrieved by reading Gentile books.⁹² Moreover, Rambam was seen as the greatest scientist and philosopher who had ever lived.⁹³ Being that one could use these originally Jewish disciplines to get a better understanding of biblical and rabbinic teachings, Rashba felt that the scientific disciplines would be of invaluable aid.

The litmus test which distinguished those who pursued the sciences or advocated their pursuit as a means of better understanding biblical and rabbinic laws from those who studied the sciences in order to obtain the truth about nature and the universe, was a case where the results of inquiry flatly contradicted a rabbinic remark concerning a scientific fact. The issue was the controversy concerning *terefah*, which had manifold halakhic ramifications. Rashba clearly demonstrated his attitude towards the limits of scientific inquiry (in the axiological sense) by the way he approached this matter. Although his halakhic posture in general is not part of the purview of this study, we must analyze his responsum on this issue in order to understand the depth of his conviction on this score.

The Talmud, in the third chapter of tractate *Hullin*, discussed the categories of certain specific sicknesses that animals and birds can contract. According to the Talmud, a creature that contracts one of the sicknesses and is classified as *terefah*⁹⁴ cannot live longer than twelve months.⁹⁵ The statement that *siman li-terefah yod-bet hodesh*, which defined the contours of *het minei terefot nimseru le-Mosheh be-Sinai* was challenged in the medieval period by reports that creatures with the selfsame sicknesses that the Talmud had specified had nonetheless lived longer than twelve months. In his treatment of the issue, Rambam had claimed that the halakhically binding factor is the *category of sickness*; even if a creature lived longer than twelve months it would still be classified as *terefah*. Hence, the prohibition for Jews to eat the creature would take effect immediately upon the recognition that the creature had contracted the illness, and for one to wait and see whether the animal would live longer than twelve months would be a halakhically irrelevant procedure. In sum, even if the medical opinion of *siman le-terefah yod bet hodesh* would not always be correct, the halakhic fact that the animal is prohibited would still remain.⁹⁶

From the question addressed to Rashba on this score, it is apparent that some Jews had decided to take the principle of *siman li-terefah yod-bet hodesh* as the exclusive factor in determining whether or not one was permitted to eat a particular animal. Any creature that would live more than twelve months, according to their argument, should be ruled as permissible food.⁹⁷ The negation of the principle of *terefot*, whose

categories the Talmud maintained were *halakbah le-Mosheh mi-Sinai*, carried with it far-reaching ramifications concerning the practical observance of Jewish law. Rashba's response was, in a certain sense, far more urgent than his rejoinder to those who questioned rabbinic pronouncements on certain theoretical issues.⁹⁸

As rabbinic authority was being challenged, not on the basis of a philosophic doctrine, but on the basis of empirical observation, Rashba's first line of defense was to challenge the observation itself. He claimed that the observer was either lying or mistaken.

... and he who so testifies errs, for never in history was it so ... and hence even if many would come and say, "Such have we seen" we will contradict them in order that the words of the Rabbis may stand, for we will not slander the words of the Rabbis and (instead) uphold the words of these. . . .⁹⁹

Rashba tried to turn the empiricist argument to his own advantage. How could the observer be *sure* that this animal lived twelve months?

... from whence do you know that *this* animal tarried (twelve months), perhaps you forgot or erred, or perhaps you mixed up the time or perhaps you mixed this animal up with another, for it is impossible to testify that this animal was in front of your eyes the entire twelve months. . . .¹⁰⁰

Rashba also suggested the possibility of a miracle.¹⁰¹ This argument could suffice by itself, and by definition cannot be disproved. Indeed, one may wonder why Rashba did not simply use this line of reasoning and conclude his responsum.¹⁰² In light of Rashba's extreme caution concerning miracles, however, as is evident from his responsum regarding the "prophet of Avila"¹⁰³ and his remarks to R. David ben Zakhri,¹⁰⁴ we may suggest that his unwillingness to base his opposition upon this argument is consistent with his general position. Another reason might be his wish to defeat his opponent on his own terms. One could plead "miracle," but such a claim would not convince the skeptic that *Hazal* were not mistaken. Rashba chose a more aggressive standpoint from which to argue the merits of his case.

His third explanation of the apparent phenomenon of an animal classified as *terefah* and yet living more than twelve months was one contingent upon the specifics of the case. The category of *terefah* at hand was *yoteret*, an extra limb. The Talmud adduced the principle that an animal with an extra limb is *terefah* from the rule (*Hullin* 58b) "Every extra (limb) is as a missing (limb)." Rashba suggested that this law only classifies those creatures with extra limbs as *terefot*; it does not, however, place them among those *terefot* that the Rabbis declared are unable to live twelve months. This solution resolves the specific case discussed here; it offers no help, however, if another category of *terefah* would live for more than twelve months.

In the midst of his remarks, Rashba utilized a phrase that he also used in one of his letters to R. Abba Mari as recorded in *Minhat Qena'ot*:

. . . and he who testified and a thousand like him can pass away, but not one iota from that upon which the holy sages of Israel, the prophets and the sons of prophets, have agreed, and the matters that were told to Moses at Sinai, will be abolished. . . ."¹⁰⁵

The source of this statement is the *Midrash Rabbah*,¹⁰⁶ but Rashba here extended its scope. A remark made by the Rabbis of the Talmud possesses the same validity as the words of the Torah, even if it is a medical statement concerning the life span of a sick animal. Of course, once Rashba decided not to divorce the statement *siman li-terefah yodbet hodesh* from *het minei terefot nimseru li-Mosheh be-Sinai*, the force of his response was understandable. As the issue possessed halakhic ramifications that reached to the fundamentals of *Torah she-Be'al Peh*, he refused to allow what otherwise would be normal methods of scientific observation to apply. Pursuit of scientific knowledge was condoned only in the context of assisting Torah: never would Rashba allow it to play a meaningful adversarial role. No stronger evidence than this can be adduced to demonstrate Rashba's firm belief of the limits (in the axiological sense) of science and the supremacy of Torah.

Rashba's world view marks him as a figure who stands in the tradition of his teacher Ramban, as opposed to that of Rambam. Moreover, certain themes, such as his shift from the philosopher to the pious individual regarding the Jew as the *telos* of creation, mark his deviation from well-known Maimonidean positions, even as he accorded Rambam the utmost respect. Interestingly, just as Rashba's search for terminology that would encompass *segulot* within nature seems to have prefigured later attempts to understand "natural magic," his unabashedly hierarchical view of Torah *vis-a-vis* other disciplines and his stress upon the pious individual as opposed to the intellectual can be found in subsequent Spanish philosophers as well.¹⁰⁷ As a Talmudist, Rashba does not receive mention in standard surveys of medieval Jewish philosophy;¹⁰⁸ the views he espoused were nonetheless the norm for many Jewish thinkers of note in subsequent centuries.

