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AMERICAN UNIVERSITY OF BEIRUT

THE CONCEPT OF HEIMARMENE (FATE)
IN THE THOUGHT OF THE
GREEK STOICS

by

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PREFACE

Stoic ethics, both by virtue of the strength of its precepts and its popularization by Roman writers like Seneca and Cicero, is commonly acknowledged as having had widespread and profound influence on subsequent Western thought. Paul Tillich goes so far as to say that Stoicism "is the only real alternative to Christianity in the Western world."¹ Stoic physics and logic on the other hand, have been generally judged to be of little philosophical interest. This assessment has been rectified to some extent by a recent study on their logic by Benson Mates,² one on their physics by Sambursky,³ one on their theory of knowledge by Gerard Watson⁴ and a general interpretative account of their thought by Ludwig Edelstein.⁵

This paper follows the suggestion of these recent writers and approaches Stoicism with the attitude that it is a system which made substantial philosophical advances in fields other than ethics. This is true, particularly of the early Greek

1 The Courage to be, (London; Nisbet and Co. Ltd., 1952) p. 9.

2 Stoic Logic, (Berkeley and Los Angeles; University of California Press, 1961.)

3 Physics of the Stoics, (London; Routledge and Kegan Paul, 1959.)

4 The Stoic Theory of Knowledge, (Belfast; The Queen's University Press, 1966.)

5 The Meaning of Stoicism, (Cambridge; Harvard University Press, 1966.)

Stoics. Consequently, what is of principal interest here is the elucidation of heimarmene (fate) in the thought of the Greek Stoics, particularly in connection with the purely physical notion of causal determinism and the consequences this entailed in respect to the unity of their system.

Although concerned with a topic which has traditionally had close ties with ethics, this paper, because of the unique meaning of heimarmene for the Stoics, and also because it is perhaps a more fruitful approach, begins with their physics. Heimarmene is not treated as primarily an ethical term, but is seen first in its physical context and from this point implications are drawn as to its meaning in related aspects of Stoic thought, including ethics. By reversing the more accepted approach we may gain the added advantage of avoiding the introduction of Christian presuppositions into the ethics of a pre-Christian system.

The subject is divided into five broad areas: a general elucidation of their physics, an analysis of the concept of heimarmene expounding its essential connection with the theory of causal determinism, the roles of providence and divination, the meaning of 'possibility' and 'chance' within a deterministic causal nexus, and, finally, the question of determinism and free will.

It is the thesis of this study that the Greek Stoics, through a detailed analysis of causality and the formulation of the notion of a universal and deterministic causal law - expressed by the concept of heimarmene - made genuinely "new" advances over their philosophic predecessors. This is not to say, however, that the ideas utilized by the Stoics were entirely unknown to any other Greek thinker. The genuineness of

the Stoic contribution lies in the originality with which they analyzed and conceived of these notions and the success with which they were able to integrate them into a comprehensive and unified world-view.

In addition, this paper suggests that one of the reasons Stoic efforts in this regard have been widely rejected and criticized - by ancient as well as modern thinkers - is essentially a linguistic one. The Stoics chose to express, by the concept of heimarmene (fate), what I believe is a straightforward theory of causal determinism descriptive of the way in which the universe operates and is structured. This concept had a long and rather well-established meaning in Greek thought - both popular and philosophical - prior to its use by the Stoics. The Stoics, however, gave the old concept a new meaning without precisely and definitely stating what, in fact, they had done. Because of this ambiguity their system was open to criticism, both as to content and to inner consistency. The confusion was and is compounded by two additional linguistic factors: (1) the imprecise use of the terms 'fatalism' and 'determinism', which are frequently considered as synonymous and are often used interchangeably; and (2) the ambiguity in the meaning of the word 'law'. In its usage in the expression, "natural law," it has a descriptive function; in its usage in the expression, "civil law" or "God's Law" (in the sense of the religious "determinist"), it has a prescriptive function - it is a law which demands compliance, regardless of the will of the individual.

The writer believes that Stoic heimarmene means or is a concept which incorporates the notions of natural law and causal determinism, and, that understood

in this way, the unity and consistency of their system is not only kept intact, but much of the criticism directed at its content is invalidated.

This study has been complicated by the fact that only fragmentary writings of the Greek Stoics have survived. In addition, there is no complete collection in English, or in any modern European language, of these writings. This has necessitated extracting from later writers, like Cicero and Sextus Empiricus, for example, those statements attributed by them to the Greek Stoics - Zeno, Cleanthes or Chrysippus. Also, I have had to rely on piecemeal translations found in a variety of secondary sources. Any work based on fragmentary sources - even when all the fragments are available - involves some conjecture and inference in interpreting and analyzing the sources. In the light of these textual problems this paper has had to rely to a large extent on such methods. The conclusions reached are, consequently, more suggestive than definitive. The decisive criterion employed in the difficult task of interpreting Stoic thought has been the consistency of the system. My assumption has been, throughout, that the Greek Stoics were "philosophical sophisticates" and that the system of thought they constructed had, at least, as much inner consistency and coherence as the more celebrated philosophies. The burden of proof, in this connection, rests with those who fault this consistency.

CHAPTER ONE

THE STOIC PHYSICAL SYSTEM

By way of introduction to the topic of this essay, an outline of the Stoic physical system is necessary, for their physics constitutes the sub-structure of their thought.¹ The concepts they employ and the picture of the physical universe they present, although containing affinities with earlier schools, are, nevertheless, sufficiently new and different so as to warrant consideration here. In addition, their elucidation at this point will eliminate the need for explaining such notions as we encounter them in connection with the analysis of heimarmene.

The most obvious feature of Stoic physics is its materialism. It is a form of materialism, however, different from that of the Epicurean school and from that form of "crude materialism" criticized by Plato in the Sophist (246ff.)² Also, it is probably not the "first principle" or most important and basic feature of the system, for it is

1 E.g., SVF II, 38, Diogenes Laertius, translation by Gordon H. Clark, Selections from Hellenistic Philosophy, (New York; Appleton-Century-Crofts, 1940) "And they compare philosophy with an animal, representing logic as the bones and sinews, ethics as the flesh, and physics as the soul. Or again, with an egg. The outside is logic, next (the white) is ethics, and the innermost part is physics."

2 The "Stranger" is speaking: "One party is trying to drag everything down to earth out of heaven and the unseen, literally grasping rocks and trees in their hands, for they lay held upon every stick and stone and strenuously affirm that real existence belongs only to that which can be handled and offers resistance to the touch. They define reality as the same thing as body, and as soon as one of the opposite party asserts that anything without a body is real, they are utterly contemptuous and will not listen to another word."

overshadowed by the still more fundamental dynamic picture of reality which they present. It is nevertheless a convenient point of departure in understanding their views on the nature of reality.

To the Stoics being is that which has the power to act or be acted upon.¹ They restricted this power to corporeal entities, to bodies (sing., soma). Cicero attributes to Zeno the view that

"in no possible way could anything be affected by that which is destitute of body...nor could anything be incorporeal which either affected something else or was affected."²

Bodies were the only realities,³ and their defining or essential characteristic was their involvement in casual relations. The only kind of action possible is action by contact. The contact the Stoics conceived of, however, as we shall see later, is unlike the "collision" of the Epicurean atoms. All causation is efficient causation in which motion is imparted from one body to another or from a part of one body to

1 Plato, also loc. cit., 247e, said that being is that which has to power to act or to be acted upon. But for him, as for Aristotle, the most "real realities" were incorporeals - thought and the objects of thought - nous and noeta, "Whether abstracted from sensation or inherent in 'matter', as the incognizable bases of all concrete existence." R. D. Hicks, "Stoicism", Encyclopedia Britannica, (Eleventh Edition; Cambridge; University Press, 1910.)

2 SVF I, 90, Jason L. Saunders, Greek & Roman Philosophy After Aristotle (New York; The Free Press; London; Collier-Macmillan Ltd., 1966.)

3 SVF II, 359, Clement of Alexandria, Saunders Ibid: "(The Stoics maintain) that that alone exists which can be touched and handled, defining corporeality and reality as identical...."

another part of that body,¹ either immediately by direct contact, or indirectly through a physical medium, the pneuma, which, according to them, permeated the entire universe.²

As a consequence of this view, large classes of things normally not considered as bodies, either had to be regarded as "not real" or assigned a corporeal status. The Stoics consistently chose the latter alternative. They considered such things as the soul,³ qualities,⁴ virtues and vices,⁵ emotions,⁶ knowledge, as a property of

1 SVF II, 492, Sextus Empiricus, Saunders Ibid.: "They say that motion is the transition of change from place to place, either of the whole body or of the parts of the whole body."

2 Plutarch, De Stoic Repugn., 1053 f., quoted in Sambursky, S. op. cit., p. 1.

3 See inter alia, SVF I, 135, Diogenes Laertius, Clark op. cit.; "Zeno of Citium said that the soul was warm breath. For by this we are alive and able to move." SVF I, 137, Diogenes Laertius, "(Chrysippus said that) death is a separation of soul from body. But nothing incorporeal separates itself from the incorporeal; for nothing incorporeal touches the corporeal. But the soul both touches and separates itself from the body. Therefore the soul is a body."

4 SVF II, 377, Galen, Saunders op. cit., "The followers of the Stoics said that the qualities and (even) all accidents were corporeal." Seneca, Ad Lucilium Epistulae Morales, translated by Richard M. Gummere, (3 Volumes, Loeb Classical Library; London; William Heinemann Ltd.; Cambridge; Harvard University Press, 1934,) Ep. 106, 7, "Do you not see how a spirit of bravery makes the eye flash? How prudence tends towards concentration? How reverence produces moderation and tranquility? How joy produces calm? How sternness begets stiffness? How gentleness produces relaxation? These qualities are therefore bodily; for they change the tones and the shapes of substances...." See also, Margaret Reesor, "The Stoic Concept of Quality," American Journal of Philology, 80, 1954.

5 Seneca, op. cit., Ep. 106, 4, "Now the good is active: for it is beneficial; and what is active is corporeal." Ibid., Ep. 117, 2, "They (The Stoics) declare that wisdom is a Good; it therefore follows that one must also call wisdom corporeal."

6 Ibid., Ep. 106, 5, "...emotions are bodily things...like wrath, love, sternness.... They change our foreheads, relax the countenance, spread blushes (and) drive away the blood."

the soul that knows,¹ truth,² and even "artistic skill and individual actions" as bodies, for the objects which produce the above "as indeed everything which makes itself felt, were considered to be corporeal."³

Although they strongly held to their view that bodies were the only "really real" entities, they were forced to take account of such things as the void, time, place, and meaning (lekton).⁴ These do not exist in the same sense as bodies, because they are neither the causes or recipients of action (i.e., motion). Therefore they could not be properly said to exist. The Stoic meaning in this regard is partially illustrated by the following extract taken from Sextus Empiricus

"(The Stoics) attempt to relieve the situation by examples. (Namely, that the incorporeals neither produce anything nor give us representations, but it is we who frame representations with respect to them.) For, they say, just as a wrestling coach or drill sergeant sometimes takes the hands of the boy and teaches him rhythm by putting him through certain motions, and as at other times, standing away from the boy, the trainer goes through the rhythm as an example for the boy to imitate, so also some things represented make their mark as if by touching and coming into contact with the ruling part of the soul, for example, white, black, and, in general, body; but other things have such a nature that while the ruling part of the soul has representations which refer to them, yet the representations were not made by them, for example, meaning (i.e., the fact of being predicated), which is incorporeal."⁵

1 SVF II, 132, Sextus Empiricus, Clark, op. cit.

2 Ibid. "... Truth differs from the true (in that) truth is a body, whereas the true is incorporeal... Truth is a body in so far as it is regarded as knowledge declaratory of all true things, and all knowledge is a state of the ruling part of the soul, just as the fist is considered as a state of the hand. The ruling part of the soul is body according to them, and thus truth is generically corporeal...."

3 E. Zeller, Stoics Epicureans and Sceptics, translated by Oswald Reichel, (1962 edition; New York; Russell and Russell, Inc., 1879) p. 130.

4 SVF II, 331, Sextus Empiricus, Saunders op. cit. "... The Stoic philosophers ... enumerate four kinds of incorporeals: meaning, void, place and time...."

5 SVF II, 85, Clark op. cit.

We read in Seneca, and various other authors,¹ that a category more inclusive than that of existents or bodies was put forward. Seneca says,

"The genus that which exists is general, and has no term superior to it. It is the first term of classification of things, and all are included under it. (However) certain of the Stoics regard the primary genus as even beyond that which exists... and call it something.... They say that 'in the order of nature some things exist and others do not. And even the things that do not exist are really part of the order of nature.'" ²

The category of the something (ti) was posited by most of the Stoics as "the most generic and all-embracing of terms."³

The bodies which make up the world are formed by the combination of an active and a passive principle. The former was the cause or reason of things working through matter, the passive principle.⁴ This active principle, considered from a physical viewpoint, is called pneuma, a gaseous substance made up of a mixture of

1 Inter alia, SVF II, 329, Alexander of Aphrodisias, Saunders Ibid.: "The term something is a more general one than that of reality, for reality can be used only of corporeal entities, while the genus something includes incorporeals...." SVF II, 334, Philo, Saunders Ibid.: "For Manna means something, and this is the most generic of all terms."

2 SVF II, 332, Saunders, op.cit.

3 Saunders, Ibid., F.N. p. 82. The other Stoic categories are, in order of generality, Substratum, Quality, State or Disposition, and Relative State or Disposition. Each lower and more specific category is subsumed under and presupposes the higher and more general categories - all of them being included under and implying the broadest category of the something. cf. SVF II, 377, Simplicius; SVF II, 371, Plotinus. "The Stoic categories of Disposition and Relative Disposition are not found earlier than Chrysippus." Reesor, op.cit., p. 45.

4 SVF II, 300, Diogenes Laertius, Saunders op.cit.: "(The Stoics) held that there are two principles for the universe, the active and the passive. The passive is unqualified reality or matter; the active is the reason inherent in the matter or God. For God is eternal and, present throughout matter, is the artificer of each thing. Zeno of Citium set down this doctrine in his book On Reality, Cleanthes in On Atoms, and Chrysippus towards the end of his first book On Physics." See also SVF I, 85c, Achilles Tatius.

air and fire. The pneuma is continuous in all parts of the world. It is the cause of the existence and cohesion of bodies and the reason or cause of the "sympathy" and interconnectedness of all parts of the world.¹

Although bodies are formed by the combination of matter (hyle) and force or cause (pneuma), this did not mean that in addition to individually existing bodies there also exists a force completely divorced from matter or a matter entirely unformed or unqualified by force. The separation of the two is a conceptual one and could never occur in reality. We read in Cicero, that of the two principles present in every existent, the active one constitutes force or cause, and the passive one is a sort of 'material' yet, the Stoics

"held that each of the two was present in the combination of both, for matter could not have formed a concrete whole by itself with no force to hold it together, nor yet force without some matter...."²

1 Alexander of Aphrodisias, De Mixtione, p. 223, 6ff, Sambursky, Ibid., p. 120. "...the whole nature is united by a pneuma pervading all of it, and by which the universe is being held and kept together and is in sympathy with itself....Bodies ...keep together because of the pneuma which makes them cohesive.... The pneuma, consisting of fire and air roams through all bodies and mixes with all of them, and the existence of each depends on that...." Also, Galen, De Multitudine, 3, SVF II, 439, Sambursky, Ibid., p. 119. "...the Stoics make one thing cause cohesion and the other cohesive. The pneuma-like substance makes for cohesion and the hyle-like is made cohesive. Therefore they say that air and fire make cohesive and that earth and water are made cohesive...."

2 Academica, translated by H. Rackham (Loeb Classical Library; London; William Heinemann, Ltd.; Cambridge; Harvard University Press, 1956,) I, 24; See also SVF I, 87, Chalcidius, Clark op.cit., "(Zeno) thought as in the case of wax which serves as material for an innumerable diversity of figures, so there is neither form nor figure nor any inherent quality whatsoever in the basic matter of all things. Yet matter is always and inseparably conjoined to some quality...."

That both of these principles are corporeal¹ follows from their basic pre-suppositions. All action is reduced to motion and all cause, therefore, means a cause of motion. Since only body can act on body it follows that the cause of the qualification of 'matter' must be as corporeal as the 'matter' upon which it acts: the cause a gaseous body and the matter a solid body.

The universe is a plenum, completely filled with body. There is no empty space within the universe, but the world itself is in or surrounded by an unlimited void.² That no void is possible within the world is explained in rather typical Stoic fashion by Cleomedes, a Stoic writer of the 1st century A. D. He says,

"If the whole material world were not completely grown together, the cosmos as it is could not be kept together and administered by nature, nor would there exist a mutual sympathy of its parts; nor could we see and hear if the cosmos were not held together by one tension and if the pneuma were not cohesive throughout the whole being. For the empty spaces in between would impede sense-perception."³

1 SVF II, 299, Diogenes Laertius, Clark Ibid. "The principles are corporeal but formless; the elements have form." Also SVF I, 98, Aristocles, Clark, Ibid. "(Zeno) said... the principles... were matter and God, here following Plato. But he asserted that they both were bodies, an active and a passive, whereas (Plato) said that the primary active cause was incorporeal."

2 SVF I, 95, Aetius, Clark, Ibid. "Zeno and his disciples asserted that there was no empty space within the cosmos; but outside it was boundless." Also, SVF I, 95c, Diogenes Laertius, Saunders op. cit. "Outside the world is diffused the infinite void, which is incorporeal. By incorporeal is meant that which, though capable of being occupied by body, is not so occupied. And within the world there is no void."

3 De motu circulari corporum caelestium, I, 1; Sambursky, Ibid., p. 128. Sense perception occurs, in their view, through the medium of the pneuma in a state of tension; it is on a principle of contiguous action. In the case of vision, for example, "the air adjoining the pupil is excited by vision and formed into a cone which is stamped on its base by an impression of the object of vision, and thus perception is created similar to the touch of a stick." Alexander of Aphrodisias, De Anima, 130, 14, Sambursky, Ibid. p. 124; see also SVF II, 879, Chalcidius; for a discussion of this topic, see Sambursky, Ibid. pp. 22-29. See also Infra, pp. 22.

The need to postulate a void at all in a world which is completely filled with body is explained by them in terms of their cosmogony. Zeno said,

"the fundamental substance of all existing things is fire, in this following Heraclitus... The whole cosmos at certain fated periods is dissolved by fire, and then again formed into a world."¹

The empty space outside the existing universe is needed so that the cosmos, in its alternating phases of generation and destruction has a 'place' in which to expand during the former phase, and a place from which it can withdraw during the latter phase. It may be worth noting here that the Stoics distinguish between place, space and the void in a manner somewhat different from Aristotle, who denied altogether the existence of the void.²

The Stoics held that the void is empty of body but is capable of being filled by body. Place is that which is occupied by body and made equal to it; "space is that

1 SVF I, 98, Aristocles; see also, SVF II, 598, Hippolytus, Saunders op. cit., "But (the Stoics, Chrysippus and Zeno) admit that there will be a conflagration (ekpyrosis) and purification of this world, the whole of it and its parts as well; and they say its parts will be renewed; and its destruction and the creation of another out of it they called purification."

2 Aristotle claimed that the expansion and contraction of bodies did not require an "empty space" in which to expand or retire from. Matter is potentially able to exist or to fill space in greater or lesser degrees of "intensity." That is, when a body expands it undergoes a qualitative change within itself and not a quantitative addition to itself. This is essentially Aristotle's argument against the existence of the void. He discussed space only in terms of spatial magnitudes and said that space is infinite in respect to division of its parts; this is by way of contrast to time which is infinite in respect to additions of parts to it. No area of space will ever actually be divided into an infinite number of parts; its divisibility exists only potentially. Place exists as the "inner boundary of the first unmoved body that contains it (first, reckoning outwards from the thing.)" That is, for example, the place of wine in a bottle is the inner limits of the bottle which contains it. The universe, then, has no place, for nothing "contains" it. W.D. Ross, Aristotle, (1964 edition; London; Methuen and Company Ltd., 1923), pp. 83-89.

which is only partially occupied, as in the case of a cask of wine (half-full)."¹

For the Stoics, place being that space occupied by a body and made equal to it is, consequently, defined by the extremities of the body. It follows then that the world has a place. The world is a finite body, "embedded like an island in the infinite void,"² and its place is defined by its outermost limits or boundaries.

Up to now we have seen that bodies, defined by the ability to receive or impart motion, were the only existents in the Stoic universe, and that that universe is completely filled with body. Bodies were formed and held together as units by the activity of pneuma, a physical substratum made up of air and fire, which is continuous throughout the universe. It remains now to examine in greater detail how the pneuma effects such results - i. e., what its characteristics, properties and functions are. In addition, we must deal with the question of "mixture": how two bodies - the gaseous pneuma and the hyle-like matter - can be said to completely interpenetrate and still retain their distinctive characteristics. The way should then be cleared for a discussion of the dynamic nature of body and/or reality.³

The pneuma came to be known as the "fifth element." Galen, in a passage in

1 SVF I, 95, Aetius, Clark op. cit.; SVF II, 505, Sextus Empiricus, Saunders op. cit.; "...space... is an interval partly occupied by body and partly unoccupied." SVF I, 95c, Diogenes Laertius.

2 Sambursky, op. cit., p. 1

3 In much of what follows I have been primarily guided by Sambursky's interpretation of the Stoic physical system. Ibid., Chapters I and II.

which he is discussing the views of Athenaius (1st half of the 1st century A.D.), the founder of the "Pneumatic School" in medicine, says

"He (Athenaius) introduces a fifth element in accordance with the Stoics, the all-pervading pneuma by which all things are held together and controlled."¹

Pneuma as the regulative power in the universe had many similarities to the Aristotelian aether, except that the latter had a particular place (the celestial spheres from which it exerted its influence) while the Stoic pneuma is spread throughout the universe. The two terms, aether and pneuma, gradually came to be used interchangeably.²

Although pneuma was considered a fifth element, it was thought to have been composed of air and fire; air, representing the cold principle, because of its elastic quality and its pervasiveness and tenuity, and fire, the warm principle, because of the heat (in the sense of innate or activating, not destructive, heat) always associated with living organisms.³ Air and fire were considered by the Stoics as the active elements while earth and water, representing the principles of dryness and moistness, were passive.⁴ The following passage from Cicero, in

1 Introductio s. Medic., 9, in Sambursky, Ibid., p. 119.

2 Sambursky, Ibid., pp. 5 and 34-35; SVF II, 471, Arios Didymos, in Stobaeus Eclog., I, 153, 24, in Sambursky, p. 34, "Pneuma...has become analogeous to aether, so that both are used synonymously." cf. also, SVF II, 447, Clement of Alexandria.

3 SVF II, 421, Cicero, Saunders op. cit. "...their (the Stoic) doctrine is that all force is of the nature of fire, and that, because of this animate creatures perish when their heat fails; also in every domain of nature a thing is alive and vigorous if it is warm...."

4 SVF II, 418, Nemesius.

which he refers to the views of Cleanthes, emphasizes the dynamic role of fire or heat:

"It is a law of nature that all things capable of nurture and growth contain within them a supply of heat, without which their nature and growth would not be possible; for everything of a hot, fiery nature supplies its own source of motion and activity; but that which is nourished and grows possesses a definite and uniform motion;... every living thing, therefore, whether animal or vegetable, owes its vitality to the heat contained within it. From this it must be inferred that this element of heat possesses in itself a vital force that pervades the whole world." ¹

By virtue of its component parts the pneuma is contrasted with hyle-like earth and water, and, as we read in Galen,

"... makes for cohesion and the hyle-like is made cohesive ... (That is) air and fire make cohesive and ... earth and water are made cohesive." ²

Earth and water, without the activity of the pneuma on them, would not cohere, as they "need the others for their cohesion." ³

The specific property of the pneuma which effects this cohesion is tension (tonos). The notion of tension, which Hicks ⁴ calls the "key" to the Stoic System

1 De Natura Deorum, translated by H. Rackham, op. cit. II, 23.

2 De Multitudine, 3, Sambursky, Ibid., p. 119, SVF II, 439.

3 Galen, loc. cit., also, Plutarch, De Comm. Notitiis., 1085c, in Sambursky, loc. cit., "... They teach that earth and water are neither themselves cohesive nor make others so, but that they conserve their unity by sharing the pneuma-like and fiery force."

4 Hicks, op. cit., also, W. Windelband, A History of Philosophy (1958 edition; Harper Torch Books; New York; Harper & Row, 1901,) Vol. I, p. 186, "The most important thing in their physics is undoubtedly the doctrine of the pneuma."

was probably introduced by Cleanthes, who spoke of it in an ethical context. He is reported by Plutarch as having said,

"Tonos is the heat of fire which, if originating in the soul in sufficient measure to accomplish the task is called strength and force."¹

That this concept of the tonos of the pneuma was used in connection with physical notions is clear from other sources. Diogenes Laertius tell us that we see

"when the light between the visual organ and the object stretches in the form of a cone.... The apex of the cone in the air is at the eye, the base at the object seen. Thus the thing seen is reported to us by the medium of the air stretching out towards it, as if by a stick...."²

Also, sleep is "caused by the slackening of the tension in our senses, which affects the ruling part of the soul."³ Plutarch⁴ and Alexander of Aphrodesias⁵ discuss the theory of the function of tonos in relation to inorganic matter. Because the pneuma pervades the whole universe, its tension is the cause of the unity of the cosmos.⁶ The pneuma, by virtue of its property of tension, acts like a force,

1 De Stoic Repugn., 1034d, quoted by Sambursky, Ibid., p. 5.

2 Lives of Eminent Philosophers, translated by R. D. Hicks (2 volumes; Loeb Classical Library; London; William Heinemann Ltd.; Cambridge; Harvard University Press, 1959,) Book VII, 157, my underlining.

3 Ibid., 158.

4 De Comm. Notitiis, 1085d, op. cit.

5 De Mixtione, 223, 34, in Sambursky, op. cit., p. 5.

6 SVF II, 447, Clement of Alexandria, Stromata, V, 8, in Sambursky, Ibid.

binding together passive matter into unified and coherent bodies.

The tension of the pneuma does not only make a body a body, but makes it a particular, determined body. The pneuma, through varying degrees of the tension of its component parts, is the "carrier" of or cause of the qualities or properties of a body. A body thereby acquires a particular unified state or structure which, in inorganic bodies is called hexis (habit or permanent state), in organic bodies, physis (nature), and in ~~living~~ ^{HUMAN} beings, psyche (soul).¹ The uniqueness of the kind of structure achieved in hexis is emphasized in passages from Sextus Empiricus and Achilles² in which a comparison with other kinds of structures is made. A "discrete" entity is one in which its parts are grouped together, either without any particular order, as in the case of a crowd, or in a regulated and ordered manner, as in a choir or army in formation. A "contiguous" structure is one which is composed of "conjoined elements, like the links of a chain or the planks of a ship or the stones of a house."³ Both the discrete and contiguous entities are alike in that the parts of each - the members of the choir, the links in the chain - are, as individuals, essentially un-

1 SVF II, 716, Galen; SVF II, 458, Philo; SVF I, 106, Philo; in Sambursky, Ibid., p. 8.

2 Sextus Empiricus, Adv. math., translated by R. G. Bury (4 volumes, Loeb Classical Library; London; William Heinemann Ltd.; Cambridge; Harvard University Press, 1960,) IX, 78, in Sambursky, Ibid., p. 118. "Some of the bodies are unified, some formed of parts conjoined, some of separate parts. Unified bodies are such as are controlled by a single hexis similar to that of plants and animals; those formed of conjoined parts are such as are composed of adjacent elements which tend to combine into one main structure, like cables and turrets and ships; those formed of separate parts are compounded of things which are disjoined and isolated and existing by themselves, like armies and flocks and choruses." Also, SVF II, 368, Achilles, Isagoge, 14, in Sambursky, Ibid.

3 Seneca, Natur. Quest., II, 2.

affected by anything that happens to the other elements of the structure. This is not the case in the unified structures denoted by hexis, physis or psyche. These structures are "ruled by a single state,"¹ and the "elements" of such structures are the physical properties of the body. Unlike the discrete and contiguous structures, then, the elements, so-called, of an inorganic structure bound together by hexis, cannot exist independently as can a single link in a chain or a member of a crowd, but can only co-exist along with the other properties of the structure. Should the structure as a whole cease to exist, its elements (i. e., its properties or qualities) also would cease to exist. They are interdependent: a change in one is reflected throughout all of them. The Stoic term for this co-existence and interdependence of the elements in unified structures was sympathy, and it was due to the structure being unified by one law: by a "pneuma-like unity."²

The universe is also a unified body guided by one principle or law whose parts co-exist in a sympathetic relationship with each other. We read in Sextus Empiricus,

"Seeing, then, that the universe also is a body, it is either unified or of conjoined or separate parts. But it is neither of conjoined nor of separate parts, as we prove from the sympathies it exhibits. For in accordance with the waxings and wanings of the moon many sea and land animals wane and wax, and ebbs and tides occur in some parts of the sea. And in the same way, too, in accordance with certain risings and settings of the stars alterations in the surrounding atmosphere and all varieties of change in the air take place... And from these facts it is obvious that the universe

1 Sextus Empiricus & Achilles, loc. cit.; Plutarch, Praec. conjug., 34; De def. orac. 29, in Sambursky, op. cit., p. 8.

2 Sambursky, Ibid., p. 9.

is a unified body. For in the case of bodies formed from conjoined or separate elements the parts do not sympathize with one another...but in the case of unified bodies there exists a certain sympathy, since, when the finger is cut, the whole body shares in its condition. So then, the universe also is a unified body." ¹

How the pneuma present in bodies actually causes the properties which define a particular body is not obviously apparent from the few fragments on this topic remaining to us. Sambursky quotes a passage from Galen which gives a general and rather vague, explanation.

"According to them (the Stoics) psyche is a sort of pneuma, as is also physis, but the pneuma of physis is more humid and colder while that of psyche is drier and hotter. This pneuma is a kind of matter akin to psyche, and the specific quality of this matter is given by the proportions admixed of the airy and fiery substance." ²

This passage indicates that it was the proportion of mixture of the two components - air and fire - of pneuma which determined the properties of a body and thereby differentiate it from all other bodies. Further information on this subject can be gathered from their cosmogony.

The Stoics asserted that the pneuma, or fiery substratum of all things, existed before the formation of the world of particular things. ³ During this period, the two principles of matter and force were identical. The pneuma, being pure fire and,

1 Sambursky, Ibid., p. 80.

2 De Anim. Mor. , Sambursky, Ibid., p. 10.

3 SVF I, 98, Aristocles.

therefore, having the highest degree of heat and motion, has, at this stage, the utmost degree of tension or strength. The first differentiation of this primitive fiery substance occurs as its heat, and consequent upon this, its tension, decreases, resulting in the distinction of force from matter. Force activates the matter and the four basic elements are formed.

Fire condenses into air or arial vapour. Water and earth are derived from the solidification of air. At each stage motion, heat and tension decrease, until, in the case of earth, we reach completely inert matter. From these four elements the ever-present pneuma fashions the individual bodies, the degree of tension (or heat or motion) present determining the kind of body formed. Inorganic bodies, such as stones, contain little heat, motion, and, therefore, tension, and are just held together. Organic bodies, like plants, contain more heat and motion and a greater amount of tension; they have a physis or growth principle. Human beings have the greatest amount of heat, motion and tension - they have a psyche, a rational soul. In the case of animals, they have a "vital principle" but no rational soul.¹

The activity of the primary fiery substratum - "of the unceasingly raging fire which pervades all existing things"² - is never ending. Its intense heat finally dries up all the moisture in the world and the things of the world can no longer subsist.

1 Hicks, op.cit., p. 944; also, SVF II, 580, 581, Diogenes Laertius; SVF II, 714, Clement of Alexandria.

2 SVF II, 620, Philo, Saunders, op.cit.

Then, everything is consumed in a final conflagration.¹ Everything turns into fire again. The process of cooling and re-forming occurs once more, and the world appears just as it was before, its regeneration and destruction going on in endless cycles.²

The picture we get is of a world in constant motion - everything continually changing into something else - but all things actually phases or mutations of the one primary substratum. The tension of this substratum, the pneuma, which effects change and individuation, is a function of the degree of heat, i. e., motion, of the pneuma. When Galen³ attributes the specific properties of matter to the admixture of air and fire present in the pneuma, it is another way of saying that the amount of heat and motion present is the cause of the specific qualities of matter.

The Stoic claim that qualities are corporeal becomes clearer, now, when we see that a quality of a body is the presence in that body of the pneuma in a certain state. That is, a quality of a body is reduced to, or is nothing more than, the condition (the degree of tension) of the corporeal pneuma (as active cause) present

1 SVF II, 593, Cicero, Saunders, Ibid.; SVF I, 98, Aristocles, Clark, op. cit. (Zeno said) "the whole cosmos at certain fated periods is dissolved by fire..."; SVF II, 299, Diogenes Laertius; SVF II, 598, Hippolytes.

2 E. g., SVF I, 109a, Tatianus, Saunders op. cit. "Zeno declares that through the conflagration the same things appear in the same relations." SVF I, 107, Stobaeus, Saunders, Ibid. "Zeno, Cleanthes and Chrysippus used to say that reality changes into fire like a seed and again out of this the same kind of arrangement, such as formerly existed, is achieved." SVF II, 820, Philo, Saunders, Ibid. "And according to these men (the Stoics) there may be one world spoken of as eternal and another as destructible, the destructible in reference to the world's present arrangement, yet eternal is the world which in reference to the conflagration is rendered immortal by the regeneration and periodic revolutions which never cease."

3 Op. cit., De Anim. Mor.

in the body. Chrysippus is reported as saying,

"the binding air is the cause for those bound into such a state being imbued with a certain property which is called hardness in iron, solidity in stone, brightness in silver. . . . Matter being inert by itself and sluggish, is the substratum of the properties, which are pneumata and air-like tensions giving definite form to those parts of matter in which they reside." ¹

The pneumata, or air-like tensions, are the qualities, consisting in a definite proportion or mixture of the components of the pneuma. All of the pneumata, or all of the qualities, are bound together and form the particular hexis, physis or psyche of the body, yet each pneuma mixes with the rest without losing its identity; just as, the quality of, say, hardness in a stone is not absorbed into the other qualities of the stone - its color, for example - but remains a quality of the whole stone and is distinct from every other quality.