NOTES

1. This essay is based upon the second chapter of my master's thesis, *The Role of Philosophy and Kabbalah in the Works of Rashba* (Bernard Revel Graduate School, Yeshiva University, 1986), written under the supervision of Prof. David Berger.
2. Y. Baer, *A History of the Jews in Christian Spain* (Philadelphia, 1961) I: 190–305; A. S. Halkin, "Ha-herem 'al Limud ha-Pilosophiyyah," *Peraqim* 1 (1967): 52–55;

idem., "Why Was Levi ben Hayyim Hounded?" *Proceedings of the American Academy for Jewish Research* 34 (1966): 65–77; *idem.*, "Yedaiah Berdesi's Apology," *Jewish Medieval and Renaissance Studies*, ed. by A. Altmann (Cambridge, 1967), 165–84; M. Saperstein, "The Conflict over the Rashba's Herem on Philosophical Study: A Political Perspective," *Jewish History* 1:2 (1986): 27–38; C. Touati, "La Controverse de 1303–1306 Autour des Études Philosophiques et Scientifiques," *Revue des Études juives* 127 (1968): 21–37.

3. The term virtue is used here in the sense of strength or potency, not in a moralistic sense. *Occult Virtue*, in its general sense, refers to powers that are hidden from the senses and, as a result, remain incapable of being understood. Keith Hutchison, "What Happened to Occult Qualities in the Scientific Revolution?" *Isis* 73 (267; 1982): 233–53, shows how after the beginning of the seventeenth century the meaning of the term "occult" changed from the meaning that it had formerly possessed during the Middle Ages and the Renaissance. Formerly, during the period of time under discussion here, "occult" was the antonym of "manifest" and was used to distinguish qualities that were hidden from the senses from qualities which were evident to the senses. For example, tastes and colors were considered manifest qualities, whereas planetary influences, magnetic virtue (the power of a magnet to attract iron) and the purported ability of certain chemicals to effect medical cures were defined as occult qualities. (Hutchison [p. 234] points out how that the term "quality" was used not only in its modern sense, to refer to the properties or attributes of an object, but in a technical sense, as referring to the causes of these attributes. Perceiving the "quality" of an object was, during the medieval period, a necessary condition for understanding it.) According to medieval Aristotelianism, science was restricted to entities within range of the senses. Hence, something which could not be perceived, *ipso facto* could not be understood. As a result, Aristotelians simply could not solve the paradox posed by occult qualities. How can science, which by definition is exclusively based upon sense perception, make sense of occult virtue? For an example of this, see the next note. In the context of medicine, occult virtue refers to the ability of a particular medicine to effectively cure an illness, although the principle behind its power is concealed.
4. See Lynn Thorndike, *History of Magic and Experimental Science* (New York, 1929), II, 769. Nicholas of Poland, a Dominican friar who studied at Montpellier and composed a *Book of Empirical Remedies*, assailed these remarks of Galen and listed a host of amulets and other occult virtues that he employed to effect cures. He proves the existence of occult virtue from the properties of magnets. No one knows why the magnet attracts the iron; it does not conform to the principle of Aristotelian physics by which action at a distance is impossible. Yet, no one can deny that the power of magnetism is an empirical fact. By the same token, he reasons, although other examples of occult virtue cannot be understood either, our lack of understanding in no way detracts from their existence.
5. Thorndike, *History* I, 117–81, discusses Galen and his works at length, and specifically describes his attitude toward magic (pp. 165–81). Thorndike characterizes Galen's ambivalent position as follows: "While Galen thus employs ligatures and suspensions . . . he draws the line at the use of images, characters and incantations" (p. 181). In other words, Galen could accept that some occult cures "work," although he was unaware of the reasons why they were effective. Other "cures," however, were in his view merely sham cures and had no true effectiveness at all. Apparently, the use of images, characters and incantations belonged to the second category. In general, see Oswei Temkin, *Galenism, Rise and Decline of a Medical Philosophy* (Ithaca, 1973).

Many of the cures that Rambam accepted can be found in Galen's work. Thorndike's treatment of Rambam, albeit somewhat dated, is in Vol. II, 205–13.

6. Thorndike, *History*, Vol. II, surveys the scholars who grappled with this issue in the twelfth and thirteenth centuries. For acupuncture as modern empirical medicine, see *Encyclopaedia Britannica* (1988), *Macropaedia*, I, 74.

Hutchison, *op. cit.*, forcefully argues that what happened during the scientific revolution was not the “banishment of occult qualities,” as is generally claimed, but the realization that no qualities are ever directly perceived. In other words, *manifest* qualities were “banished” and a new understanding of science, in which qualities need no longer be perceived in order to be understood, came into being. Hutchison writes:

If a drug like aspirin, for example, manages to relieve a headache, it does so by virtue of qualities which are imperceptible, and its effect is no direct or indirect reflection of its being a silent, white powder of bitter taste and medium density. We can observe the effects of aspirin, but we cannot observe what it is in aspirin which achieves those effects. . . . Today we accept such powers as a matter of course . . . and we have accepted such powers continuously since the seventeenth century. (pp. 234–35)