It is apparent from the foregoing that the problem of mixture (the mixture of air and fire in the pneuma; the mixture of the pneumata with the matter of the body) was a principal concern for the Stoics. Indeed, the view that reality is a continuum, i. e., that the pneuma is continuous in time and space, everywhere and always present, filling bodies and the spaces between bodies, requires a theory of mixture which can explain the relationship between this continuous corporeal substratum and individual bodies.

¹ Plutarch, De Stoic Repugn., 1053f, Sambursky, op.cit., p. 7, who says the passage is taken from Chryssippus' book On Physical States. In the same passage translated by Saunders, op.cit., it is attributed to Chrysippus' book On Cohesions.

In their classification of mixtures they distinguished three types:¹ There is, first, mechanical mixture, or juxtaposition of elements, in which

"two or more substances are put together in the same place and placed side by side, joining each other, as (Chrysippus) says, and preserving in this juxtaposition their proper essence and quality according to their individuality, as happens for instance when beans and grains of wheat get mixed together with one another."²

Then Chrysippus distinguishes a kind of mixture in which two or more substances are completely mixed together and a new substance is created.

"Some bodies are destroyed together through a complete fusion of their substances and their respective qualities as is the case with drugs whose components undergo simultaneous destruction and as a result of it another body emerges.

But it is the third kind of mixture which is of principal interest to the Stoics, for the pneuma mixed with matter is an example of it. It is the kind of mixture which

"result(s) in a total interpenetration of substances and their qualities, the original substances and qualities being preserved in this mixture; this he (Chrysippus) calls specifically krasis of the mixed components.

The substances so mixed in krasis

"can again be separated, which is only possible if the components preserve their properties in the mixture....

1 Alexander of Aphrodisias, De Mixtione, 216m, 14 ff, Sambursky, op. cit. p. 121; SVF II, 472, Philo;

2 Alexander of Aphrodisias, op. cit.

And, in addition, in such a mixture,

"the substances mixed together interpenetrate each other such that there is not a particle among them that does not contain a share of all the rest." ¹

In support of this theory, they cite examples of such mixtures found in nature: Still discussing Chrysippus' theory, Alexander of Aphrodisias says,

"...many bodies preserve their qualities whether they are present in smaller or in larger quantities, as can be seen in the case of frankincense. When burnt, it becomes greatly rarefied, but for all that preserves its quality. Further, there are many substances, which, when assisted by others, expand to an extent which they could not do by themselves. Gold for instance, when mixed with certain drugs, can be spread and rarefied to an extent which is not possible if it is beaten out by itself."

They claimed that in total mixture the volume of the mixture would not be greater than, or barely perceptibly greater than, the volume of the larger component of the mixture. ²

As we saw above, the Stoics posited this theory of total mixture primarily to account for the relationship between the pneuma and bodies. Since the pneuma was

1 See also SVF II, 479, Diogenes Laertius; Stobaeus, Eclog., I, 154, in Sambursky, Ibid., p. 123. "They call krasis the total interpenetration of two or more liquids whereby their respective qualities are preserved; for the quality of each of the mixed liquids is displayed at the same time in the mixture, e.g. wine, honey, water, vinegar, etc. That in such a mixture the qualities of the components persist is evident from the fact that they often can be separated by a contrivance. If, for example, one puts an oiled sponge into wine mixed with water, the water separates from the wine by returning into the sponge."

2 Simplicius, Physics, 530, 29, in Sambursky, Ibid., p. 15. "a ladle mixed with another one in total mixture shall give again a ladleful."

a gaseous and extremely rarefied body, its mixture with the more solid and bulky hyle-like matter was supposedly possible without a significant increase in volume. They saw it as analogous to the relationship between the soul and the body. Both are bodies, yet the soul completely interpenetrates the body, there being no part of the body which can be said not to have soul in it.¹

The major criticism of their notion of total mixture was that it denied the principle that two bodies cannot occupy the same place at the same time. The Stoics answer this criticism by returning to their notion of continuity, in terms of which the denial of the principle is merely an apparent denial. For, in a continuum-theory, it is not that one body can occupy the place of another, but that body is everywhere continuous in greater or lesser degrees of density or tension. At times it seemed that they had come close to the notion of specific density. They apparently realized that a "substance could exist in different densities according to various physical conditions."²

Throughout this discussion numerous references have been made to dynamic and active aspects of Stoic physics. Bodies are characterized by their ability to receive or impart motion; they are formed and held together through the activity of

1 Alexander of Aphrodisias, op. cit., 217. "(Chrysippus and the Stoics) adduce as clear evidence the fact that the soul has substantiality of its own as has the body containing it. By totally pervading the body it preserves in this mixture its own essence (there is no part of the living body which does not have its share in the soul), and the same holds for the nature of plants and for the physical structure of those things held together by hexis."

2 Sambursky, op. cit., p. 14.

a pneuma-like force. The world is formed by the unceasing activity of a primitive force; it is a world which in itself and in respect to all its parts is continuously in flux. Pneuma, the active principle in reality, has the specific physical property of tension - a quality akin to force and closely related to heat and motion - which enables the pneuma to cause the coherence and qualities of bodies. We will look more closely, now, at these dynamic aspects of their physical system, particularly at their theory of motion and the active nature of the unified bodies that constitute reality.

Illustrations of the kind of motion the Stoics conceived of are afforded us in passages which discuss the Stoic theory of sound. Diogenes Laertius says,

"We hear when the air between the sonant body and the hearer is struck in spherical waves which impinge on the ears, just as the waves in a pool expand in circles when a stone is thrown into it." ¹

Similarly, in their theory of vision ² they stress this notion that it is the state of tension of the continuous medium of the pneuma, present between the eye and the object seen, which makes possible the seeing of the object.

In their theory of perception we find evidence that it is the "modification of the soul," or the dynamic states of the pneuma caused by its tensional quality, which accounts for the fact that we have a multitude of co-existing perceptions, or that we have perceptions at all. Chrysippus explains his intent by an analogy with sound-

1 Op. cit., Book VII, 158.

2 See Supra, Footnote 3, p. 7.

waves in the air.

"(Chrysippus') definition runs like this - 'presentation is a modification of the soul'; for it is no longer absurd that, when many presentations co-exist in us at the same moment, the same body should admit of innumerable modifications; for just as the air, when many people are speaking simultaneously, receives in a single moment numberless and different impacts and at once undergoes many modifications also, so too when the hegemonikon is the subject of a variety of images it will experience something analogous to this."¹

Within the body the act of perception continues as impulses are transmitted from outside through the sense-organs to the ruling part of the soul and vice versa by the constant movement of the pneuma in varying states of tension.² The idea of a "stretched spirit" is emphasized in the following passage:

"The Stoics say that the highest part of the soul is the hegemonikon (the dominant or ruling part). Aside from the ruling part, there are seven parts which are born of the soul and are stretched through the body like the tentacles of a polypus are twined. Five of the seven parts of the soul are the senses.... Of these, sight is a spirit stretching from the ruling part to the eyes, (and similarly in the other four cases). Of the remaining two, one is the seminal principle, which also is itself a spirit stretching from the ruling part to the testicles;

1 Sextus Empiricus, Adv. Math. op.cit., VII, 228, Sambursky, op.cit., p. 125. The "absurdity" referred to is the criticism Zeno was subjected to when he said that "presentation is an impression on the soul." Cleanthes said Zeno meant "impression" in the sense that wax can be impressed, causing thereby depressions and protrusions in it. This interpretation entailed, obviously, that subsequent impressions would erase previous ones. Hence, Chrysippus' attempt to reinterpret "impression on the soul" in a dynamic rather than a static sense.

2 SVF II, 802, Philo.

and the other, called by Zeno 'vocality' (which they also call voice) is a spirit stretching from the ruling part to the pharynx, tongue, and the appropriate organs. . . ." ¹

The analogy of the spider and its web, attributed to Chrysippus in the following passage, is further evidence of the Stoic belief that motion is the propagation of a state of a continuous medium. The writer is discussing the relation between the hegemonikon and the various parts of the body.

"In the same way as a spider in the center of the web holds in its feet all the beginnings of the threads, in order to feel by close contact if an insect strikes the web, and where, so does the ruling part of the soul, situated in the middle of the heart, check on the beginnings of the senses in order to perceive their messages from close proximity." ²

The image suggested is one in which there is no break in continuity between the hegemonikon and each sensory outlet. As a sense-organ receives an impulse from outside the body, the impulse travels, like a wave through water, to the ruling part of the soul.

The active nature of the unified bodies is emphasized in the texts. The hexis of a body - the sum-total of the qualities of the body - is not a static condition, but is, rather, an "event" or the resulting effect of a "process;" the process being the continual movement of the pneuma, or air-like tensions.

1 SVF II, 836, Aetius, Clark, op. cit.

2 SVF II, 879, Chalcidius, Ad Timaeum, 220, in Sambursky, op. cit. p. 124.

"This is the pneuma that returns upon itself. It begins in the centre of the body and extends outwards to its boundaries, and after touching the outermost surface it turns back till it arrives at the same place from which it started." ¹

In a passage from Nemesius we are told that this alternating motion performs two functions: that of causing a body to be a body and that of causing it to be a particular body, or of qualifying it.

"There are those like the Stoics who say there is a tensional motion in bodies which moves simultaneously inwards and outwards. The outward movement gives rise to quantities and qualities, while the inward movement produces unity and essence." ²

In the case of humans, this is illustrated by the activity of the soul. In its major role as reason or ruling principle, ³ soul is the cause of the particular attributes or distinguishing characteristics of body. That is, the character or personality of a man - his virtues, vices, emotions, actions - all those things which mark him off and distinguish him from other men, are caused by his soul being in a particular state. The state of the soul is conditioned by the purely physical phenomenon of the movement of the pneuma and its degree of tension in the soul. The soul also holds the body together and unifies it. This should be understood in the sense that all the particular, distinguishing characteristics of a man are, through the constant movement of the pneuma, referred back or seen as actions, emotions, virtues, etc., which belong to one unified, intact, unique individual.

1 Philo, Quod deus sit immutabilis, 35, in Sambursky, Ibid., p.127.

2 De Nat. Hom., ch. 2, in Sambursky, Ibid., p. 128.

3 SVF II, 836, Aetius; SVF II, 837, Diogenes Laertius.

Although a body may, as a whole, be "at rest," it is essentially or internally, in continuous motion. The kind of motion visualized - the motion within unified bodies and within the universe as a whole - appears to be of the nature of wave-motion or motion which can be characterized as the propagation of a state. Sambursky describes it¹ as motion which consists of "the expansion of a disturbance in an elastic medium."

It is in the light of the foregoing description of the theory of motion, then, that we may be justified in saying, as we did in the beginning of this discussion of Stoic physics, that their materialism ultimately "gives way" or is subject to their still more fundamental dynamic picture of reality. A brief comparison with Aristotelian views on the nature of motion may make this clearer. Aristotle's theory states that movement is the actualization of a potentiality: movement is a change in mode of being, a change from potential to actual being. Holding this theory of motion entails holding the absolute priority of substance, that which undergoes a change in mode of existence. The movable, as Bruno Snell puts it, becomes a pre-requisite for motion.² But this is not the case with the Stoics, for in their system there are no Aristotelian substances per se. The bodies which make up the whole of Stoic being or reality are events, processes - the result of a force (i. e., motion) in a certain state. While for Aristotle, movement is a function of body; for the Stoics, body is a function of movement.

1 Sambursky, op.cit., p. 22.

2 Bruno Snell, The Discovery of the Mind, (Oxford; Basil Blackwell, 1953,) p. 242.

CHAPTER TWO

HEIMARMENE - A STUDY IN CAUSAL DETERMINISM

The aim of this chapter is to describe and analyze the Stoic concept of heimarmene. In addition to the term 'heimarmene' there are other Greek words which are sometimes translated into English as fate, e.g., moira, aisa and occasionally anake and aitia. Heimarmene is the term most often found in Stoic writings and to avoid confusing the unique Stoic usage with other usages in Greek thought, I intend to use the Greek word heimarmene instead of the English translation.

The Stoic etymology of the word is presumably from the verb eiro, which means to string beads or to construct a series.¹ Although it is considered an incorrect etymology by modern grammarians, it was common among ancient writers.² Both moira and heimarmene are, according to present-day students of language, derived from the verb meiromai, to receive one's portion. Moira is traced back "to the special divisions or portions of primitive tribes, and the

1 Sambursky, op. cit., p. 57.

2 Wm. C. Greene, Moira, (1963 edition; Harper Torch Books; New York and Evanston; Harper and Row, 1944,) p. 340; St. George Stock, "Fate (Greek and Roman)", Encyclopaedia of Religion and Ethics, Edited by James Hastings, (Edinburgh; T. & T. Clark; New York; Charles Scribner's Sons, 1912) Volume V.

shares of land, etc., that they held."¹

Stoic heimarmene is an expression of natural law and is intimately connected with a deterministic causal theory. There is ample evidence of this in the statements on heimarmene attributed to the early Stoics. These statements are reported in a variety of sources and contain a general uniformity of content. Among them we find,

"In his 4th book on Providence, Chrysippus says that fate is a certain physical order wherein one thing is always caused by and results from another, in such a way that this interrelation cannot be changed."²

Also,

"...heimarmene is an orderly series, established by nature, of all events, following one another and joined together from eternity, and their unalterable interdependence."³

Diogenes Laertius attributes to Chrysippus and Zeno the view that

"All things happen by fate or destiny.... Fate is defined as an endless chain of causation, whereby things are, or as the reason or formula by which the world goes on."⁴

Cicero, in explaining his own and the Greek (i. e. Stoic) view of fate says,

"Reason compels us to admit that all things happen by Fate. Now by Fate I mean the same that the Greeks call heimarmene, that is, an orderly succession of

1 Greene, op.cit., Appendix 4, p. 401.

2 SVF II, 1000, Aulus Gellius, translated by G. Watson, op.cit.

3 The Attic Nights of Aulus Gellius, translated by John C. Rolfe, (3 volumes; Loeb Classical Library; London; William Heinemann Ltd.; Cambridge; Harvard University Press, 1954,) VII, 3.

4 Op.cit., VII, 149.

causes wherein cause is linked to cause and each cause of itself produces an effect.... Therefore nothing has happened which was not bound to happen, and, likewise nothing is going to happen which will not find in nature every efficient cause of its happening. Consequently we know that Fate is that which is called, not ignorantly, (or superstitiously) but scientifically (physice), the eternal cause of things, the wherefore of things past, of things present, and of things to come." ¹

Theodoretus (393-ca. 465) reports that Chrysippus said:

"that which is compelled by necessity does not differ from that which is fated, for fate is an ordered, continuous, eternal motion." ²

Chrysippus did not merely state his theory, but he tried to prove it. His argument strikes us as rather peculiar, accustomed as we are to distinguish between the sphere of logic or thought and that of events occurring in time and space. The Greeks, however, including the Stoics, tended to ignore this distinction. Chrysippus, accordingly, finds no difficulty in basing his argument on the logic of propositions. The argument is reported by Cicero as follows:

"...If there is a motion without a cause, not every proposition... is either true or false; for whatever does not have efficient causes is neither true nor false. Therefore, there is no motion without a cause. If this is so, everything that happens, happens by antecedent causes. And if this is so, then everything happens by fate. Therefore, whatever happens, happens by fate...." ³

1 De Divinatione, translated by William Falconer, (Loeb Classical Library; London; William Heinemann Ltd.; Cambridge; Harvard University Press, 1953) I, 125-6.

2 SVF II, 916a, Clark, op. cit.

3 SVF II, 952, Saunders, op. cit.

The intimate connection between heimarmene and causality is clearly suggested by these statements. Before proceeding to a detailed analysis of the Stoic theory of causality, however, it may be advantageous to attempt a more general evaluation of their conception of heimarmene, particularly its relation to the notions of natural law and determinism, with the aim of emphasizing the uniquely Stoic contribution.

It is the connection, or assimilation of the two notions of efficient causality and natural law in Stoic thought which distinguishes the Stoic concept of heimarmene from its historical antecedents and constitutes their contribution to the epistemology of science.¹ Historically this insight was overshadowed for centuries by the dominant influence of the Aristotelian system and its emphasis on final causes.

It is only with Francis Bacon's appeal to look to the "beginnings of things" and not to their ends, i. e., to stress efficient not final cause, and with the rise of modern science in the 16th and 17th centuries that we see again these connected notions of natural law and efficient causality first suggested by the Stoics. We must not overlook, however, the fact that by the seventeenth century these ideas were firmly established through the advances made in mathematics and its use as an instrument of discovery and description, and the concomitant emphasis on systematic experimentation and observation. These two factors were essential for the development of modern science. They were not known to the Stoics, and,

1 Science requires (1) a belief in a general order of things; (2) an emphasis on efficient cause; (3) belief in the interrelatedness or correlation of all parts of the universe; and (4) an interest in things for their own sake. See A. N. Whitehead, Science and the Modern World, (New York; The MacMillan Co., 1950), Ch. I.

consequently, this paper is not an attempt to show that "the Greeks have already said it."

Before discussing the deterministic aspect of their notion of heimarmene, it may be advisable to make a general distinction between the meanings of the terms 'fatalism' and 'determinism' as used in this paper. "Fatalism is the belief that a definite event will take place, whatever happens." That is, an event will occur irrespective of any individual effort or any natural, causal sequence. It is essentially a denial of causality.¹

Determinism, on the other hand, is a view which postulates the universality of causal law. Most directly stated, it simply says: there is no uncaused event. Cause and effect sequences are to be found in natural or objective events and in human acts and subjective phenomena (such as desire, deliberation, feelings of freedom or constraint) as well. They are all the "result of empirical conditions, and are subject to explanation by natural law."² Events may be said to be determined in the following sense: "Events have complex and multiple causes which stretch a considerable distance back over time, and one cannot therefore conceive that a particular historical event could have been other than it was, unless a number of antecedent events were also altered. It is, therefore, 'determined'."³

1 St. George Stock, op. cit.

2 M. Mandelbaum, F. Gramlich, A. Anderson, editors, Philosophical Problems, (New York; The MacMillan Co., 1957), p. 303.

3 Alex Nove, "Thoughts on Historical Determinism and Necessity," The Philosophical Journal, Vol. V, 1968, p. 25.

Actions, while "determined" by the set of conditions which precede them, are not compelled or restrained, in this view, by a force or power standing outside of the natural chain of causes which led up to the action.¹ These same ideas - that all events have causes and all events are "determined" by the set of conditions antecedent to them - are an integral part of the Stoic conception of heimarmene.

The notion of fate as a power at work in the universe has been a part of Greek thought since its inception. There are numerous Homeric references to fate. The Milesian philosophers associated fate with the idea of a law which permeated the whole cosmos giving form to life.² Heraclitus identified ananke (necessity) with heimarmene and in his thought the Logos guides the world-process in accordance with this natural necessity.³ Parmenides and Democritus attempted to "humanize" the fate or natural necessity which guided the world-process by identifying it with concepts of dike (justice) and pronoia (providence, foresight).⁴

The tragedians dramatized the popular notions of the sixth and fifth centuries regarding fate and its powers. Fate in the tragedies is either identified with the will of the gods or sometimes as a power to which the gods are subject. This

1 Natural law or causality is merely a description of the way things, as a matter of fact, do happen, and not a prescription for the way things must happen irrespective of individual effort or action. Morris Schlick, Problems of Ethics, Ch. VIII, New York, 1939, quoted by C. A. Campbell, "Is Free Will a Pseudo-Problem?", Mind, Vol. 60, 1951. See also, P.H. Nowell-Smith, "Free Will and Moral Responsibility," Mind, Vol. 57, 1948.

2 Gundel, "Heimarmene," Pauly Wissowa, (1958 edition, Stuttgart; Alfred Druckenmüller Verlag), Vol. 7.

3 H. Diels, Die Fragmente Der Vorsokratiker, (3 volumes; Weidmannsche Verlagsbuchhandlung, 1952,) I⁸, p. 145, 8.

4 Ibid., I⁸, p. 223, 32.

power moves with inevitableness and indifference; its workings are irreversible. The individual incidents of the plays serve as examples and illustrations of moira. It may be, as Whitehead¹ suggests, that the vision of fate held by the tragedians is like that of modern science in regard to natural laws - that "the laws of physics are the decrees of fate." One must remember, however, that the tragedies were primarily concerned with a moral and religious order specifically in relation to individual human beings, and to a much less extent with a natural physical order of things and events. Also, as is to be expected, no detailed analysis of causality was undertaken.

Plato's attitude towards fate is more complex. In some of the dialogues² references to fate are made in a manner which suggest that it was merely a "way of speaking" and not a subject of serious consideration. Many references³ are set in a mythical context in which the beginnings of things are discussed. The myths indicate a recognition of fate both in its meaning as world-order or cosmic law and as a power with reference to individual human beings. But, it would seem, particularly after a consideration of the Timaeus⁴ that Plato's idea of fate is closely related to the natural causal necessity which derives from matter.⁵

1 Op. cit., pp. 15-16.

2 E. g., Gorgias, 512E; Phaedo 115A; Theaetetus 169C.

3 E. g., Statesman 271E; Republic X ^{617C;} ~~619C~~; Protagoras 320.

4 Especially and inter alia 48, 68 and 69.

5 St. George Stock, op. cit.; see also Phaedo 97-99, where Socrates discusses his disappointment with the nous of Anaxagoras as an explanation of the causes of things.

There are two orders of cause - the divine (i. e., the intelligent, good, providential and ordering principle) and the necessary (material, purposeless, amoral and accidental) - which stand in antithetical relation to each other. The world-soul works on matter to bring about form, order and goodness in the universe, but it does not attain complete success. Necessity, which may be close to Plato's notion of fate, "stubbornly asserts itself, in disregard of moral considerations, and is negatively victorious against the divine law of goodness, order and reason, at least to some extent."¹

There is no significant reference in Aristotle's writings to heimarmene or moira. He is evidently not a fatalist and probably not a determinist. There is ample evidence in his writings to support the view that he believed there was an element of real contingency in the world.² This aspect of his thought - the relations between and meanings of 'possibility', 'necessity', and 'chance' are more fully discussed in Chapter IV of this paper.³

Aristotle classified causes into material, formal, efficient and final,⁴ and said that "nature belongs to the class of causes which act for the sake of some-

1 Cyril of Jerusalem and Nemesius of Emesa, edited by William Telfer, (The Library of Christian Classics; London; SCM Press Ltd., 1955,) Note I, p. 405; Note 2, p. 407.

2 Ross, op. cit., "(Aristotle) had no clear conception of a universal law of causation." p. 201.

3 Infra, pp. 87ff.

4 Physics II, 194b 20f. Metaphysics I, 983a 24f; 1013a 24f.

thing."¹ The final cause - or that for the sake of which things act - was the pre-dominant cause of change, not only for nature as a whole, but also in regard to the individual things and events which constitute nature. If, however, as in modern usage, causality is one of the concepts employed to describe and interpret the things and events of the world given in experience, and if, in addition, "the basis of the scientific concept of causality...is found in correlations between phenomena" in the sense that one looks for the "causes of a phenomenon pertaining to a given body...in terms of the observable properties of other bodies,"² it appears that the Aristotelian emphasis on teleological causes as an explanation is not conducive to the aims of science in this respect.

The most significant pre-Stoic advances in regard to the elucidation of the idea of cause are to be found with the medical writers of the 5th century.³ The general guide of the physicians in diagnosis and prognosis of diseases is a method which sets out to describe the past conditions of the patient, diagnose his present state and, thereby, predict the future course of the disease.⁴ It is an approach which strongly suggests a belief in causal determinism, if not theoretically developed, at least practically acknowledged in the work of the physician.

1 Physics II, 198b 10f.

2 V. F. Lenzen, "Physical Causality," Causality, (Berkeley, University of California Press, 1932,) pp. 69-73.

3 Hippocrates, translated by W. H. S. Jones, (2 volumes; Loeb Classical Library; London; William Heinemann; Ltd.; Cambridge; Harvard University Press, 1957,)

4 ibid., "Epidemics," I, xi, 9, "declare the past, diagnose the present, foretell the future."

The close alliance of the notion of causality with determinism is further reinforced by a passage in the Hippocratic writings, "The Art," which clearly rejects the notion of an uncaused event.

"No patient who recovers without a physician can logically attribute the recovery to spontaneity. Indeed, under a close examination, spontaneity disappears; For everything that occurs will be found to do so through something, and this 'through something' shows that spontaneity is a mere name and has no reality..."¹

This resembles closely the Stoic position vis-à-vis chance-occurrences or uncaused events discussed in Chapter V of this paper. In a strictly causally determined world an uncaused event is impossible - it "has no reality" - and is a "mere name" applied to an event about whose causes we are ignorant.²

Although much of the other medical writings are later than the Stoics, Galen (c. A. D. 130-C. 200), for example, has some value as a source. He inveighs against the art of medicine as practiced in his time and advocates a return to the guiding scientific spirit and attitude which pervaded the earlier practice of the art of medicine. His works, consequently, reflect a good deal of this attitude. In a passage in which he attacks the methods of the Erasistrateans, sometimes called the medical empiricists, Galen maintains that it is not sufficient to merely describe

1 Ibid., Vol. II, VI, 10, p. 199.

2 The intent here is not to establish that the medical writers influenced the Stoic concept of cause, but merely to indicate that there was, in the Greek world, a school of thought which held views on the nature of causality with certain affinities to those held by the Stoics.

the present condition of the patient in order to cure him. One must know the causes, the set or sets of previous conditions which gave rise to the present illness. It is these temporally antecedent causes which determine the present state of the patient and the future course of the disease.

Galen asks, why is it "that the stomach contracts upon the food, and why the veins generate blood." There is no use in recognizing the mere fact of contraction, without also knowing the cause; "if we knew this we shall also be able to rectify the failure of function." But the Empiricists reply,

"This is no concern of ours, . . . we do not occupy ourselves with such causes as these; they are outside the sphere of the practitioner, and belong to that of the scientific investigator." ¹

But, just so, responds Galen, for the good physician is both practitioner and scientist.

"How are you going to be successful in treatment, if you do not understand the real essence of each disease: . . . If the stomach is, in a particular case, unable to exercise its peristaltic and grinding function, how are we going to bring it back to the normal if we do not know the cause of its disability." ²

The Stoic theory of causality is, of course, much more complete than that of the physicians. It is a fundamental concept in their philosophy and received, there-

1 Galen, On the Natural Faculties , translated by Arthur J. Brock, (Great Books of the Western World; Encyclopedia Britannica Inc. ; Chicago, London, Toronto, 1952) II, 9, p. 195.

2 Ibid.

fore, detailed attention.

The Stoics classified causes into four kinds: auxiliary and proximate causes; perfect and principal causes; cooperating or intensifying causes; and joint causes.¹ All of these are efficient causes. This is apparent from the general definition of cause as "that through which."²

Auxiliary and proximate causes³ are those causes which lead up to an event or act. It is this kind of causes that is meant when Chrysippus says, in a quotation preserved by Cicero,

"... Everything happens by fate and antecedent causes....
If everything happens by fate, of course it follows that
everything happens by preceding causes...." ⁴

Perfect and principal causes⁵ are those causes which are related to, dependent

1 SVF II, 974, 994, 997; Clement of Alexandria, Stromata, op. cit., VIII, 9.

2 SVF I, 89, Stobaeus, Clark, op. cit. "Zeno said that a cause is that through which..."

3 Termed "initiating" cause by Reesor, "The Stoic Categories," (American Journal of Philology, 78, 1957), and "antecedent" cause by the medical writers Erasistratos and Asclepiades of Persia. See M. Pohlenz, Die Stoa, Vol. I, p. 105; Vol. II, p. 61, quoted in Sambursky, op. cit., p. 60. "A cause which initiates a sequence but does not determine its course is called by the Stoics a procatartetic (initiatory) cause." "On Fate," Moralia, translated by Philip H. DeLacy, Benedict Einarson, (Loeb Classical Library; London; William Heinemann, Ltd.; Cambridge; Harvard University Press, 1959), Vol. VII, p. 305.

4 SVF II, 974, Clark, op. cit.

5 Termed "complete" causes by Reesor, "The Stoic Categories," op. cit., and "active and operating" causes by the medical writers, op. cit. "Causes that determine completely the character of their effects" are called autotelê (complete in themselves). Translators' Introduction, Plutarch, loc. cit. See Infra, Chapter V, pp. 94ff, for further clarification of the distinction between auxiliary and perfect causes; there discussed in connection with the human willing situation. Chrysippus made this distinction in order to explain how the freedom of the will could be preserved within the context of causal determinism.

on and controlled by the particular entity or individual involved. They are not compelled or restrained from acting in a particular way by anything external to the entity of which they are a part. That is, although the auxiliary or antecedent causes, which are a part of heimarmene, represent the initial stimulus to action, they do not determine the specific nature of the action. The particular kind of action depends upon the perfect and principal causes alone. Referring to the Cicero passage again, we find that Chrysippus also says,

"...When we say everything happens by fate and antecedent causes we do not mean perfect and principal causes."

Chrysippus illustrates his meaning by reference to an agricultural roller and a top - both of which need an external stimulus to move them. Once this "principle of motion" is given, "the top spins and the roller revolves, each according to its own nature." The initiating motion - the effect of the auxiliary cause - persists after the cause itself, let us say a push, ceases to exist. In the case of disease, the perfect and principal causes would be found in the general disposition of the patient. In principal and perfect causes, effect and cause exist simultaneously; should the cause cease to exist so would the effect. In the illustration of the spinning top, the perfect and principal cause of the spinning type of motion is the top itself: its particular shape or "nature" determines that once motion is imparted the top will spin and not revolve. Should the top cease to exist as a top, the effect - spinning - would also cease.

A "cooperating" (synergon) or intensifying cause is one which, alone, cannot bring about an effect. Its function is to intensify the effect caused by the perfect

and principal causes. In the case of the top, a cooperating or intensifying cause might be the particularly fine construction of the top, which aids in making the top spin faster and for a longer period of time.

A joint cause (synaition) "was used to characterize the additive nature of certain causes which together bring about the resulting effects."¹ The example given by Clement of Alexandria² is that of men pulling together being the joint causes of a ship being drawn down to the water.

These different kinds of causes, however, do not act in isolation, but are in "sympathetic" relation with each other. This sympathy derives from Stoic physical views.³ The bodies (and, therefore, also the causes) which constitute the whole of reality, are modifications of the pneuma, the material substratum which is everywhere present, continuous in time and space. Since bodies (and causes) are all parts of one whole, an action in one is reflected in them all. This interrelatedness and complexity make it practically impossible that one body, alone, could be the cause of an effect in another. A multiplicity of causes is at work in every causal sequence.

In line with the modern concept of causality, the causal sequence is infinite. The Stoics asserted that the chain of causes and events was unending. Events are

1 Sambursky, op.cit., p. 60.

2 Loc. cit.

3 See Supra, Ch. I, p. 14.

always dependent for their "being" on previous events,¹ and, therefore, "no cause is properly speaking the first."² This view aroused the scorn of Aristotelians like Alexander of Aphrodisias.³ For, in his view, science is the knowledge of first causes, and without a first cause in the series science would be impossible.

It is virtually impossible that a man could know all the causes responsible for the occurrence of an event. Despite this fact, however, the Stoics did not hesitate to affirm their belief in the strictly deterministic nature of the causal relations which constitute heimarmene. This is illustrated in a formulation of the Stoic view of causality given by Alexander of Aphrodisias.

"In view of the multiplicity of causes, the Stoics equally postulate about all of them that, wherever the same circumstances prevail with regard to the cause and the things affected by the cause, it is impossible that sometimes the result should be this and sometimes that; otherwise there would exist some uncaused motion."⁴

This passage also reveals that the Stoics held the view that situations are reproducible; i. e., given A again the same effect on B will necessarily follow.

1 SVF II, 946, Plotinus, Clark, op.cit., "The consequents always follow the antecedents, ... the consequents lead back to those by which they came into being and without which they could not have come into being, and ... the later are subject to the earlier."

2 SVF II, 944, Cicero; see also Edelstein, op.cit., p. 28.

3 SVF II, 949, Clark, op.cit., "It is absurd to say that causes regress to infinity and that there is neither a first nor a last in the series and linkings of causes... By this argument even science would be impossible, if indeed science is chiefly the knowledge of first causes, and for them (the Stoics) there is no first among causes."

4 De Fato, Ch. 22, in Sambursky, op.cit., p. 130. SVF II, 959, Alexander of Aphrodisias; Clark, op.cit., "...contrary effects are impossible under identical conditions..."

Reproducibility of events, then, is another shade of meaning entailed by their concept of heimarmene or causal determinism. This is the earliest statement on record on causality suggesting elements of recurrence and reproducibility of situations.¹ It is not surprising, however, after all we have seen, that the Stoics never attempted to verify it.²

The Stoics regarded all causes as corporeal,³ because cause fulfilled the conditions of corporeality mentioned in the section of this paper on Stoic Physics.⁴ A cause is active, or imparts motion, in so far as it determines an effect in the body in which it inheres or in another body.⁵ It is passive, or receives motion, in so far as it is determined by the series of causes which occurred prior to it.⁶

Effects, however, are described as incorporeal actions, designated in speech by the verb form. Effects are "predicted" of some thing, or are "accidents" of

1 Sambursky, Ibid., p. 54.

2 S. Sambursky, "The Possible and Probable in Ancient Greece," Osiris, 12, 1956, pp. 47-48. "...With a few exceptions, it never occurred to the Greek to devise systematic repetitions in imitation of nature, to restore by a 'dissection of nature', the same situation A which will give rise again to the same situation B. The unnatural device of a series of identical, man-made events, artificially isolated from a complex of interwoven processes, was foreign to the mind which conceived the Cosmos as an organic unity."

3 SVF I, 89, Stobaeus; SVF II, 336; Stobaeus.

4 Supra, Ch. I, p. 1f.

5 SVF II, 492, Stobaeus.

6 M. Reesor, "The Stoic Concept of Quality," op. cit., p. 44.

some thing. The following statement is found in Sextus Empiricus¹

"The Stoics say that every cause is a body which is the cause to a body of something incorporeal."

Sambursky's translation of the same passage perhaps conveys the meaning more clearly,

"Every cause is a body which is the cause to a body of something incorporeal happening to it."²

That is,

"the lancet is a body, and "the flesh" is a body and the expression (lekton) "being cut" is incorporeal; and again...fire is a body and "the wood" is a body, and the expression "being burned" is incorporeal."

The lancet is the cause to the flesh of being cut; the fire is the cause to the wood of being burned.