7. The standard edition of *Minhat Qena'ot* was edited by M. Bislikes (Pressburg, 1838; repr. New York, 1958). The editor wrote that he based his printed text upon a manuscript found in the Florence library; unfortunately, this manuscript has subsequently disappeared. A new annotated edition was recently edited by H.Z. Dimitrovsky in *Teshuvot Ha-Rashba* (Jerusalem, 1990), I, 225–408; II, 409–883. Dimitrovsky writes in his introduction that besides Bislikes' printed text, he utilized six other manuscripts and fragments of a seventh, which can be subsumed under two primary branches, to establish the text of his edition. (See Vol. I, *Introduction*, 17; he promises to detail explicitly the nature of the various MSS. in his introduction to a forthcoming volume of *Teshuvot ha-Rashba*). Citations from *Minhat Qena'ot* in this article will be footnoted with the appropriate pagination from both sources, first from Bislikes' Pressburg edition and subsequently (in parentheses) from Dimitrovsky's Jerusalem edition (vol. and page number). Translations from *Minhat Qena'ot* in this paper are based upon the Pressburg edition; substantive differences in Dimitrovsky's edition will be noted as well.
8. The letter was published by Alexander Marx in *Hebrew Union College Annual* 3 (1926): 349–58. For an English translation, see Ralph Lerner, *Medieval Political Philosophy: A Sourcebook*, ed. by Ralph Lerner and Muhsin Mahdi (New York, 1963), 227–36.
9. *Letter on Astrology*, Lerner translation, 229.
S.J. (Jim) Tester, *A History of Western Astrology* (New York, 1989), 157–58, writes that in the Moslem world, Al-Kindi, who flourished during the ninth century, presented the philosophical basis for astrology as well as for magic, divination, and other occult sciences. Other seminal Islamic astrologers of the eighth and ninth centuries that he cites are Al-Kindi's pupil Abu Ma'shar and Masha'allah, “the first voluminous Arab writer on the subject.” Masha'allah and al-Battani are the most often cited Arabic sources of Latin astrology.
10. Thorndike devotes a chapter (I, 504–22) to Augustine's position on magic and astrology. Like most early Christian writers, he attributed both the origin and apparent success of magic to demons. He was hostile to astrologers and maintained that their predictions come true either as a result of chance or because of demons who wish to confirm mankind in its error, but not as a result of their (false) doctrines. His position on astrology led him to downgrade astronomical observations as well.
11. The most prominent example is R. Abraham ibn Ezra. See, e.g., M. Friedlaender, *Essays in the Writings of Abraham ibn Ezra* (photo-offset reprint, Jerusalem, 1964), 10–11.
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12. Tester, *op. cit.*, 176, remarks that as Aristotle had said that all sublunary change was the result of and dependent upon motions in the heavens, proponents of astrology could accept it as *astrologia*, a legitimate science properly belonging to the Aristotelian scheme of knowledge. See below, n. 13, regarding Gersonides.
13. See his *Milhamot ha-Shem*, II, 2; *Encyclopaedia Judaica* XI (1972), 95–6. Of course, accepting as a fact the influence of the stars upon human beings does not necessarily imply that one would accept as truth all the assumptions of astrologers (whom Gersonides calls *hakhmei ha-mishpat*), e.g., that the stars can affect one's thoughts. Cf. Gad Freudenthal, "Épistémologie, Astronomie et Astrologie chez Gersonide," *Revue des Études juives* 146 (3–4; 1987): 357–65, esp. pp. 360–64, who maintains that Gersonides' purportedly "pro-astrology" view is a mischaracterization and who argues that to describe his position regarding astrology as one of "approval" or "acceptance" of astrology is an oversimplification of a complex naturalistic position.
14. See his comments in *She'elot u-Teshuvot ha-Rashba ha-Mebuhasot la-Ramban*, #293 (one of two responsa recorded therein that were actually written by Ramban), printed in *Kitvei ha-Ramban*, ed. by C. Chavel (Jerusalem, 1963), I, 379. On Ramban's view of hidden miracles in general, see David Berger, "Miracles and the Natural Order in Nahmanides," *Rabbi Moses Nahmanides (Ramban): Explorations in his Religious and Literary Virtuosity*, ed. by I. Twersky (Cambridge, 1983), 107–28.
15. Actually, although Ramban discussed the matter in numerous places, to the best of my knowledge he never expressly made reference to the statement in the Talmud (*Shabbat* 156a) "*en mazzal le-Yisrael*" as a proof for his position. He limited himself exclusively to biblical verses to make his point. Hayyim Henokh's assertion that Ramban decided in favor of the opinion that *ein mazzal le-Yisrael* is correct, but the only place Ramban says so explicitly is in the responsum concerning demons cited above, n. 14. See H. Henokh, *Ha-Ramban ke-Hoqer ve-khi-Mequbal* (Jerusalem, 1978), 57.
16. See above, n. 6.
17. *Ibid.*, II, 66–93, especially pp. 91–93 (on Marseilles).
See M.T. d'Alverny, "Translations and Translators," in *Renaissance and Renewal in the Twelfth Century*, ed. by R. Benson and G. Constable (Cambridge, Mass., 1982), 421–62; Tester, *op. cit.*, 152.
Recently, much scholarly work has been written concerning medical education, knowledge and practice during the period of time that Rashba lived. See Michael McVaugh, "The Nature and Limits of Medical Certitude at Early Fourteenth-Century Montpellier," *Osiris*, 2nd series, 6 (1990): 62–84; Luis Garcia Ballester, Lolla Ferre, Edward Feliu, "Jewish Appreciation of Fourteenth-Century Scholastic Medicine," *Osiris*, *ibid.*, 85–117; Nancy G. Siraisi, *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice* (Chicago, 1990). McVaugh demonstrates how at Montpellier at the beginning of the fourteenth century, Galen was interpreted as "having maintained an instrumentalist view of medical truth" (p. 84). This view of medicine is important for proper classification of Rashba's view, as this essay will show.
18. Thorndike, *ibid.*, 699–701.
19. *Ibid.*, 699.
20. Magic in ancient Greece, which utilized occult virtue in its broad sense, was not connected with astrology. The inclusion or exclusion of magic for medicinal purposes was not at all related to belief in celestial determinism. Ludwig Edelstein, "Greek Medicine in its Relation to Religion and Magic," *Bulletin of the Institute of the History of Medicine* 5 (1937): 201–46, demonstrated that the Greek physicians of antiquity generally rejected magical cures. They did, however, accept the notion of sympathetic medicine, i.e., that "like cures like," which they

viewed as a *natural* phenomenon, and many doctors in antiquity used amulets on this basis. See *ibid.*, 230–34.

During antiquity and the Middle Ages, an example of an apparently “magical” object which caused its effects based upon “occult virtue” was the torpedo fish, which could numb a man’s body even without direct contact, e.g., through the tools of the fisherman’s trade—spear, rod, club, line and net. Scientists now know that the torpedo fish uses muscle tissue to generate electricity for various purposes. Since, of course, scholars living during antiquity and the Middle Ages did not possess electricity as a category of reference, the torpedo fish joined the categories of objects whose “magical” powers were simply classified as instances of “occult virtue.” See Brian Copenhaver, “A Tale of Two Fishes: Magical Objects in Natural History from Antiquity through the Scientific Revolution,” *Journal of the History of Ideas* 52:3 (July–Sept. 1991): 373–98.

21. Joseph Shatzmiller, “In Search of the ‘Book of Figures’: Medicine and Astrology in Montpellier at the Turn of the Fourteenth Century,” *AJS Review* 7–8 (1983): 383–407, quotes examples of medieval scholars who created talismans designed specifically for use in conjunction with certain astrological configurations. For example, in July of 1301 Arnold of Villanova treated the kidney of Pope Boniface VIII with the talisman of a lion (p. 389). See Robert E. Lerner, “The Pope and the Doctor,” *Yale Review* 78 (Autumn, 1988): 62–79, for an engaging account of the relationship between these two colorful figures.

S.J. Tester, *op. cit.*, 142 (and n. 73, *ad loc.*), points out that what is notable in the Latin West is the *lack* of astrological activity before the twelfth century. Once the assimilation of Arabic knowledge began, however, the study of astrology, as well as of branches such as *iatromathematica* (known today as iatromathematics or astrological medicine) developed in earnest. See *ibid.*, 222, for *iatromathematica* as “natural astrology.” For a view which asserts that the Western Church itself possessed certain latent forces which eventually helped facilitate the transmission of scientific astrology, see Valerie Flint, “The Transmission of Astrology in the Early Middle Ages,” *Viator* 21 (1990): 1–27.

22. David Pingree has done much scholarly research concerning the *Picatrix*, a work which can be traced back to the Arabic treatise *Ghayat al-hakim* (the Aim of the Sage). See his articles “Some of the Sources of the *Ghayat al-hakim*,” *Journal of the Warburg and Courtauld Institutes* 43 (1980): 1–15, and “Between the *Ghaya* and *Picatrix* I: *The Spanish Version*,” *Journal of Warburg and Courtauld Institutes* 44 (1981): 27–56 (both cited by Shatzmiller, *op. cit.*, 404, n. 41), and his recently published critical edition of the Latin text of the *Picatrix* (see below, n. 46). The term *Picatrix* itself has been the subject of research; see J. Thomann, “The Name *Picatrix*: Transcription or Translation,” *Journal of the Warburg and Courtauld Institutes* 53 (1990): 289–96. Shatzmiller, *op. cit.*, p. 385, mentioned the “exchange of medical information between Christian and Jewish doctors in Montpellier around 1300,” citing the example of Jacob ben Machir ibn Tibbon, who was involved in much scientific collaboration.