The "incorporeal happening" or the "incorporeal predicate" is the result or effect of the causal interaction of two or more bodies. Here we have an interesting situation. Causes, because they effect action or change or motion, are bodies and, therefore, real. But the effects, which are the actions or motions, are incorporeal,

1 Against the Physicists, op. cit., I, 211; see also SVF I, 89, Stobaeus, Clark, op. cit., "Zeno said that a cause is that through which; but that of which it is the cause is an accident. The cause is a body, that of which it is the cause is a predicate; and it is impossible for the cause to be present and that of which it is the cause not to occur. The significance of this statement is as follows. A cause is that through which anything occurs, for example, through wisdom comes wise deliberation, and by the soul there is life, and through temperance there comes temperate living...."

2 Op. cit., p. 53, my underlining.

belonging to the class of lekton.¹ We seem to be forced to the conclusion that causes are real but effects are unreal. It would also seem to do violence to the Stoic belief in a continuous chain of causation wherein cause follows cause in an unending, interrelated and interdependent sequence.² One break in the chain, or one lost "link", would necessitate the destruction of the whole.³ The incorporeal effects appear to be such lost "links".

That they are not is evident from two related passages found in Seneca⁴ which indicate how the incorporeality of effects should be understood. The relevant point made in Epistle 113 is that all change is modification of an essentially unchanging subject.⁵

"Every living thing exists as it began, until death; a man, until he dies, is a man, a horse is a horse, a dog a dog. They cannot change into anything else."

Seneca is specifically discussing justice as the corporeal cause of "living justly."

1 Clement of Alexandria, op. cit.; A lekton is "that which is meant." "The 'actual entity' indicated or revealed by the sound (a body) and which we apprehend as subsisting together with (i. e. in) our thought. . . . It is what the Barbarians do not understand when they hear Greek spoken." Mates, op. cit., pp. 11 and 12. Sextus Empiricus, Against the Logicians, op. cit., VIII, 12; Diogenes Laertius, VII, 57; Seneca, Epistle 117, 13.

2 E. g., SVF II, 912, Plutarch; Alexander of Aphrodisias, De Fato, Ch. 22, Sambursky, op. cit., p. 130.

3 Alexander of Aphrodisias, loc. cit., "The cosmos would break up and be scattered and could no longer remain a unity administered by one order and plan, if some uncaused movement were to be introduced into it. This would be the case if there were not some cause preceding it for all that exists and happens, from which it results by necessity."

4 Epistle, 113, 7 and 8 and 11; Epistle 117, 1ff.

5 See Edelstein, op. cit., pp. 25-26. See also Reesor, "The Stoic Concept of Quality," op. cit.

Justice is a corporeal quality of the soul, for it is the soul in a certain state or condition; it is a "kind of power of the soul." (Justice stated in strictly physical terms, is the pneuma of the soul in a certain degree of tension.) This same soul may successively or simultaneously act in different ways without thereby losing its essential identity as a human soul.

"This soul is transformed into various likenesses and does not become a different kind of living thing as often as it acts differently."

That is, the corporeal quality, justice, is the cause to the corporeal soul to which it belongs, of that soul's behaving or acting justly - this action is the effect and is incorporeal. "Acting justly" does not have the power, in itself, to cause a change in that soul as a soul - in that essentially unchanging substance, just as "being cut" does not have the power to change "the flesh" into a different substance.

This is the point made in the second Seneca passage, Epistle 117. Considered in themselves, effects have no causal efficacy. Seneca is discussing the Stoic belief that "wisdom is a Good, but 'being wise' is not a Good," or wisdom is corporeal, but 'being wise' is incorporeal. Whatever is active is corporeal and wisdom is active for it is the cause of 'being wise.' But 'being wise' has only a relative or dependent corporeality. It is "accessory to something else, in other words, wisdom; hence it is in no respect active...." 'Being wise' is, consequently, only a "relative" good - it is a good, but only in so far as it is referred "to that on which it depends - in other words, wisdom itself." It is not a good nor corporeal in itself: i. e., effects qua effects are incorporeal. Effects in relation to the body to which they belong have corporeality and reality.

The example of the lancet, the flesh and the incorporeal effect (predicate) of 'being cut' given in Sextus Empiricus,¹ can be understood, then as follows: 'being cut' qua 'being cut' is "nothing" - that is, it neither imparts nor receives motion, and it is said to belong to lekton, for it is that which is predicated of body. But, 'being cut' vis-à-vis the flesh is "something" - it is a state or condition of the essential subject, flesh; from it is derived a quality of the flesh, "cutness." A piece of cut flesh is corporeal and can be the cause, to itself in this case, of "being bloody" - an incorporeal effect. A cut piece of bleeding flesh is or can be the corporeal cause to another body, say the table on which it rests, of the incorporeal effect of "being stained," and so on. Corporeal qualities are derived from these incorporeal predicates,² and as qualities are considered causes, the continuous chain of interrelated causes is preserved.

This view - that causes are corporeal and therefore real while effects are incorporeal - is misleadingly interpreted by George Boas,³ who considers it yet another philosophic attempt to draw a distinction between reality and appearance. In the case of the Stoics then, Boas claims that causes are real and effects are the appearance of reality. He wishes the reader to compare the Stoic position with the

1 Against the Physicists, loc. cit.

2 Reesor, "The Stoic Concept of Quality," op. cit.; SVF II, 193, Diogenes Laertius; "Chrysippus defined a logical proposition as derived from a proposition's having been made." Also Simplicius 216, 19 ff, Reesor translation: "(the Stoics) derived the qualities from what are usually termed predicates. Roofing is the result of having been roofed; equality is derived from equalization...."

3 Rationalism in Greek Philosophy, (Baltimore, The Johns Hopkins Press; 1961), pp. 247-249.

Platonic, for he writes,

"Whereas the Academics made their distinction (between appearance and reality) on the basis of epistemology, Zeno seems to have made his on the basis of causal power."

In the Platonic system only those things which are intrinsically intelligible to the mind - i. e., form - are real and forms are incorporeal. The material bodies which are "in-formed" are not knowable in this way. We "know" bodies by means of the senses and sensory data yield only doxa (opinion) and not episteme (knowledge). Bodies or matter, therefore, are only the appearance of reality, just as doxa is the appearance of episteme. But, we cannot draw an analogy with the Stoic distinction. It is true that in their system causal efficacy is the distinguishing mark of bodies; causes are bodies and therefore real. But the "unreality" or incorporeality of effects, as we saw above, requires the qualifications discussed; effects are not simply "appearances" as opposed to the "reality" of causes.

Effects are motions - either tensional, internal motions of the pneuma, or external motions or change of place of another body. Space is a necessary condition for causality. An effect is a process, "originating in a body A and leading to a change in a body B, " or originating in body A and leading to a change in body A. Time (antecedence) along with space (contiguity) is also a necessary condition of causal connections.¹

1 Seneca Ep. 65, 11. "The throng of causes defined by Aristotle and by Plato embraces either too much or too little. For if they regard as 'causes' of an object that is to be made everything without which the object cannot be made, they have named too few. Time must be included among the causes; for nothing can be made without time. They must also include place, for if there be no place where a thing can be made, it will not be made. And motion too; nothing is either made or destroyed without motion. There is no art without motion, no change of any kind...."

We find references in Sextus Empiricus, Clement of Alexandria and Diogenes Laertius which suggest that the Stoics not only held an asymmetrical and time-dependent view of causality in which A is the cause of the effect E happening to B, but that they also were aware of the symmetrical notion of the mutual interaction of causes in bringing about effects. Clement affords us ample examples of this kind of causal conception.

"...A given condition of the spleen is not the cause of fever but of the beginning of fever, and a given fever is not the cause of the spleen but of a change in its condition. In the same way virtues are mutual causes such that they cannot be separated because of their interdependence. And the stones of a vault are each either's cause for staying put; but one is not the cause of the other. Pupil and teacher are mutual causes for progress. Sometimes one speaks of mutual causes of the same thing, for instance the importer and the retail trader who are mutual causes for making profit; and sometimes of different things, for instance the knife and the meat; the one is the cause for the meat to be cut, the other the cause for the knife to cut." ¹

We should note that the discussion of cause is somewhat complicated by the broad usage of the term, especially in this passage. We would not say today, for example, that the meat is the cause for the knife to cut, but rather that the meat is the condition for the knife to cut; nor would we say that the importer is the cause for the retailer making a profit, but that the importer is a condition for profit-making. ²

¹ Op.cit., translation here by Sambursky, Stoic Physics, op. cit., p. 137.

² Cf. Infra, Ch. IV, p.74, on the wide use of cause in the Stoic analysis.

What should be noticed, however, in this passage, is the suggestion made by the various examples chosen, of the notion of function and variable. For example, the progress in learning made by the pupil is a function of the two variables, the natural ability and effort extended by the pupil himself and the skill of his teacher.

The Stoics' functional attitude toward causality is exemplified also in the following passage:

"... The effects produced by the same cause naturally vary owing to the material affected and the distances, as in the case of the sun. For being close to the Ethiopians it naturally burns them, and being at a moderate distance from us it warms us, and being far removed from the Hyperboreans it does not warm them at all but merely illumines them..."¹

Their dynamic view of the nature of reality, explored in the discussion of their physics, receives additional confirmation here from their theory of causality.

In summary, we may say that the Stoic theory of causality is one in which all things and events in the universe are connected naturally and invariably, so that preceding conditions or causes determine with necessity, present and future conditions. It is this "absolute necessity" that is expressed by the concept of heimarmene.²

1 Sextus Empiricus, Against the Physicists, op.cit., I, 249; also Diogenes Laertius, op.cit., VII, 151, in which the change of seasons is seen as a function of the changing position of the sun.

2 Zeller, op.cit., p. 170.

A critical statement of what is thought to be the Stoic position on heimarmene is found in Cicero. It expresses, albeit inadvertently, their understanding of the concept quite well. The "challenge" reads,

"... If there were no such word at all as fate (fatum), no such thing, no such force, and if either most things or all things took place by mere causal accident, would the course of events be different from what it is now? What is the point then of harping on fate, when everything can be explained by reference to nature and fortune without bringing fate in?" ¹

Indeed, everything for the Stoics does take place by what is termed in this passage "mere causal accident;" everything can be explained "by reference to nature," and the "course of events" would not be "different from what it is now" if we resort to this kind of "natural" explanation. This the Stoics, in fact, did; but they chose to call this "natural" or physical form of explanation, this causal, activity by which and through which things and events come to be, by the "meta-physical" name of fate. Perhaps, just as Plato felt it necessary to reject, as complete explanation, physical causality because he thought it lacked telos or plan or a purposive element, ² so too the Stoics may have felt a similar need to "say more."

It would appear that the Stoics took over an old concept - heimarmene -

1 De Fato, translated by H. Rackham, (Loeb Classical Library; London; William Heinemann, Ltd.; Cambridge; Harvard University Press, 1948;) 6.

2 Sophist, 248b ff; cf. 265 cd; Philebus, 28e and 30 ab; Phaedo 97 ff.

a round which for centuries past a cluster of related and well-established meanings had gathered, and gave it a new content. Heimarmene was, for them, the expression of the natural and necessary causal interconnection of the things and events which go to make up the whole of the universe. It was a concept employed to express the way in which the universe is structured and ordered. It was not a metaphysical principle or power (as was the Logos of Heraclitus), standing outside the causally determined process which makes up the whole of reality. It is that natural and physical process, in so far as the events of the process are "necessary" - i. e., in so far as they are determined by the set or sets of conditions which preceded them.¹

One might conjecture that had they chosen a different word to express their belief in causal determinism, much of the criticism directed against them, especially in relation to the question of the freedom of the will and the unity of their system, might have been avoided. As it was, however, by naming this natural and causally determined sequence of events - this process - "heimarmene," the process tended to become hypostatized. The impression was easily gained therefore that heimarmene was something more than, something over and above, the natural and determined sequence of cause and effect.

It would have been less confusing, perhaps, for them to have merely said,

¹ See Edelstein, op. cit., who emphasizes again and again that there is nothing outside the Stoic universe: there is no purpose external to the universe toward which it moves; there is no external "pattern" of which it is a copy, etc. The Stoic universe merely is. In Edelstein's words, the Stoic universe is "brute fact."

in their attempt to describe the overall structure of the universe, that all events have causes, and that such events are determined by the causes which give rise to them. Formulated in this way their theory is a "general law" in the sense and spirit of the general laws of science; that is, it is an abstraction which describes the unchanging elements in the temporal sequence of events (in this case, that they are determined by the events which precede them.)¹

1 M.R. Cohen, "Necessity and Law," from Reason and Nature, (The Free Press, 1931), reprinted in Philosophical Problems, op. cit., pp. 78-79.

CHAPTER THREE

PROVIDENCE AND DIVINATION

Heimarmene was not the only concept used by the Stoics to describe the universe and its structure. From the point of view of natural science, heimarmene becomes pneuma, the all-pervading, all-producing Breath, the artistic fire which is the Soul of the world.¹ It is also described as an "ordered, continuous, eternal motion."² As the groundwork of natural formations this general law (heimarmene) is called Nature.³ From the standpoint of popular faith, it is "called Zeus, or the will of Zeus and in this sense it is said that nothing happens without the will of Zeus."⁴ From the point of view of the rationality of the process it is called Logos, the "Reason of the World," the "Universal Law," the "rational form of the world's course."⁵

1 Diogenes Laertius, op.cit., VII, 156; SVF II, 913, Stobaeus.

2 Ibid., Stobaeus; SVF II, 916a, Theodoretus.

3 Ibid., Stobaeus.

4 Zeller, op.cit., p. 171. SVF I, 102, Diogenes Laertius; SVF II, 936c, Plutarch.

5 E.g., SVF I, 160, Tertullian. Chrysippus, instead of Logos, sometimes used aletheia (truth), aitia (cause), physis (nature) and ananke (necessity). He assigned the same meaning to heimarmene and katenankasmenon. Zeller, Ibid., p. 170.

The process was sometimes described as Logos Spermatikos (Seminal Reason): the universal reason present in each thing as a seed. It is the creative force of nature, as a whole, and, in its particular manifestations is responsible for the production of individual things.¹ This idea of a "seed" should be distinguished from Augustine's rationes seminales. For Augustine, the rationes seminales are "germs" of things created in the beginning by God. Although they are not direct objects of experience - they cannot be perceived by the senses - still they are some "thing;" a species for example, "with all its future developments and particular members" created in the beginning by God "in the appropriate seminal reason."²

The Stoic references to seeds, to the Logoi Spermatikoi, bear a somewhat different interpretation. The sources indicate that, in the use of this term, the Stoics were speaking analogically to describe not an entity but the nature of a process in which an active force (pneuma or God) works upon passive matter.³ The nature of the relationship between the active and the passive aspects of reality is described by analogy with a seed. For example,

1 E.g., SVF I, 87, Stobaeus.

2 F. Copleston, A History of Philosophy, (1962 edition; Image Books; New York, Doubleday & Company, Inc.; 1950,) Volume II, Pt. I, pp. 91-92.

3 The use of Logoi Spermatikoi was a metaphor for causality. See Cicero, De Divinatione, I, 128, "As in seeds there inheres the germs of those things which the seeds produce, so in causes are stored the future events whose coming is foreseen by reason or conjecture. . . ."

"The Stoics, of course, say that God is matter, or rather a quality inseparable from matter, a god which permeates matter as semen permeates the genital organs." ¹

Another source reports,

"For it pleases the Stoic philosophers (to say) it is possible for all reality to change into fire as into a seed and again out of this to produce a world arrangement, such as previously existed. And Zeno, Cleanthes, and Chrysippus, the foremost and oldest of the school approve this belief." ²

If one wishes to emphasize the purposeful development of the world-process and include in it, at the same time, an element of personality, it can be described as providence. ³ As was the case with the Logoi Spermatikoi, we must be careful to note that the Stoic meaning of providence (pronoia) is different from the meaning of providence in a Christian context. Both ancient ⁴ and modern ⁵ writers have criticized the Stoic assertion of the existence of providence as an inconsistency

1 SVF I, 87, Chalcidius, Clark, op. cit.

2 SVF I, 107, Eusebius, Clark, Ibid.; also SVF I, 102, Diogenes Laertius, Clark, Ibid., "God and Mind and Fate and Zeus are all one, and he is called by many other names. Existing in himself from the beginning he turns all reality into water through air. And as the seed is surrounded by the seminal fluid, so also he who is the seminal reason of the cosmos remains within the moisture and with ease fashions matter to his own purposes."; SVF I, 87, Stobaeus, Clark, Ibid. "Throughout, this matter is arranged by the universal reason, which some call Fate, and which is similar to the seed in the womb...."

3 SVF I, 913, Stobaeus. Providence may be thought of as a combination of Zeus and Logos.

4 Nemesius, op. cit., Ch. 44, p. 434. "The Stoic philosophers, advocating belief at once in fate and in our own free will, leave no possible room for providence."

5 E. Bevan, Stoics and Sceptics, (1959 edition; Cambridge; W. Heffer & Sons, 1913.)

in their thought. These critics conceive of providence as the act whereby a transcendent God takes an active interest in the affairs of men, particularly in regard to their individual salvation. In the Stoic conception, providence is not "merely an attribute" of "deity," but "deity" itself, considered from a particular point of view.¹ The Christian notion also entails the belief that the world and the creatures within it were created for a purpose which is to be realized outside the world and the temporal process. Typical of the confusion between the Christian and Stoic senses of providence is a discussion in Bevan² in which he criticizes the Stoic teaching that the final goal or ethical end towards which men strive is the willing assent to the world-process. In this willing assent, man finds his freedom and happiness. But, says, Bevan, it is a "poor sort of freedom" and a "happiness without content" if the world-process is not rational in the sense of purposive - i. e. moving towards an end - and if all the events which comprise it are not means to this end.