In another article, Shatzmiller points out that none of the “distinctive group of Jewish doctors” in Provence and in Spain seemed to have actually attended the University of Montpellier prior to 1348, in spite of the Judaeo-Christian scientific collaboration. See “On Becoming a Jewish Doctor in the High Middle Ages,” *Sefarad* 43:2 (1983): 239–50, on pp. 244–45.

23. For Michael Scot, see Thorndike, *op. cit.*, II, 331–37; for the *Picatrix*, see *ibid.*, 813–24; for Peter Abano, see *ibid.*, 875–911, especially pp. 890–95.
24. See Paul Oskar Kristeller, *Renaissance Thought and Its Sources* (New York, 1979), 54.

Occult virtue persisted into the Renaissance as various thinkers propounded theories of “natural magic,” e.g., Heinrich Cornelius Agrippa of Nettesheim

(1486–1535), who wrote *De occulta philosophia* (*The Occult Philosophy*), published in 1510. Agrippa made the distinction (employed previously by Augustine) between sensing an entity and experiencing it, occult qualities being subsumed under the domain of experience, but outside that of sense. See Hutchison, *op. cit.*, 239. In general, see Brian Copenhaver, “Astrology and Magic,” *The Cambridge History of Renaissance Philosophy*, ed. by Charles B. Schmitt and Quentin Skinner (Cambridge, 1988), 264–300.

25. See *Minhat Qena'ot*, 20–21 (Vol. I, 273–75).

In the course of underscoring the connection between the amulet and the astrological principles upon which its efficacy was based, Shatzmiller, *op. cit.*, 384, n. 2, refers to the matter as the “figures of Leo controversy.”

26. *Hilkhot 'Avodah Zarah* XI:16.

In the preceding *halakhah* (XI:15), Rambam distinguished between *ahizat 'enayim* and *kishuf*. If *kishuf* is taken to mean an actual production of a magical effect that is not in conformity with the laws of nature, as opposed to the optical illusion of *ahizat 'enayim* where in reality, nothing is produced, Rambam would seem (in the case of *kishuf*) to concede the reality of some kinds of sorcery, which would contradict his flat assertion of XI:16. See Jacob Levinger, *Darkhei ha-Mahshavah ha-Hilkhatit shel ha-Rambam* (Jerusalem, 1965), 130–31, n. 128. I maintain, however, that in XI:15, *ahizat 'enayim* refers to a phenomenon which in reality was not produced (an optical illusion), and *kishuf* refers to something which is produced. Yet according to the Rambam, the *kishuf* here does not entail any supernatural causes at all. Only natural causes are involved. The *ba'al mekhashef* deceives his audience by having them believe that supernatural causes are at the root of the phenomena he produced; in reality, however, there is a natural explanation for them. The *ba'al ahizat 'enayim* engages in a different sort of deception; he makes his audience think something unnatural happened when in reality, no act was performed and nothing, not even something natural, occurred. See the comments of *Kesef Mishnah*, *ad loc.*, and *Hiddushei ha-Rambam la-Talmud*, ed. by J.L. Sacks (Jerusalem, 1963), 109.

27. See his *Introduction to the Code of Maimonides* (New Haven, 1980), 482–83. See also his recent article, “Aspects of Maimonides’ Epistemology: Halakhah and Science,” in *From Ancient Israel to Modern Judaism: Essays in Honor of Marvin Fox*, ed. J. Neusner, E. Freirichs and N. Sarna (Atlanta, 1989), 3–23, on pp. 10–12; and his expanded Hebrew version, “Halakhah u-Madda: Hebetim be-Epistemologiyah shel ha-Rambam,” *Shnaton ha-Mishpat ha-'Ivri* 14–15 (1988–89): 121–51, on pp. 135–40.

28. *Pesahim* 56a.

29. Rambam, *Perush ha-Mishnah*, ed. and trans. J. Kafih (Jerusalem, 1964), *Pesahim* 4:10.

The medieval translation of Rambam’s *Perush ha-Mishnah* from the Arabic into Hebrew that both Rashba and R. Abba Mari had available to them included such phrases as *דברים שמנע השם מלעשותם*. The term *מנע* can be misconstrued to mean a prohibition that exists in spite of the effectiveness of a cure, something Rambam certainly did not intend to say.

Rambam admitted that such medical books as the one Hezekiah hid are not sheer nonsense, for one can learn information concerning natural phenomena from them (even though the cures themselves are false; see the translation of Kafih, *ibid.*). With these remarks, Rambam extended the principle of *אתה למד אתה להבין ולהוררת* to a discipline other study of idolatry, which he, of course, did classify as utter nonsense.

30. See Twersky, *op. cit.*, 483. Franz Rosenthal, “The Defense of Medicine in the Medieval Muslim World,” *Bulletin of the Institute of the History of Medicine* 43 (1969): 519–32, shows that many of the same arguments that Rambam used to

defend the use of medicine were made as well by Islamic thinkers in response to their coreligionists who wished to ban its use. For example, both Rambam and his Islamic counterparts argued that just as one must nourish oneself with food when hungry and cannot remain passive and starve oneself, by the same token, one must also actively treat sickness with medicine and cannot allow the ravages of disease to attack one's body.