Bevan feels that it is quite clear from the Stoic theory of conflagration and of eternal recurrence³ that the purpose of the Stoic universe "is for nothing." For, if things continually repeat themselves, if there is no ultimate escape from the process, or so Bevan reasons, there is no point in assenting so joyfully to the

1 E. V. Arnold, Roman Stoicism, (1958 edition; London; Routledge & Kegan Paul Ltd.; 1911,) pp. 203-204.

2 Op. cit., pp. 30-31.

3 Supra, Ch. I, p. 15.

process. There is, he claims, no metaphysical basis for ethics.

It is obvious that Bevan is reasoning from his Christian background, which involves the belief that the only justification for ethics is to be found in a transcendent Being. This being guides his creation toward the realization of a goal which exists, or is achieved, outside the created universe.

It may be that this understanding of providence is the right one. But it is not the Stoic understanding and it is not reasonable to criticize the Stoics for a view they did not hold. Any purpose recognizable in the Stoic universe must be entirely within that universe, for there is nothing outside it, there is nothing "behind things" for which they are.¹ All purpose must be seen in terms of the growth process. In the case of individual things, their purpose is the realization of their individuality and their nature. In the case of the world as a whole, its purpose is nothing more than the realization of the process of its growth. It is only realized, however, and then destroyed in the final conflagration; then to begin again the same process of growth, decay and destruction.

An illustration of the relatively restricted sense of the meaning of providence for the Greek Stoics is given in a passage from Cicero² in which he explains the

1 Edelstein, *op. cit.*, p. 33. "There is no overall purpose or aim; the realization of the inherent force is the end or purpose itself, and this realization is the only value realized."

2 *De Natura Deorum*, II, 57-58. In this passage we can see incorporated all the various names designative of the nature of the world process.

views of Zeno. Zeno defines nature as "a craftsmanlike fire, preceeding methodically to the work of generation." Actually, this process of growth can be said to be the work of a "craftsman", whose foresight plans out the work to serve its use and purpose in every detail." The work of any craftsman is conducted for a particular purpose, e.g., the potter's goal is to turn out usable and perhaps beautiful pieces of pottery. The good craftsman works to attain his goal, not haphazardly, but by following a well-considered, orderly method or plan in his work. These same characteristics are applicable to the "craftsman" of the world whose work is generation, and

"...it can therefore be designated as prudence or providence..."¹

There are other purposes in the universe, but all are relative to the primary purpose of the self-realization of the process itself. Providence directs itself

"to secure, for the world, first, the structure best fitted for survival; next absolute completeness; but chiefly consummate beauty and embellishment of every kind."²

The reality of providence was sometimes adduced by the Stoics as a proof for the existence of divination. We read in Diogenes Laertius,

1 Ibid.

2 Ibid.

"Divination in all its forms is a real and substantial fact, if there is really a Providence. And they (Zeno, Chrysippus, Posidonius) prove it to be actually a science on the evidence of certain results."¹

That is, if there is providence, in the sense described above, events proceed in an orderly, methodical and purposeful fashion. Divination,² then, in which predictions are made on the basis of the observation of present events, is possible because of the regularity entailed by providence.

Despite the fact that most of the extant writings on the subject of divination come from the middle Stoic period,³ in particular the arguments presented in its favor by Posidonius of Apamea (130-46 B. C.), there is evidence that the Greek Stoics also wrote extensively on this subject.

"The Stoics (Zeno and Cleanthes)... defended nearly every sort of divination. Then came Chrysippus, ... who exhaustively discussed the whole theory of divination in two books, and besides, wrote one book on oracles and another on dreams."⁴

1 VII, 149; also Cicero, De Divinatione, I, 82 f and De Natura Deorum, II, 12.

2 Called mantike in Greek and, according to Plato (Phaedrus 244C) derived from the word mania, meaning madness or frenzy. Plato interprets it as a divine madness. The Latin word is divinatio and, according to Cicero, De Div., I, 1, derived from divi, meaning 'gods'.

3 Panaetius of Rhodes (180-111 B. C.), the teacher of Posidonius, was an exception to the universal Stoic acceptance of divination. He evidently doubted many Stoic theories concerning it and, according to one source, denied that it had any "real existence." Cicero, De Div., I, 6; Diogenes Laertius, VII, 149.

4 Cicero, Ibid. Also, "Speaking now of natural divination, everybody knows the oracular responses which the Pythian Apollo gave to Croesus, to the Athenians, Spartans, Aegeans, Argives and Corinthians. Chrysippus has collected a vast number of these responses, attested in every instance by abundant proof." Ibid., I, 37.

Not only was divination a subject of keen interest to these early Stoics, but they also appear to have held essentially the same position in regard to its value and meaning as did Posidonius. Consequently, there seems to be adequate justification for following the views on divination described in Cicero's De Divinatione, the major source¹ for this topic, even if the arguments presented there are, according to the translator, Falconer,² mainly taken from Posidonius' writings. There is further justification in the fact that there is an intimate relationship between universal causality and the doctrine of "sympathy", or the belief in the interrelatedness and affinity of all things,³ on the one hand, and the art of divination on the other.

Divination, we are told,⁴ is the "foreseeing and foretelling of events considered as happening by chance." There are two kinds of divination, natural and artificial.

Natural divination includes prophecies made as a result of dreams or from "insights" gleaned in moments of ecstasy or frenzy, or in times of intense mental

1 There is also some material found in the fragments of the Peripatetic Diogenianos preserved in Eusebios, Praep. evang., IV, 3, 1-13, some of which are found in Sambursky, Physics of the Stoics, op. cit., p. 133.

2 Introduction, p. 217.

3 See Supra, Ch. I, p. 14, and Supra, Ch. II, p. 40.

4 Cicero, De Div., I, 9; also De Div. II, 63, 130, in which there is the following definition attributed to Chrysippus: "Divination is the power to see, understand and explain premonitory signs given to men by the gods."

excitation.¹ In this kind of divination, no recourse is made to the interpretation of external signs by the use of reason and inference, as is done in artificial divination. The possibility of natural prophecy or divination derives from the Stoic view² that "the universe is wholly filled with the Eternal Intelligence and the Divine Mind, (therefore) it must be that human souls are influenced by their contact with divine souls."³

Natural divination occurs under those conditions when men are least conscious of their bodies and their own individuality; under those conditions, that is to say, when they might be expected to be most receptive to the influence of a universal soul or mind. For,

"When men are awake their souls, as a rule, are subject to the demands of everyday life and are withdrawn from divine association because they are hampered by the chains of the flesh."⁴

We should note here that the reference, above, to the "chains of the flesh" suggests a kind of Platonic disembodied soul which proceeds, unencumbered by corporeality, in its search for knowledge. This has a decidedly un-Stoic ring;

1 Cicero, Ibid., I, 12, 34.

2 There is some similarity with the Platonic view expressed in Symposium, 188B, where divination is said to be "the art of communion between gods and men."

3 Cicero, De Div., I, 110. This principle is expressed in Stoic physics by the doctrine of the pneuma, the material force which permeates and completely fills the whole universe. See Supra, Ch. I, p. 10 .

4 Cicero, De Div., I, 110.

for the common position held among them was that the soul is corporeal, being that which is capable of acting and being acted upon.¹ It may be that this suggestion - that the soul is hampered by its bodily associations - is a contribution of Posidonius. There is disagreement among scholars as to whether or not Posidonius held that the soul was a body, but even if he did, what little information is available on how he conceived of the soul's functions seems to indicate close affinities with the Platonic position and does not reflect that of the Greek Stoics.² For example, Posidonius, in discussing the "ways in which men dream as the result of divine impulse," says, "The air is full of immortal souls, already clearly stamped, as it were, with the marks of truth."³ In dreams, a man's soul would or could "see" or "make contact" with these verities, i. e., could gain knowledge without benefit of the senses - a very un-Stoic position. In fact, in a passage reported in Sextus Empiricus, in which Posidonius is explaining the meaning of Plato's Timaeus, he stresses that only reason knows reason, that only like can know like.

"Just as light is apprehended by the light-like sense of sight, and sound by the air-like sense of hearing, so also the nature of all things ought to be apprehended by its kindred reason."⁴

1 E. g., Diogenes Laertius, VII, 156-157; There was no dualism of body and soul; they were both of the same "stuff." See Bevan, op. cit., pp. 100-101.

2 See Watson, op. cit., pp. 77-79. Referring to passages in Galen (De Plac. Hipp. et Plat. 348, 448, 460) Watson states that Posidonius supposedly rejected Chrysippus' position of the unity of the soul and introduced a kind of "tripartite theory of the soul's functioning." Passions, for example, "are caused by the appetitive and passionate faculty of the soul" and unhappiness is caused by "the irrational, unhappy, godless element in the soul."

3 Cicero, De Div., I, 64.

4 Against the Logicians, I, 93.

As we are dealing with the views of the early Greek Stoics, we must be cautious in ascribing to them what appear to be the ideas of a later Stoic like Posidonius. On this particular question of natural divination, we can probably say with some degree of certainty that the Greek Stoics did not hold that the soul "escapes" from the body's demands when it dreams or is in a state of ecstasy, and, so-released, sees a higher truth upon which it can, subsequently, base prophecies. In their theory of knowledge they state quite emphatically that the soul is a tabula rasa at birth and that all knowledge must come, ultimately, through the senses.¹ On the other hand, because of the scarcity of the sources, we cannot make a positive statement about their views on just how or why during these moments of great mental excitation, knowledge, on which prophecy can be based, is actually acquired. However, the soul, as logos, was of the same "stuff" as the world-logos and was a part of the causal process of nature. Therefore it would be possible for the soul to have, as in the case of natural divination, a sudden insight into certain aspects of this causal process.

It is the artificial or "scientific" kind of divination which is of primary interest to the Stoics. Their interest in it was not dictated by a desire to justify a wide-spread and ancient practice. Rather, they saw in the validity of artificial divination a confirmation of their belief in universal causality and in its exercise an illustration of inductive reasoning. Artificial divination is defined in Cicero² as an art (techne)

1 E.g. Diogenes Laertius, VII, 49-53. See also Watson, op. cit. Ch. II.

2 De Div., I, 34.

in which the unknown is derived (or inferred) from observation of the known; and in Sextus Empiricus¹ as a "science which observes and interprets... signs." Included under it are the prophecies of soothsayers, the interpreters of prodigies and lightnings, of augurs, astrologers and oracles.² Its methodology, in contrast with that of natural divination, entails the repeated empirical observation of past events and, on the basis of these observations, making reasoned inferences as to future events. This methodology of observation and induction or inference is stressed again and again in the sources. For example, we read that divination

"... has grown into an art through the repeated observation and recording of almost countless instances in which the same results have been preceded by the same signs."³

The ancient Assyrians practiced this methodology in astrology

"by observing the paths and movements of the stars, and, having made note of them, transmitted to posterity what significance they had for each person."⁴

Man, using his natural faculties, is capable of making predictions, for the

"... great length of time employed in continued observation begets an extraordinary fund of knowledge, which may be acquired even without

1 Against the Physicists, I, 132.

2 Cicero, De Div., I, 12.

3 Ibid., I, 25.

4 Ibid., I, 2.

the intervention of the gods, since repeated observation makes it clear what effect follows any given cause, and what sign precedes any given event." ¹

The Stoics refused to admit any essential difference between the prophecies of the diviners and the inferences of science; those made, for example, by the practitioners of the arts of medicine and meteorology. They both follow the same scientific method of empirical observation and rational inference, and both, in the true pragmatic, scientific spirit, focus their attention on the results or effects of the art rather than on the sources or nature of the causes of their art. The point is not why things happen but rather do they or do they not happen. ²

Physicians, for example, have been able, through time and with long observation and recording of results, to employ such things as

"roots that are good for the bites of wild beasts, for eye-affections and for wounds, and though reason has never explained their force and nature, yet through usefulness they have won approval for the medical art and for their discoverer." ³

Similarly, the signs by which weather is predicted "work" (i. e., permit true or correct predictions), yet we cannot explain why. We do not know why,

1 Cicero, *De Div.*, I, 109, also I, 127, "The careful study and recollection of... signs, aided by the records of former times, has evolved that sort of divination known as artificial..."

2 *Ibid.*, I, 86.

3 *Ibid.*, 12-13; also, I, 16, "I see the purgative effect of the scammony root and I see an antidote for snakebite in the aristolochia plant... - I see their power and that is enough; why they have it I do not know."

for instance, the herons come in from the sea when a storm is coming,¹ yet they do and on the basis of their coming we can expect a storm. We do not know why, before it rains, frogs croak.² "I do not ask why, since I know what happens." Not to know the source or reason of the power of these signs to guide us is no reason to deny the power. We all know that the magnet attracts iron, but we do not know why it does so; but because we do not know why it has this power, we do not deny that it has it.³

And so it is with divination; because its basis cannot be rationally justified, because when one asks why, for example, "the cleft or thread in the entrails" signifies a certain event, one cannot answer, does not constitute an adequate reason for dismissing divination as non-scientific. What is adequate to the purposes of science is that there be a long-recorded history of repeated observation of "countless instances in which the same results have been preceded by the same signs,"⁴ and on the basis of these empirical observations, probable, yet reasoned predictions as to the future course of events can be made. That is to say, what is important is the method employed and the success of the results.

The scientific value of divination cannot be discounted either on the grounds that the diviners sometimes make wrong predictions. This is a fault shared by all

1 ibid., I, 14.

2 ibid., I, 15.

3 ibid., I, 86.

4 ibid., I, 25.

arts which depend on a method of "conjecture and deduction - on inference¹ - and whose results are "merely probable."² Physicians, sea pilots, generals and political leaders make mistakes, yet we do not, for this reason, deny that medicine, navigation, military science and statecraft are arts.³

Error is due to the nature of the method which can only yield probabilities, and/or to the lack of skill of the practitioner or interpreter.⁴ This is obvious, for in a world governed by heimarmene, in a world structured in a strictly determined causal way, if men were more skilled, more wise, if they were omniscient and could see all the causal connections which constitute the universe, they would make no such errors.⁵ But,

"since such knowledge is possible only to a god, it is left to man to presage the future by means of certain signs which indicate what will follow them." ⁶

The possibility of this rests on the fact that this is, throughout, a rationally ordered universe exemplifying "lawful" behavior. There is no real contingency in

1 Ibid., I, 24.

2 Ibid., I, 25.

3 Ibid., I, 24.

4 Ibid., I, 118.

5 Ibid., I, 127, "...since...all things happen by Fate, if there were a man whose soul could discern the links that join each cause with every other cause, then surely he would never be mistaken in any prediction he might make. For he who knows the causes of future events necessarily knows what every future event will be."

6 Ibid.

the universe, no chance event, no truly spontaneous happenings.¹ If there were, the Stoics would have to affirm, like Aristotle,² that scientific knowledge of such events is impossible. But, in the Stoic universe,

"things which are to be do not suddenly spring into existence, but the evolution of time is like the unwinding of a cable: it creates nothing new and only unfolds each event in its order."³

It is understandable then that the diviners can tell us of things that will take place in the future, and that they can have

"a presentiment of things that exist nowhere in the material world: for all things 'are', though from the standpoint of 'time', they are not present. As in seeds there inheres the germ of those things which the seeds produce, so in causes are stored the future events whose coming is foreseen by reason or conjecture..."⁴

Since this is really the way things are, or, the way in which they occur, scientific knowledge is possible, and diviners who follow the proper method, diviners

"who, for a long period of time have studied and noted the course of facts and the connections of events,"⁵

1 See Infra, Ch. IV.

2 Metaphysics 1027a "...but that there is no science of the accidental is obvious; for all science is either of that which is always or of that which is for the most part...the accidental is contrary to...laws...and there is no science which deals with it."

3 Cicero, loc. cit.

4 Ibid., I, 128. See Supra, this chapter, p. 1.

5 Ibid.

can be expected, at least sometimes, to know what the future will be. ¹

The deterministic universe, then, justifies or validates divination, ² but, at the same time, the fact that divination "works," is a confirmation of the Stoic belief in universal causality. ³ Diogenianos considered this to be circular reasoning - that Chrysippus was "begging the question." Diogenianos says,

"Chrysippus has given us a proof based on the mutual dependence of things. For he wants to show by the truth of divination that everything happens in accordance with fate, but he cannot prove the truth of divination without first assuming that everything happens in accordance with fate." ⁴

That is, Chrysippus is apparently assuming in his premise what he wishes to prove in the conclusion. This, of course, is what David Hume pointed out. There is no rational ground for the assertion of the principle of universal causality, i.e., no rational proof of the proposition 'the future will resemble the past'. If logical reasoning is used, the conclusion is ^{a tautology;} ~~a tautology;~~ if empirical or inductive reasoning is employed circular reasoning is involved. Every instance of inductive generalization

1 It should be noted that not every prophet practices a scientific art. Fortune tellers, necromancers, mediums, and those who prophesy for money are excluded. For they have neither the "knowledge or skill" that divination demands. They are "but superstitious bards, soothsaying quacks, /Averse to work, or mad, or ruled by want, / Directing others how to go and yet / What road to take they do not know themselves." Ibid., I, 132.