31. See Thorndike, *op. cit.*, I, 155.
32. This corresponds to the Hebrew phrase *יש בו משום רפואה* (*Shabbat* 67a).
33. See *The Guide of the Perplexed*, trans. by S. Pines (Chicago, 1963), 544. Rambam's analysis of the historical development of amulets and his polemic against their use can be found in I:61–2 (Pines ed., pp. 149, 152) and III:37 (Pines ed., pp. 540–50).
34. Rambam agreed to the principle that scientific development had advanced since Aristotle's time. See *Moreh Nevukhim* II:4, 19 (Pines ed., pp. 257, 308). Cf. Rambam's critique of Ptolemaic astronomy (*Moreh Nevukhim* II:24; Pines ed., pp. 322–27).
35. *Moreh Nevukhim* III:37.
36. In his *Perush ha-Mishnah to Shabbat* VI:10 he also stressed that the guiding principle is *כל שיש בו משום רפואה אין בו משום דרבי האמורי*.
The difference between his comments in *Moreh Nevukhim* and in his other works is that in the *Moreh* he stated that physicians have come to know for a fact that certain "cures" no longer "pertain to medicine."
37. See above, n. 33.
38. *Hil. Shabbat* XIX:13.
39. See *Bet ha-Behirah 'al Massekhet Shabbat*, ed. by I. Lange (Jerusalem, 1976), 196 (to *Shabbat* 53b), 225–27 (to 61b). Cf. his comments concerning empirical medicine on p. 249 (to *Shabbat* 66b) and p. 250 (to 67a).
40. In *Hil. Shabbat* XIX:13, Rambam ruled that one may wear a fox's tooth on *Shabbat*, his position concerning its efficacy notwithstanding. Rambam might not allow this state of affairs to go on forever, though. Perhaps, since he mandated that *doctors* decide if a cure is truly effective or not, Rambam felt that they would inform the potential user whether the cure (e.g., the suspension of the fox's tooth) truly pertains to medicine or not. Once one would *know* that an amulet was a sham, of course, the ill person could not be allowed to wear it on *Shabbat*.
The issue of "who decides" is crucial in ascertaining the boundaries of halakhically legitimate empirical medicine. In his first treatment of the issue, Rashba (*She'elot u-Teshuvot* I:167) also stated that doctors decide if an amulet (in that particular case, a miniature form of a lion without a tongue) is effective or not. In *Minhat Qena'ot*, however, he declared that the reliability of Jewish traditions (even medicinal ones) can be based even upon the "old women of Israel." See, e.g., *Minhat Qena'ot*, 25 (vol. 1, p. 290), where Abbaye's citation of women's medicinal advice is quoted.
Dimitrovsky, in his edition of *Minhat Qena'ot* (Vol. 1, 287, n. 80), aligns Rambam's view with that of Me'iri.
41. See Ramban to Deuteronomy 18:9 and 18:13.
42. See Ramban to Leviticus 26:11, and in *Torat ha-Adam*, printed in *Kitvei Ramban* II, ed. by C. Chavel (Jerusalem, 1963), 42.
43. *Torat ha-Adam*, *ibid.*, 40–41.
44. See *She'elot u-Teshuvot ha-Rashba* I:167.
Ramban did accept the principle that certain medicines, even though they are not strictly defined as idolatrous, may not be taken, for they may lead one to believe in the potency of idols. Hence, *אין מתרפאין בעצי אשרה*, for example. See *Torat ha-Adam*, *ibid.*, 35 and cf. *Tosafot Pesahim* 25a, s.v. *huz*. By this reasoning, R. Abba Mari attempted to prohibit all amulets. See below.

45. See *Rosh Hashanah* 24b and *'Avodah Zarah* 43a–b.
46. In his study, *op. cit.* (n. 21), Joseph Shatzmiller traced the relationship of this text to the *Picatrix*. On p. 402 he concluded “. . . there existed in Montpellier in the early 1300's a Hebrew version of the *Book of Figures* and this Hebrew version, known to R. Abba Mari, is incorporated today in the Cambridge manuscript. . . .” Shatzmiller's recent article, “The Forms of the Twelve Constellations: A Fourteenth-Century Controversy,” in *Mehqerei Yerushalayim be-Mahshevet Yisrael* 9 (1990) (*Sefer ha-Yovel li-khevod Shlomo Pines*) II, 397–408, includes his publication of the *Zurot Sheneim 'Asar Mazzalot* from the only extant manuscript of this text (Cambridge Add. 1741 (8); #17496 in the Institute of Hebrew Manuscripts of the National Library in Jerusalem). Expanding upon his first article on the subject, in which Shatzmiller demonstrated both the relationship between this Hebrew work and the citations of R. Abba Mari in *Minhat Qena'ot*, as well as the parallels that exist between the Hebrew text and the Latin text of one of the additions to the *Picatrix* published by Pingree in his edition, entitled *Picatrix: The Latin Version of the Ghayat al-Hakim* (London, 1986), he posed the following query regarding the Hebrew and Latin works: Is the Hebrew edition a translation from the Latin, or *visa versa*? It may indeed be possible, he concluded, that the Hebrew version *preceded* the Latin one, and the Christian scholars at the university of Montpellier who used the Latin text were using a translation from the Hebrew.
- D. Pingree, “Between the *Ghaya* and *Picatrix* . . .” (cited above, n. 22), discussed another line of transmission of this body of lore. A Spanish translation of the Arabic *Ghayat al-Hakim* was completed between 1256–1258, and a Latin translation of this work was made from the Spanish version.
- In general, the connection between knowledge of astrology and knowledge of medicine and the need to master both to pass medical examinations in the fourteenth century is attested by Shatzmiller, “On Becoming a Jewish Doctor,” 242, who cites (n. 11, *ad loc.*) F. Baer, *Die Juden in Christlichen Spanien* (Berlin, 1929), 578–79 on this score.
47. *Minhat Qena'ot*, 20–21 (Vol. 1, 270–75).
48. See above, n. 26, and cf. *Perush ha-Mishnah* to *Yoma* VIII:4, a reference surprisingly not cited, neither by R. Abba Mari nor by Rashba.
49. See above, n. 33 and n. 35.
50. Pines translates the passage of the *Guide* as follows (p. 543):
- This is the meaning of “. . . And ye shall not walk in the customs (*huqqot*) of the nations” (Lev. 20:23) these being those that are called by (the Sages), may their memory be blessed, Amorite usages. For they are branches of magical practices, inasmuch as they are things not required by reasoning concerning nature and lead to magical practices that of necessity seek support in astrological notions. Accordingly the matter is turned into a glorification of the stars. They say explicitly: “All that pertains to medicine does not pertain to the Amorite usages.” They mean by this that all that is required by speculation concerning nature is permitted whereas other practices are forbidden.
- Rambam would have argued that the “evidence” that purported to show that the amulet “works” was false, even though “old books” attested to its efficacy.
51. Rambam himself, it is safe to say, would have eschewed Rashba's arbitrary distinction between Jewish and non-Jewish medical sources. Rashba's suggestion regarding Rambam's position was an attempt to integrate Rambam's views into a framework that included the very opinions to which Rambam himself was opposed. Cf. J.L. Teicher, “The Mediaeval Mind,” *Journal of Jewish Studies* 6 (1955): 1–13.

52. This had also been Ramban's point. Note his formulation in his commentary to Deut. 18:9:

Now, many scholars dispose themselves to be liberal with regard to these enchantments by saying that there is no truth in them whatsoever, for who tells the raven or the crane what will happen? But we cannot deny matters publicly demonstrated before the eyes of witnesses. Our Rabbis also acknowledged their existence. . . .

Cf. his responsum, cited above, n. 14. Earlier in that same passage, he gave his view of astrology and sorcery.

And now, know and understand concerning the subject of sorcery, that when the Creator, blessed be He, created everything from nothing, He made the higher powers to be guides for those below them. Thus, He placed *the earth and all things that are thereon* (Nehemiah 9:6) in the power of the stars and constellations, depending on their rotation and position as proven by the study of astrology. Over the stars and constellations He further appointed guides, angles, and "lords" which are the soul (of the stars and constellations). . . . However, it was one of His mighty wonders that within the power of these higher forces, He put configurations and capacities to alter the behavior of those under them. . . . This then is the secret of sorcery and their power concerning which the Rabbis have said that they "contradict the power of Divine agencies," meaning that they are contrary to the simple powers (with which the agencies have been endowed) and thus diminish them in a certain aspect thereof.

Ramban saw demons, then, as occupying a specific place and exercising specific powers within the cosmic framework, while retaining their character as "unnatural" beings who can "contradict" the simple order of the world. He did not seem to be bothered by the questions that forced Rashba to make his formulation of *teva' mesugal*, a phrase which we will clarify below.

53. *Minhat Qena'ot*, 27 (Vol. 1, 298). Dimitrovsky's text is slightly different (*ibid.*, lines 208–14) but still underscores the same point. *Segulot* themselves are part of nature, albeit not understood by man.

Luis Garcia Ballester, "Dietetic and Pharmacological Therapy: A Dilemma among Fourteenth-Century Jewish Practitioners in the Montpellier Area," *Clio Medica* 22 (1991): 23–37, discusses the work of rationalist Jews such as Israel ben Joseph Caslari who translated Arnold of Villanova's *Regimen Sanitatis* from Latin into Hebrew. While discussing Caslari's experimental reasoning, Ballester writes: "The almost regular effect of medicines, both simple and compound in the form of prescriptions (*recepta*), is something that can be personally checked or verified, and, in fact, we do so when we give a patient a prescription. The latter's effectiveness could only confirm the value of the experiment (*experimentum*) of the author from whose works it was taken and would legitimize the experimental reasoning (*ha-'iyun ha-nisyoni*) applied. Medical authorities took great care to record these experiments in writing (in collections of prescriptions or *experimenta*) in which the *virtus specifica* or "hidden nature" (*teva' ne'elam*) of medicines is made evident." Note the similarity between the phrase *teva' ne'elam* (טבע נעלם) and Rashba's *teva' mesugal* (טבע מסוגל).

54. Rashba himself believed in demons just as Ramban did, and quoted Ramban's remarks concerning interrogations of demons, as we have mentioned. Indeed, he may not even have perceived himself as maintaining a position different than that of Ramban on these matters. What we are suggesting here is that Rashba's formulations were a conscious effort to make such positions philosophically palatable.

In his *Ma'amar 'al Yishmael she-Hibber 'al ha-Datot*, printed in J. Perles, *Rabbi Salomon b. Abraham b. Adereth: Sein Leben und seine Schriften* (Breslau, 1863), Hebrew section, 11, Rashba stated:

שיוצאים מגדר הטבע רבים, מהם טבעיים בסבה שלמה נוהגת תמידית, ומהם בתחבולה אנושית, ומהם אדיות עינים, ומהם ע"י שד, ומהם בפלא מוחלט רצהו הוא ית' וגור עליו. . . .

. . . (matters that) leave the boundary of (known) nature are many; some of them are fully natural and are always in existence, and some of them (come into existence through) the efforts of man, and some of them are optical illusions, and some of them (come into existence) through a demon and some of them by an absolute miracle; God desired it and ordained it. . . .

Although here שד is set in contradistinction to טבעיים בסבה שלמה, it is still not classified as a פלא מוחלט, for only God can contravene the laws of "Nature" in its broadest sense.

55. At this point we should recall Rambam's critique of the Ptolemaic cosmology and its impossibility according to the laws of Aristotle (*Guide* II:24, Pines ed., pp. 322–27). Rashba's inference from certain inconsistencies of the Aristotelian system that there must be a different order entirely (here, one that admits to the effectiveness of amulets) is, to a certain extent, an extension of Rambam's reasoning.
- Ballester *et al.*, "Jewish Appreciation . . .," 97, n. 56, characterizes Rashba as being a "utilitarian" experimentalist who rejected an exclusively scholastic approach towards medicine and wholeheartedly accepted empirical medicine.
- Interestingly, Shatzmiller, "On Becoming a Jewish Doctor," 239, shows that during this period, the term *empiricist* was also used to characterize those who simply practiced medicine without having received formal university training.
56. *Minhat Qena'ot*, 27–28 (Vol. 1, 300).
57. In R. Abba Mari's words, כנותן כח הזוראה לכוכב הנזכר בעשיתו הצורה הזיא, *Minhat Qena'ot*, 34 (Vol. 1, 324).
58. See *Minhat Qena'ot*, 37 (Vol. 1, 332–33).
59. See *ibid.*, 28 (Vol. I, 302).
60. *Ibid.*, 40–42 (Vol. 1, 340–48).
61. Shatzmiller, *op. cit.* (n. 21), 406–07.
62. In the exchange of letters between Rashba and Rosh (Rabbenu Asher), there happens also to be a halakhic exchange concerning 'orlah. See *Minhat Qena'ot*, 108f (Vol. 2, 587–89).
63. *Minhat Qena'ot*, 27 (Vol. 1, 296–97).
64. See his *Sefer ha-Mizvot*, negative commandment #317.
65. *Guide* III:41 (Pines ed., p. 561).
66. See I. Twersky, "Joseph ibn Kaspi: Portrait d'un Intellectuel Juif Medieval," *Juifs et Judaïsme de Languedoc* (Toulouse, 1977), 185–204; *idem*, "Yedaiah ha-Penini u-Ferusho la-Aggadah," *Alexander Altmann Jubilee Volume*, ed. by R. Loewe and S. Stern (Alabama, 1979), Hebrew section, 63–82. See also his *Introduction to the Code of Maimonides*, *op. cit.*, 440–41.
67. See Gershom Scholem, *Kabbalah* (New York, 1974), 182–89 ("Practical Kabbalah").
68. Christian scholastics also used this notion to explain apparently miraculous acts. see A. Maurer, "Between Reason and Faith: Siger of Brabant and Pomponazzi on the Magic Arts," *Medieval Studies* 18 (1956): 1–18. Siger quoted Averroes' criticism of Avicenna's doctrine, but admitted that here, human reason leads to conclusions which must be denied in the light of faith.
69. A. Ravitsky, "The Anthropological Theory of Miracles in Medieval Jewish Philosophy," *Studies in Medieval Jewish History and Literature* II, ed. by I. Twersky (Cambridge, 1984), 231–72.

70. *She'elot u-Teshuvot ha-Rashba* I:408. See also *Sefer ha-Himukh* #231.
 71. *Ibid.*
 72. Ravitsky, *op. cit.*, 247, n. 44.
 73. Ravitsky, *ibid.*, 248, n. 49, translates a passage from *Hiddushei ha-Rashba 'al Aggadot ha-Shas*, ed. by S.M. Weinberger (Jerusalem, 1966), 107 (commentary to *Hullin* 7a, *s.v.* R. Pinehas):

They wanted to reveal to us the soul's spiritual degree, for saintly men, while their soul cleaves to its root, have the power to transcend the workings of the lower world and change the course of nature. In spite of their (the workings of the lower world) being guided by the power of the celestial spheres, they will be removed entirely from the confines of nature, as the splitting of the Red Sea by Moses. Most certainly this applies to what does not exceed the boundaries of nature altogether, such as stopping the flow of rivers that dry up at times. This happens only because they (the Saints) have dominion over the powers above, and the upper acts upon the lower.