2 Diogenianos, Eusebios, op.cit., IV, 3, 1, "According to (Chrysippus) the predictions of the diviners could not be true if fate were not all-embracing."

3 "Each prediction that came true added a new instance to the sum total of all the cases noted by experience where the event B followed every time the factual situation A, as seen by the diviner, repeated itself." Sambursky, Physics of the Stoics, op.cit., p. 68.

4 Loc. cit.

which supposedly affirms the truth of the proposition 'the future resembles the past', has, as its assumption or first premise, the very proposition that is to be proved. Science, however, despite Hume, continued to use the method of inductive reasoning. If, for the scientist of today, a belief in the truth of universal causality is no longer a necessary assumption for the use of induction, which, in fact, it is not, the two, nevertheless, are generally considered mutually confirmatory. The Stoic view of the interdependence of the two appears to be close to this modern attitude.

CHAPTER FOUR

STOIC NOTIONS OF 'POSSIBILITY' AND 'CHANCE'

Within the context of their strict causal determinism, the Stoics were drawn into discussions concerning notions of the possible and of chance events. They said that a possible event is one "that is not prevented by anything from happening even if it does not happen."¹ This definition, reported by Alexander of Aphrodisias (late 2nd century A. D.) is not attributed to a specific source, but it closely resembles a statement in Plutarch² directly assigned to Chrysippus. It would seem that either Alexander took the statement from a later doxographer or that he is using an authentic quotation from Chrysippus. Plutarch reports that Chrysippus said, "everything is possible that admits of happening even if it will not happen." A sentence from Cicero explains, "For instance it is possible for this jewel to be broken even if it never will be..."³

Quoting from the same Stoic source, and thus possibly Chrysippus, the

1 Alexander of Aphrodisias, On Fate, 176, 15; in Sambursky, Physics of the Stoics, op. cit., p. 136.

2 De Stoic Repugn., 1055d, op. cit.

3 De Fato, 13.

passage in Alexander continues:

"There is nothing to prevent the occurrence even of the opposite of what happens through fate, for even though it does not occur it is still possible."

Alexander, in his own words, adds the following explanatory remarks:

"And the fact that the preventing causes (of what does not occur) are not known to us is the reason for the assumption that there was no hindrance for the things to happen. . . . But because we have no knowledge of things which happen, therefore, so they say, things which do not happen seem possible to us. . . ."

This indicates that Stoic possibility is a characteristic or quality attributed to things or events by the knowing (or, more accurately, the ignorant) mind. Things and events do not contain an "inherent" or "objective" or "real" possibility, so to speak, but only a kind of possibility attributed to them because the mind does not know the complete causal sequence which will lead up, necessarily, to their realization. The possible, then, becomes a subjective category; in a sense, an epistemological category. The Stoic theory of the possible refers to the nature of the knowing mind rather than to the objective succession of events. In this way the Stoics, like Laplace, "defined equally possible cases as cases about whose existence we are in equal ignorance,"¹ and thereby preserved a meaning for the possible within

¹ Theorie analytique des probabilites, 1812, p. 178, quoted by Sambursky, "On the Possible and the Probable. . .", op. cit., p. 40.

their deterministic framework.¹

As to the nature of the unknown "preventing causes," which determine that a thing or event will not come to be, we find in the same passage quoted above from Alexander that:

"These things which are the causes for the opposite things to happen according to fate are also the causes for the non-happening of the things themselves, if, as they say, it really is impossible that under the same circumstances the opposite should happen."

In this way the Stoics contend that their theory of the possible

"does not exclude that everything shall happen according to fate. . . ."

What is meant can be illustrated by supposing two "equally possibly" propositions about a future event: 'Tomorrow there will be a naval battle;' 'Tomorrow there will not be a naval battle'. These two propositions were first analyzed by Aristotle.² They exhibit a relation of "exclusive disjunction" so that they cannot both be true. Recall the Stoic view that there is one causal chain, in which all things and events are contained and interrelated. Suppose that the first proposition, 'that there will be a naval battle tomorrow' is the true proposition, i. e., that when

¹ Alexander of Aphrodisias, op. cit., 176, 26, quoted in Sambursky, The Physics of the Stoics, op. cit., p. 75. "According to them (the Stoics) the possible is relative to our cognition." Alexander adds, "for those who are able to know the full causal nexus, as for instance the diviners, the possible does not exist."

² De Interpretatione 19a 28f.

tomorrow comes a naval battle actually does take place. Now, what the Stoics want to say is that within the context of the causal nexus, certain things and events led up to, or were the causes (let us call them a, b, c and d) of the naval battle (E) taking place. We may symbolize the situation, then, as follows: $\overline{[(a.b.c.d) \supset E]}$

Now, this string of causes (a, b, c, and d) which brought about E, also "caused" $\sim(\sim E)$, (i.e., it is not the case that a naval battle will not take place tomorrow.). For, if $a \sim(\sim a)$; if $b \sim(\sim b)$; and if $E \sim(\sim E)$. That modern readers may find this explanation strange may be due to the fact that the Stoics said that E was the cause of not not-E, while today we would probably say something like the realization of E precludes the realization of not-E.¹ It would not be too unusual, however, to say that the occurrence of E determines not not-E as in "The Prime Minister's decision to appoint or not to appoint a committee to study the problem will determine whether or not the problem is solved." This would be quite close to what the Stoics meant by E causes not not-E. This is what they intended, then, when they claimed that their theory of the possible did not contradict heimarmene. For, if the causal nexus which leads, necessarily, to the realization of a certain event is not known in its entirety, and, in addition, these same causes are also the causes for the non-realization of the contrary event, then, the realization of the contrary event can seem to be, to the non-omniscient intellect, a possible event.

In order to make Chrysippus' views clearer, we will look at another view of the possible held in Hellenistic times and argued against by him in his book On

¹ See Supra, Chapter II, p. 48, on the broad Stoic use of 'cause'.

Things Possible. Diodorus Cronos,¹ a logician of the Megarian School,² said, "only what either is true or will be true is a possibility."³ In this view only one of two alternative propositions, e. g., either there will be a naval battle tomorrow or there will not be, is possible, for in Diodorus' definition only what actually happens or what actually will happen, can be categorized as possible.⁴ One of

1 Diodorus was a native of Iasus in Caria who lived at the court of Alexandria in the reign of Ptolemy Soter (c. 300 B. C.). Because of his great skill in logic he was called "the logician" and "most logical one." Mates, op. cit., pp. 5-6.

2 The Megarian school was founded by Euclid the Megarian. They developed Socratic teaching into an extreme Realism in which the universal absorbs the particular and is the only reality. (The Cynics took the opposite emphasis in Socratic teachings and stressed the individual.) The Megarians held that multiplicity and change are essentially contradictory and, therefore, illusory. The ethical end of the individual is absorption in the Absolute. Members of the school were Thrasymachus of Corinth; Eubulides, a logician, and supposedly the author of the antinomy of The Liar; Ichthyas, the successor of Euclid as head of the school; Apollonius Cronos; Philo of Megara; Stilpo, who taught Zeno; and Diodorus Cronos. Mates, Ibid. See also, Edward Caird, The Evolution of Theology in the Greek Philosophers, (2 volumes; Glasgow; MacLehose, Jackson and Company, 1923), Vol. II, pp. 68f.

3 Cicero, De Fato, 13. Alexander, In An. Pr., 184, edited by Wallies and quoted by Mates, Ibid., p. 40, gives, "the possible is that which either is or will be." But Mates observes that after analysis of the closely related Diodorean definitions of the terms 'impossible', 'necessary', and 'non-necessary' found in Boethius (In De Interp., edited Secunda, Meiser, 234; Mates, Ibid., p. 37), the definition should read, as Cicero puts it, "the possible is that which either is or will be true." The other Diodorean definitions are: "The impossible is that which, being false, will not be true." "The necessary is that which, being true, will not be false." "The non-necessary is that which either is or will be false."

4 Alexander, In An. Pr., loc. cit., gives the following examples: "According to him (Diodorus) it is possible for me to be at Corinth if I am at Corinth or if I am going to be at Corinth. But if I should never be at Corinth, it wouldn't have been possible. And a child's becoming a grammarian is possible, if he ever does become one."

the difficulties in understanding the theory of Diodorus is, as Mates points out, that Diodorus seemed to view propositions as though they contained time-variables; in other words, he confused propositions with propositional functions. Mates says of Diodorus that,

"His examples always include expressions like 'It is day,' and he says that these are true at certain times and false at others, or that they become true and become false. It seems, therefore, that instead of dealing with what today would be called 'propositions,' he in effect considered the corresponding functions formed by adding 'at t' to each proposition: "Snow is white at t," "grass is green at t," "It is day at t," etc. Thus "(t) (Snow is white at t)" would represent the Diodorean-type proposition "Snow is white' is always true;" and "(Et) (Snow is white at t)" would represent the statement "'Snow is white' is sometimes true." ¹

Diodorus' position would be clearer if we knew more of his arguments. We do know the so-called "Master" argument which, as we learn from Alexander, ² Diodorus employed to justify his theory of possibility. However, because of lack of information concerning it, it is not of much help. It is briefly discussed by Epictetus, ³ and consists of the following three propositions, of which any two are supposed to contradict the third:

1 Mates, op. cit., p. 36.

2 Alexander, In An. Pr., loc. cit., quoted by Mates, Ibid., p. 38, "And for the establishment of this (notion of possibility) the 'Master' Argument was put forth by Diodorus."

3 Discourses, translated by W. A. Oldfather (2 volumes; Loeb Classical Library; London; William Heinemann Ltd., New York; G. P. Putnam's Sons, 1926), II, 19.

- (1) Every proposition true about the past is necessary.
- (2) An impossible proposition may not follow from a possible one.
- (3) There is a proposition which is possible, but which neither is true nor will be true.

According to Epictetus, Diodorus accepted the truth of (1) and (2) and thereby established the validity of his definition of the possible as that which either is or will be true. The incompatibility of the three propositions must have been generally accepted,¹ for Epictetus tells us that different combinations were chosen by other philosophers. Cleanthes picked propositions (2) and (3) as the true ones, while Chrysippus chose (1) and (3). Chrysippus, in the first book of his treatise On Things Possible, wrote against the Diodorean choices and in defense of his own. Epictetus, in the same passage, also reports that Cleanthes wrote "a special work on the topic," as did Antipater of Tarsus (a Stoic philosopher, c. 133 B. C.) in his book On Things Possible and in his monograph The Master Argument.

The principal objection of Chrysippus to the theory of Diodorus is his identification of the possible with the necessary. "A possibility is that which either is or will be true, and whatever will be, he (Diodorus) says, must

¹ There is so little information available about the argument that scholars do not agree on its correct interpretation. Zeller (quoted by Mates, op.cit., pp. 38-39) puts forth an analysis in which he claims that in the second proposition Diodorus is confusing logical with temporal consequences. On the basis of this assumption, Zeller goes on to construct what he believed the argument to be. Mates, although he rejects Zeller's explanation, admits that he is not able to find a more satisfactory answer as to why the propositions were considered incompatible.

necessarily happen, and whatever will not be, . . . cannot possibly happen." ¹
 Chrysippus wished to preserve a meaning for the term 'possible' within the
 context of Stoic determinism, ² which he did by making it a subjective or
 epistemological rather than an ontological category.

Philo of Megara, a pupil of Diodorus Cronos, held a view regarding
 possibility different from his teacher and with formal affinities ³ to the Stoic
 view. Philo said that a proposition is possible "if in its internal nature it is
 susceptible of truth." ⁴ That is, the criterion of possibility rests in "internal
 fitness" and not in external circumstances. Simplicius, discussing Philo's
 theory of knowledge, says,

"Shall we decide by fitness (in the sense of
 capability of coming into being) alone, as
 Philo said. . . . As for instance that a piece
 of wood in the Atlantic ocean is combustible
 in itself and according to its own nature." ⁵

1 Cicero, De Fato, 13.

2 "Things which will not be are also 'possible'." Ibid.

3 Reesor, "The Stoic Categories", op. cit., p. 66, believes they are
 substantial affinities. She says 'being breakable' is a characteristic, or quality
 of jewels just as "hot is a quality of fire and cold of ice, and all quality is an aspect
 of the logos." The jewel may never be broken; that is circumstances may never
 arise whereby the jewel will actually be broken. Nevertheless, 'being breakable'
 remains a possible quality of the jewel. Just as we saw in Philo - a piece of wood
 at the bottom of the ocean is combustible - or has the possible quality of combusta-
 bility - even though it may never be actually burned.

4 Boethius, In De Interp. quoted by Mates, op. cit., p. 40.

5 Simplicius, In Categ., 195, 32, quoted by Sambursky, The Physics
 of the Stoics, op. cit., p. 136.

This sounds very much like Chrysippus' view that "it is possible for this jewel to be broken even if it never will be."¹

That these two views share only formal similarities will become apparent when it is recalled that for Philo the possibility of the jewel being broken, or the water-soaked piece of wood being burnt (and their opposites - not being burnt or not being broken) - are real, non-subjective contingencies, which exist by virtue of the nature of the things (jewels and wood) concerned. This is why he uses the adjective form 'combustible' rather than the verb form 'can be burnt.' We could say, with truth, and be making a statement about objective reality, that it is possible that this piece of wood on the bottom of the ocean is combustible. As Sambursky notes, in Philo's position

"possibility is seen as an application of the definition of a certain property to a special case. We know by experience that wood can be burnt and, having arrived by induction at combustibility as a property of wood in general, we ascribe it as a possibility also in cases which may to the best of our knowledge never be realized."²

For the Stoics, on the other hand, should we make the same statement, i. e., that it is possible for this piece of wood on the bottom of the sea to burn, we would not be talking about the objective and determined flow of events, for within that determined flow there is no possibility - the particular piece of wood will either be

1 Cicero, De Fato, 13. We should note that the Stoics do not use the adjective form 'breakable', but, rather, the verb form 'can be broken'.

2 Sambursky, The Physics of the Stoics, op. cit., p. 74.

burned or it will not. What we would be, in effect, saying when we make such a statement, is that so far as our knowledge of wood and its properties is concerned, we have observed that wood does burn; that is, insofar as our knowledge of the characteristics of the class 'wood' is concerned, we can speak of its burning as a possibility. Its burning, so far as our knowledge goes would not be in conflict with the observed regularities in nature. But, in relation to this particular piece of wood which lies at the bottom of the sea, we can speak of the possibility of its being burned only in relation to our knowledge or lack thereof of the entire causal nexus which will determine whether or not it is burned. Since we do not know if this piece of wood will lie in the sea until it disintegrates or if it will perhaps someday be washed ashore and used as fuel, we can say of it that it is possible that it will be burned only in relation to our subjective and limited knowledge of future happenings in a deterministic world.

All events are causally determined and, in this respect, all events are necessary. But, by limiting the application of 'possibility' to those cases in which our knowledge is incomplete or incomprehensive (i. e., for example, in empirical situations); by making its use subjective rather than objective, it was consistent for the Stoics to claim that the possible does not conflict with heimarmene.¹

1 Plutarch raised the common criticism that the two are irreconcilable. *De Stoic Repugn.*, 1055d-e, quoted by Sambursky, *Ibid.*, p. 75 (SVF II, 202). "How could there be no contradiction between the doctrine of the possible and the doctrine of fate? If indeed the possible is not that which either is true or will be true, as Diodorus postulates, but everything is possible that admits of coming true though it may never come about, then there will be many things possible among those which will not happen in accordance with unconquerable, unassailable and victorious Fate. Either the power of Fate will dwindle or, if Fate is as Chrysippus supposes it to be, that which admits of happening will often become impossible. For all that is true will necessarily be, being compelled by supreme necessity, but all that is false will be impossible, the strongest cause preventing it from becoming true."

This subjective and epistemologically related notion of the possible is further clarified by their classification of the kinds of propositions. Propositions are, of course, judgements and, therefore, concerned with the question of knowledge. Within this epistemological framework the Stoics gave meaning to the possible, impossible, necessary and non-necessary - in so far as propositions or judgements are concerned. We must not forget that in so far as objective reality is concerned, i. e., in that realm which exists regardless of our knowledge of it, there is only room for the necessary and its opposite, the impossible.

The Stoic classification of propositions is found in Diogenes Laertius.

"A proposition is possible which admits of being true, there being nothing in external circumstances to prevent it being true, e. g. 'Diocles is alive.' An impossible proposition is one which does not admit of being true, as e. g. 'the earth flies.' ¹

Now, this passage indicates that a possible proposition comes very close to what we would call today an empirical or synthetic proposition. ² The 'admission' or the 'capability', once we note the explanatory clause in Diogenes Laertius' statement ('there being nothing in external circumstances...') must refer to an empirical admission or permissibility. That is to say, there is nothing in the observed regularities in nature which would negate the possibility of Diocles' being alive.

1 Diogenes Laertius, VII, 75; Clark, op. cit., substitutes 'capable' in place of 'admits'.

2 See Sambursky, "On the Possible and the Probable..." op. cit., p. 41.

There is no reason "in the nature of things" which would necessarily preclude the possibility of this proposition being true. There is such an empirical inadmissibility of occurrence in the truth of the proposition 'the earth flies'. As Mates points out, "for something to be possible it was only required that it be 'capable of being'." ¹

Diogenes Laertius goes on to state the Stoic definition of a necessary proposition as one

"which besides being true does not admit of being false, or while it may admit of being false is prevented from being false by circumstances external to itself, as 'Virtue is beneficial.' A non-necessary proposition is one which is true and is capable of being false, the external circumstances not preventing it, such as 'Dion is walking'."