In *Hidushei ha-Rashba: Perushei ha-Haggadot*, ed. by L.A. Feldman (Jerusalem, 1991), a new critical edition of Rashba's commentary to Aggadah based upon numerous manuscripts, the passage is on pp. 124–25.

Feldman's edition effectively supplants Weinberger's edition, a book which also contains passages that were not authored by Rashba. For subsequent citations of Rashba's comments upon Aggadah in this essay, we will first cite the appropriate page in *Hiddushei ha-Rashba 'al Aggadot ha-Shas* (Weinberger's edition), then cite the lemma of the Talmudic passage Rashba was commenting upon (in parentheses) and afterwards the page in *Hiddushei ha-Rashba: Perushei ha-Haggadot* (Feldman's edition).

For R. Isaac Pulgar, see Ravitsky, *ibid.*, 247, n. 46 and J. Levinger's annotated edition of *'Ezer ha-Dat* (Tel Aviv, 1984), 46.

74. See *Hiddushei ha-Rashba 'al Aggadot ha-Shas*, *ibid.*, 84–85 (*Nedarim* 39b, *s.v. darash*); *Hiddushei ha-Rashba: Perushei ha-Haggadot*, 140–42. Feldman originally published his edition of Rashba's *Nedarim* Aggadah commentary in *Hagut Iurit ba-Amerika* 1 (1972): 421–25.

Ravitsky (*ibid.*, 249) notes that one of the criticisms of this theory of miracles was the impossibility of attaining the requisite perfect intellectual apprehension. If one shifted the focus to a man of *piety*, this objection would be deflected.

75. *Minhat Qena'ot*, 25 (Vol. I, 289); 28, (Vol. I, 302).
 76. *She'elot u-Teshuvot ha-Rashba* V:51.
 77. See *ibid.*, V:50–52, which deal with certain aspects of the kabbalistic interpretation of blessings.
 78. See the seminal article on the subject by Harry A. Wolfson, "Classification of the Sciences in Medieval Jewish Philosophy," *Hebrew Union College Jubilee Volume* (Cincinnati, 1925), 263–315.
 79. See his *Sefer ha-Yareah*, Chapter 1, published in *Minhat Qena'ot*, 125 (Vol. 2, 648–9). The following is Dimitrovsky's text:

... מיני החכמות שנים, האחד חכמת הטבע, והיא חכמת מעשה בראשית, והשני חכמת האלהות, והוא מעשה מרכבה, ויש עוד חכמה שלישית, שהיא כמדרגה לאלו השנים, ונקראת חכמה למודית, מפני שהוא מרגלת השכל ומלמדת אותו להשיג האמתות ויש לחכמה הזאת מדרגות, כגון מספר, תכונה, תשבורת, והן שקורין אותן שבע חכמות. מהם שהם מדרגות קרובות לחכמת הטבע ומהן שהן מדרגות קרובות לחכמת האלהות. ...

יש תועלת גדולה לחכמים יראי הש' בכל אחת מן התכליות, כי בהן יבחן האדם ציור המציאות וידע וישיג קצת מפלאות ה' ית'. ...

... there are two types of knowledge, one is called knowledge of nature (physics), and it is (called) the knowledge of *ma'aseh bereshit*, and the

second is the knowledge of *elohut* (metaphysics) and it is (called) *ma'aseh merkavah*, and there is also a third type of knowledge, which is like a stepping-stone to the first two, and it is called *hokhmah limmudit* (preparatory knowledge), for it trains the intellect and teaches it to receive truth, and this knowledge has steps, for example, arithmetic, geometry and astronomy, and they are called "the seven (branches of) wisdom," of them, some steps are closer to physics, and some are closer to metaphysics . . . and there is great benefit for God-fearing wise men in each one of them, for with (the knowledge) man can discern the picture of reality and will know and understand some of the wonders of God, Blessed be He. . . .

See Wolfson, *ibid.*, 268, n. 22.

The hierarchical order of the sciences themselves fits well with the conception that they were beneath the highest discipline of all: theology, See J.A. Weisheipl, "Medieval Classification of the Sciences," *Medieval Studies* 27 (1965): 56–57, who discusses the position of Augustine and Clement of Alexandria. Albertus Magnus and Thomas Aquinas, on the other hand, insisted that the various sciences should not even be classified in an hierarchical order with respect to one another, let alone in relation to theology (see Weisheipl, *ibid.*, 81–90).

80. In this respect, the Jewish thinkers distanced themselves from Aristotle, who valued knowledge for its own sake, not as a means to know God. See Wolfson, *ibid.*, 312–13.
81. See A. Hyman, "The Liberal Arts and Jewish Philosophy," *Arts Liberaux et Philosophie au Moyen Age* (Montreal, 1969), 109. The exemption was not explicit in the texts of the ban, but was mentioned by Simon ben Joseph in his book *Hoshen Mishpat*, ed. by D. Kaufmann, published in *Zunz Jubelschrift* (Berlin, 1884), 142–74.
82. *Hiddushei ha-Rashba 'al Massekhet 'Avodah Zarah*, ed. by J.L. Sacks (Jerusalem, 1966), 217. In his review of this edition (*Qiryat Sefer* 38 (1967): 132–39), A. Rosenthal demonstrated that parts of this edition were written not by Rashba but by R. Asher ben Yehiel (Rosh).
83. Ritba (cited by Sacks, *ibid.*, n. 499), quoted Rashba's query but used different terminology:

. . . and my master Rashba, may God protect him, also asked, that it is a matter verified by experience that as the vessels of *yein nesekh* become older, they improve the wine poured into them, but how can that which is spoiled improve something else?

Rashba's remarks here lead one to raise an important question: To what extent did he use categories from other disciplines when analyzing halakhic issues? See most recently, I. Ta-Shema, "Shiqulim Pilosophiyyim be-Hakhra'at ha-Halakhah be-Sefarad," *Sefunot* 18 (1985): 99–110.

84. Rosenthal, *op. cit.*, 133, n. 5.

The relationship between scholastic thought and the late medieval Jewish philosophers has been explored by S. Pines, "Scholasticism after Thomas Aquinas in the Works of Hasdai Crescas and his Predecessors," *Proceedings of the Israel Academy of Sciences and Humanities* 1 (Jerusalem, 1966): 1–73. Pines contends that one must probe the implicit influence that non-Jewish thinkers exerted upon their Jewish contemporaries in order to understand the principles of the Jewish philosophy of the time which, ostensibly, was simply a response (either affirmative or negative) to that of Rambam. Even when Jewish thinkers did not proclaim their indebtedness to their Christian counterparts, in his view, they were nonetheless often adapting features of their philosophic doctrines. I. Twersky took issue with Pines (see his "Yedaiah ha-Penini u-Ferusho la-Aggadah," *Studies in Jewish Religious and Intellectual History*, ed. by S. Stern and R. Loewe [Alabama,

1979]), Heb. sec., 76, n. 11, and maintains that when Jews did borrow from Gentile scholastic thought, they explicitly admitted that fact.

85. *Hiddushei ha-Rashba 'al Aggadot ha-Shas*, 61–63 (commentary to *Berakhot* 59a, s.v. *mai*); *Hiddushei ha-Rashba: Perushei ha-Haggadot*, 61–63.

86. He wrote:

. . . and we, against our will, will believe the words of the Greeks that the rainbow is produced from the heat of the sun in the moist air. . . .

In *Torat Hashem Temimah*, in *Kitvei Ramban* I, ed. C. Chavel (Jerusalem, 1963), p. 174, Ramban noted that Aristotle had explained the cause of the rainbow in ספר האותיות. David Berger has pointed out that this should read ספר האותיות, referring to the *Meteorologica* that Shmuel ibn Tibbon translated in 1210. See his master's essay, "Nahmanides' Attitude toward Secular Learning and Its Bearing upon His Stance in the Maimonidean Controversy" (Columbia University, 1965), 100, n. 19.

87. E.g., I Samuel 12:18.

88. Rashba did cite *Berakhot* 59a: "Thunder was not created except to straighten the crookedness in the heart. . . ."

In Rashba's polemic, *Ma'amar 'al Yishmael she-Hibber 'al ha-Datot*, printed in J. Perles, *op. cit.*, 24–56, he explained several apparent "innovations" by God as based in actuality upon eternal principles. Rashba's polemic was also published in H. Dimitrovsky, *op. cit.*, Vol. 1, 159–221.

89. Another difference between Ramban's presentation and that of Rashba is that although Ramban hinted at a kabbalistic explanation for the appearance of the rainbow, Rashba made no reference here to such a doctrine.

90. *Hiddushei ha-Rashba 'al Aggadot ha-Shas*, 79–80 (commentary to *Megillah* 14a, s.v. *ha-ramatayyim*); *Hiddushei ha-Rashba: Perushei ha-Haggadot*, 86–87. Feldman originally published this text in the L. Landman, ed., *Joseph H. Lookstein Memorial Volume* (New York, 1980), 124.

91. See, for example, Gershon ben Shlomo, *The Gate of Heaven*, trans. by F. S. Bodenheimer (Jerusalem, 1953), Treatise I, Seventh Gate, paragraphs 155–69, who explained the cause of earthquakes (wind confined inside the earth) and the phenomena that precede their arrival. His discussion of earthquakes immediately follows that of rainbows (paragraphs 138–54), where he adopts the explanation found in the *Meteorologica*.

92. See Rambam, *Moreh Nevukhim* I:71; Ramban in *Kitvei Ramban* I, 339. For the general theme, see Norman Roth, "The 'Theft of Philosophy' by the Greeks from the Jews," *Classical Folio* 32 (1978): 53–67.

93. See R. Yedaiah ha-Penini's comments in *Ketav Hitnazlut (She'elot u-Teshuvot ha-Rashba* I:418):

. . . and he (Rambam) truly understood in philosophy . . . everything which Aristotle and all his commentators understood, and in geometry, arithmetic and the (disciplines) connected to them, he understood everything which Euclid and his friends understood, and he knew (regarding) astronomy everything which was known of its workings to Ptolemy . . . (regarding) medicine, everything which Galen found. . . .

94. *Hullin* 42a (with regard to animals), 56a (with regard to birds). See Rambam, *Hil. Ma'akhalot Assurot* IV:6–9 and *Hil. Shehitah* V:1–2 for the principle that *terefah* is a creature that has a sickness (דורלי) and is "turning towards death" (נרטה למות).

95. *Hullin* 57b. The Talmud (*Hullin* 42a and elsewhere) records a dispute whether *terefah hayah* or not. The assumption that *terefah 'enah hayah* (i.e., that an animal designated as such will invariably die) is the axiom upon which the statement *siman li-terefah yod-bet hodesh* is based.

96. See Rambam, *Hil. Shehitah* X:13. Twersky, "Aspects of Maimonides' Epistemology," 16–18, and "Halakhah u-Madda . . .", 143–45, notes the contrast between the views of Rambam and Rashba on this issue. Rambam did *not* "posit the fallibility of medical diagnosis as Rashba did (see below)," he merely points out that it is not relevant in this context. Rambam's formulation contrasted with his opinion (expressed in *Hil. Rozeah*) that if doctors determine that a man with a sickness that would ordinarily designate him as a *terefah* (and exonerate one who would otherwise be liable for murdering him) can indeed live, he is *not* to be classified as *terefah*. His distinction between humans and animals on this score has been a popular topic of discussion for classical Talmudic and Maimonidean commentators (e.g., R. Joseph Babad, *Minhat Hinukh* #34, *s.v. lo tirzah*; R. Hayyim Ozer Grodzinsky, *Ahiezzer, Even ha-Ezer* 12:5).
97. The assumption that *siman li-terefah yod-bet hodesh* was an absolute principle was challenged later by R. Solomon Luria, *Yam Shel Shlomo, Hullin* #80, who claimed that the Talmud merely meant that a majority of animals classified as *terefah* will not live more than twelve months. Rashba opened his responsum by declaring that the principle of *yod bet hodesh* could only be utilized in cases where one was unsure whether or not an animal was *terefah*, but if a creature clearly had contracted one of the sicknesses, there would be no point in "waiting it out." Maharshah took this as an admission that a *terefah* could in fact live longer than twelve months. The thrust of the remainder of Rashba's remarks, however, was that such a possibility was *not* to be entertained. See below.
98. Cf. Rashba's letters to R. Abba Mari in *Minhat Qena'ot, passim*.
99. *She'elot u-Teshuvot ha-Rashba* I:98.
100. *Ibid.*
101. He quoted the talmudic statement (*Hullin* 43a) that Job lived in spite of the fact that he was a *terefah* because of a miracle.
102. Subsequent authorities, in fact, presented a bowdlerized version of the responsum, stressing *only* this specific answer. See the commentary of R. Shabbetai ha-Kohen Rappaport (*Shakh*) to *Yoreh De'ah* 57:48.
103. *She'elot u-Teshuvot ha-Rashba* I:548 (Dimitrovsky ed., Vol. I, 100–107).
104. *She'elot u-Teshuvot ha-Rashba* I:9. I discuss Rashba's view of the relationship between speculative reasoning and tradition (*sevarah* and *kabbalah*) in greater length in my master's thesis, *op. cit.*(n. 1), 9–23.
105. *She'elot u-Teshuvot ha-Rashba* I:98.
106. Yitzhak Baer, *A History of the Jews in Christian Spain* (Philadelphia, 1961), 442, n. 38, already noticed the parallel. In his Hebrew version, *Toledot ha-yehudim bi-Sefarad ha-Nozerit* (repr.; Tel Aviv, 1965), 512, n. 94, he named *Vayiqra Rabbah* as the source.
107. See, e.g., most recently, Hava Tirosh-Rothchild, "Pilosophiyyah Medinit be-Mishnat Avraham Shalom: ha-Massoret ha-Aplatonit," *Mehqere Yerushalayim be-Mahshevet Yisrael* 9 (1990): 409–40, for a philosopher whose basic views were much more in tandem with Ramban than with Rambam.
108. E.g., Colette Sirat, *La Philosophie Juive medievale en Pays de Chretiente* (Paris, 1988).