Here we see, I believe, two not clearly distinguished senses of necessary. The first part of the statement, "which besides being true does not admit of being false," leads to the conclusion that in distinction from possible (or empirical propositions) a necessary proposition is one which deals with logical or mathematical matters. In the discussion that follows I will designate such logically necessary propositions as "necessary(1)". As a matter of fact, Sambursky says, "The attribute 'necessary' should be reserved for propositions which are always true irrespective of time, i. e., logical (or mathematical) statements." ²

1 Op. cit., p. 41.

2 Sambursky, "On the Possible and the Probable...", op. cit., p. 41.

This assessment, however, does not appear to take into consideration the second clause of Diogenes Laertius' account. "Or, while it may admit of being false, is prevented from being false by circumstances external to itself, as 'Virtue is beneficial' ". Now, it is of the very nature of logical statements that they do not depend on anything external to themselves for their truth or falsity. Therefore, it would seem that the Stoics considered a class of propositions necessary in addition to those which are logically necessary.

The particular example chosen ('Virtue is beneficial') to illustrate what I shall designate "necessary (2)" propositions is significant. It is probable that only a limited number of propositions would fit this description. 'Virtue is beneficial' is a proposition which admits of being false - and here I think we should understand 'admits' in the logical sense, in the sense that the negation of this statement would not involve a contradiction. Therefore this proposition is not necessary(1). But, external circumstances prevent its falsification. Here we seem to be brought back to those conditions which determine possible propositions, i. e., "A proposition is possible which admits of being true, there being nothing in external circumstances to prevent its being true." The meaning of "external circumstances", however, for each type of proposition must be different. Obviously those every-day, time-dependent circumstances which determine the truth or falsity of possible propositions are not the same as those which determine the truth of necessary(2) propositions.

The "external circumstances" which determine necessary(2) propositions, presumably refer to the ethical or metaphysical preconceptions of Stoicism - in

particular their concept of the summum bonum and the nature of man. Since this paper is not intended to be an analysis of these questions, I will merely sketch out the main aspects of their views in these matters, suggesting thereby the direction one would take in searching out a comprehensive understanding of the sense of "external circumstances" in regard to such necessary(2) propositions as 'Virtue is beneficial'.

The Greek Stoics maintained (1) that man's nature is essentially rational; that his capacity to reason was his highest and most perfect faculty;¹ that reason constituted man's "link" with the Divine, i. e. that it was the aspect of his being which he had in common with the Divine.² (2) To "follow Nature" is the guiding principle of their ethical thought.³ To "follow Nature" means either one's individual nature or the universal nature, both being, in the final analysis, the same.⁴ For man, this life is possible when he lives in "harmony with himself and with reason, that reason which is his own individual nature and at the same time the nature of the whole universe."⁵ The result of leading this kind of rational life

1 SVF II, 836, Aetius; SVF II, 837, Diogenes Laertius.

2 Zeller, op. cit., pp. 261-271. We must note, however, that 'divine' means nothing more than logos-pneuma, and does not represent anything outside of the world process.

3 See also SVF III, 13, Cicero.

4 "Living virtuously is equivalent to living in accordance with experience of the actual course of nature...for (Chrysippus says) our own individual natures are parts of the nature of the whole universe." Cleanthes, however, "takes the common nature alone as that which should be followed, without adding the nature of the individual." Diogenes Laertius, VII, 86-87.

5 Hicks, Stoic and Epicurean, op. cit., p. 77.

is the realization of the ethical goal of virtue, and, consequently, the experiencing of happiness and joy.¹ (3) This result is possible because they hold the Socratic view that virtue is essentially knowledge and vice is ignorance.²

Now, given these three basic positions which were, in their view, descriptive of the nature of things and of man in a real and, we might say, ontological sense, we can begin to appreciate what they meant when they designated as necessary such propositions as 'Virtue is beneficial.' They are necessary because the "external circumstances" - in this case the nature of man, the highest good and the relation between reason and virtue - are as they are. These are "facts" about reality, about the world. They describe reality or the world as it actually is. For such a proposition as 'Virtue is beneficial' to be false, these "external circumstances" would have to be different from what they, as a matter of fact, happen to be. This class of necessary(2) propositions has certain affinities, with important qualifications, of course, to Kant's synthetic a priori propositions, those propositions which are descriptive of empirical facts - which are informative - and yet are both universal and necessary.

We can say, then, that the possible, as an epistemological or subjective category which the mind attributes to an event because of its ignorance of the complete causal sequence that will determine or lead up to the event, is particularly

1 Ibid., p. 108.

2 Zeller, op.cit., pp. 58-59; Hicks, Stoic and Epicurean, op.cit., p. 104. See also Infra, Chapter V, and the definition of freedom as self-determination in the sense of following one's own nature.

related to what we would call today empirical events. Logical truths and synthetic a priori propositions about which we know "more" because they belong more intimately to our mind, are necessary "from the beginning." Possibility refers, in other words, to the gap between knowledge and reality.

From the Stoic notion of the possible and the related idea of necessity, we may move easily to their views on chance (tyche) and the uncaused event.

"The Stoics who believe that everything happens out of necessity and by providence, judge the causal event not according to the nature of chance itself but according to our ignorance; for they take as causal that which, though happening by necessity, is not known to men." ¹

Also, from Alexander of Aphrodisias,

"The assertion that chance is a cause obscure to the human mind is not a statement about the nature of chance but means that chance is a specific relation of men towards cause, and thus the same event appears to one as chance and to another not, depending on whether one knows the cause or does not know it. . . " ²

This "relational" analysis of chance and the possible marks a divergence from the Aristotelian position and explains, in part, the attacks directed against the Stoics by such "pure" Aristotelians as Alexander of Aphrodisias. The Stoics said that chance or the uncaused event would be akin to a creation ex nihilo and equally

¹ Boethius, De Interpretatione, II, p. 194, in Sambursky, The Physics of the Stoics, op.cit., p. 135.

² De Anima, 179, 6, in Sambursky, Ibid., p. 135. See also, SVF II, Simplicius; SVF II, 966, Aetius; and SVF II, 979, Alexander of Aphrodisias.

impossible.¹ Aristotle, while not going so far as to ascribe causal efficacy² to chance in the sense or senses of his material, formal, efficient and final causes, does ascribe to chance some sort of reality or existence. In Metaphysics, XI, 1065a 33f, Aristotle defines chance as "obscurity to human calculation," and asserts that it is a "cause by accident."

This conception would appear to correspond to what the Stoics meant by chance. The difference lies, however, in the meaning given to the statement in the two systems. For the Stoics, as we saw, this is a statement not about the nature of chance as such, as it was for Aristotle, but means, rather, "that chance is a specific relation of men towards cause."³

Aristotle's views on chance, at least as discussed in the Physics,⁴ and as appear from his illustrations, indicate that chance or the chance event is one in which two apparently unrelated chains of events intersect. The result of this intersection leads to an occurrence not involved in one or the other of the events alone. For example, a man goes to the market to buy food (A); he meets there another man who owes him money (B); the result is the payment of the debt. Neither of these two unrelated events (A or B), by themselves, can be said to have produced

1 Alexander of Aphrodisias, De Fato, 192, 14, in Sambursky, Physics of the Stoics, op.cit., p. 55.

2 "It is not an operative cause but only a name for a certain kind of connection between events." Ross, op.cit., p. 76.

3 Alexander of Aphrodisias, De Anima, 179, 6ff., Sambursky, The Physics of the Stoics, op.cit., p. 76.

4 II 4-6; following Ross, Op.cit., pp. 75-78 and Theodor Gomperz, Greek Thinkers, (4 volumes; London; John Murray, 1912 - 1920) IV, pp. 95-96.

the effect of collecting or paying the debt. The trip to the market-place on the parts of both men was undertaken to achieve a different result. That debt-collection did also result cannot be attributed to the causal sequence which led up to either man's original action. Its occurrence, therefore, can be said to be indeterminate; it is a chance-event.

This account, in itself, as Ross emphasizes,¹ has defects and does not establish Aristotle as a thorough-going indeterminist.² All he has actually said is that these two men both had sufficient reasons for being in the same place at the same time. A's lack of knowledge of B's reasons for being there makes it appear, to A, that B's presence is a chance occurrence and vice-versa. The result of this chance meeting is the realization of a goal different from the intended goal of A and B in this instance and, therefore, an instance of chance. But, on these grounds, "chance is simply a name for the unforeseen meeting of two chains of rigorous causation."³

Ross concludes, however, from other passages (notably those in which Aristotle discusses freedom) that "Aristotle seems to believe in an objective contingency which is not a mere euphemism for our ignorance of the future. He had no clear conception of a universal law of causation."⁴

1 Ross, Ibid., pp. 77-78.

2 Gomperz, op. cit., is in agreement, pp. 97 ff.

3 Ross, op. cit., p. 78.

4 Ross, ibid., p. 201, refers to De Int. 18a 33-19b 4; Met. 1027b 10-14.

Aristotle rejected the Megarian view discussed above (p.75 ff) in which of two contradictory statements about a particular future event only one can be true. In De Interpretatione¹ this is made clear when Aristotle analyzes the sentence, 'tomorrow there will be a naval battle'. He acknowledged only that once tomorrow has come and a naval battle does or does not take place, would it be meaningful to say of the statement that it is true or false. It would not be meaningful to say of such a statement, made before the occurrence of the event, that this statement was either true or false. This would only be possible in a completely determined universe and then only by a Laplacean "omniscient intellect."

This is Aristotle's position in regard to the world of generation and corruption. As far as empirical events and entities in the sublunar sphere are concerned, there is a real and observable contingency, i. e. such events are undetermined in principle and may be said to belong to the order of the 'possible'. "Absolute necessity," however, applies only to the rotation of the heavenly bodies and to other "cyclical series... as the succession of the seasons which depend on the motions of the heavenly bodies, or the series cloud-rain-cloud-rain..., or man-seed-child-boy-man."²

It would appear, from this account of Aristotle's views, that there is a certain ambiguity in his use of the word 'possible'.³ In the foregoing cases, of

1 19a 28ff, quoted by Sambursky, "The Possible and the Probable...", op. cit., p. 39.

2 Ross, op. cit., p. 81.

3 As Sambursky points out; "The Possible and the Probable...", op. cit., p. 39.

those events which are "absolutely necessary," the possible is connected to the necessary. That is, the rotations of the heavenly bodies are eternal, immutable and, therefore, absolutely necessary or determined, and the terms 'possible' and 'necessary' are, in effect, synonymous.¹ However, in the discussion of the statement about tomorrow's naval battle, the possible is linked to an element of real contingency and is related to the non-necessary. In such a situation, the possibility of a naval battle taking place tomorrow does not entail that the battle will necessarily occur. Such an event can be termed 'possible', not because it necessarily will occur (as is the case with the rotations of the heavenly bodies), but because its occurrence is not necessary: it is illustrative of the contingent nature of events in the sublunar sphere.

The Stoic universe, however, is one without any "real" contingency. All events are "necessary" in the sense of being determined by preceding causes. "Possibility" and "chance" are merely subjective categories which refer to our knowledge or lack of knowledge of the chain of causes.

1 Metaphysics IX, 1050b 6-25.

CHAPTER FIVE

CAUSAL DETERMINISM AND FREE WILL

We have surveyed briefly the physical background of the Stoic concept of heimarmene and its relation to relevant parts of the Stoic system. We must now consider how the Stoics attempted to reconcile their belief in causal determinism or heimarmene with the supposedly incompatible assumption of the freedom of the will. Since this is not a study of Stoic ethics, the treatment of the topic will not be as exhaustive as would be required had our principal concern been ethical. Of primary interest is the question of how the Stoics reconciled the notion of causal determinism with that of free will: in other words, how far the Stoics were able to safeguard the consistency of their system.

Their critics claimed that the freedom of choice which ^{the Stoics} ~~they~~ claimed to be necessary for their ethics, was not consistent with the causal determinism they postulated in their physics. If the will is determined in its choices by previous causes, it would appear meaningless to assign blame or praise to the moral agent or to hold him morally responsible for his choice.¹ The classic view of those

¹ Ledger Wood, "The Free-Will Controversy", Philosophy, Vol. 16, 1941.

who assert the incompatibility of universal causality and free will takes the form that "an action is really free only if under the very same circumstances in which it was performed it might not have been performed." ¹

Typical of this kind of criticism is the following excerpt from the Peripatetic Diogenianos (c. 1st century B. C. - 1st century A. D.)

"I believe that in the same way as the notions sweet and bitter, black and white, hot and cold are absolute contraries, so are also "by our free will" and "by fate;" provided one defines "according to fate" as the course things would take under any circumstances, whether we follow readily or not, and "by our free will" a course which will reach its goal through our endeavors and actions, but will fail to reach it if we do not care and are idle." ²

Other criticisms took the view that Stoic determinism would entail a life of complete inaction. This kind of criticism was frequently expressed by the Idle or Indolent argument, which runs as follows:

"If it is fated for you to recover from this illness, you will recover whether you call in a doctor or do not; similarly, if it is fated for you not to recover from this illness, you will not recover whether you

¹ Arthur Pap, An Introduction to the Philosophy of Science, (New York; The Free Press; London; Collier-Macmillan Ltd., 1962), p. 335.

² Quoted by Eusebius, Praep. Evang., VI, 8, 30; in Sambursky, The Physics of the Stoics, op.cit., p. 61. See also Nemesius, op.cit., pp. 399-400, who attempts to show that an ethic of moral responsibility cannot follow from a deterministic physics. Diogenianos is apparently confounding "fatalism", "the course things would take under any circumstances" with "determinism", the view that all events have causes. The latter is the Stoic position. This criticism, therefore, "misses the mark."

call in a doctor or do not; and either your recovery or your non-recovery is fated; therefore there is no point in calling in a doctor." 1

Chrysippus attempts to discredit this argument by, typically, drawing a distinction.² There are two kinds of facts, he claims, simple and complex. An example of the former is 'Socrates will die at a given date.' There is no conceivable action on Socrates' part which would alter the fact that he will die at a particular date. That 'Laius will have a son Oedipus' is a complex fact. To say that if it is fated for Laius to have a son no matter what he does - as was observed to be true in the case of the simple fact of Socrates' death - is absurd. For, 'to have a son' means or entails the additional fact that Laius must mate with a woman. His mating is "co-fatal," or "co-destinate" - or goes together with - his having a son. In the case of the illness, another complex fact, calling in a physician is "co-destinate" or equally a part of the chain of determined causes as is the recovery. The "absolute inactivity" supposedly established in the Indolent argument is easily rebutted, for

"All these things are equally predestined, and go together by fate. There is no such thing as a watch kept by sleepers, a victory won by runaways, or a harvest reaped except after sowing good clean soil." 3

1 Cicero, De Fato, 28-30; See also Seneca, Nat. Quest., iii, 37, 1.

2 Cicero, loc. cit.

3 Plutarch, fr. 15, 3; Stobaeus ii 8, 25; found in Arnold, op. cit., p. 201.

In response to those criticisms which assert the incompatibility of determinism and free will, Chrysippus drew his well-known distinction between causes. ¹

"Some causes are perfect and principal, others auxiliary and proximate. Hence when we say that everything takes place by fate owing to antecedent causes, what we wish to be understood is not perfect and principal causes but auxiliary and proximate causes." ²

What he means is that in the sphere of human conduct we can observe two chains of causes which result in a specific act on the part of an individual. In the first place, there are all those external causes - the auxiliary and proximate ones - which lead up, in a natural and deterministic fashion, to a sensory presentation to the individual. The sensory presentation is "fated;" it is the culmination of a complex series of antecedent causes and therefore determined by them. The individual has little or no control over, or freedom from the kinds of sense-perceptions to which he is subjected. They are, for the most part, outside his power.

Once the sense-datum is presented to the individual, however, he is free to judge it as a true or false perception, to choose a course of action in compliance with it or not, etc. ³ Here we have the second chain of causes, the perfect and

1 See Supra, Ch. II, p. ~~37f.~~ ^{38f.}

2 Cicero, De Fato, 41.

3 "Every event is determined by natural necessity, but in the moment of judging the rational being is free to obey reason or to disobey it. The strength and tension of the soul, in the last resort, alone decides what he will do." Hicks, Stoic and Epicurean, op. cit., p. 104. See also, SVF I, 563, Plutarch and SVF I, 563, Stobaeus. See also Supra, Ch. I, p. 12.

and principal causes, which originates in and from the individual himself. Freedom consists in the fact that choice is completely self-determined, in the fact that choice is in conformity with one's own nature.¹ This is not to say, however, that choice (or judgement or assent) takes place without the external stimulus of a sense-presentation.

"... assent can(not) take place without being aroused by an external force...for assent must necessarily be actuated by our seeing an object..."²

The self-determination in which man's freedom is found can be examined on two levels which, for the sake of convenience, we will term the "general" and the "particular". A simile by Chrysippus found in Aulus Gellius illustrates this point.

"For instance, if you roll a cylindrical stone over a sleeping, steep piece of ground, you do

1 Hicks, Ibid., p. 77. Freedom and happiness are to be found in willing "nothing that will not be realized independently of us." An interesting confirmation of the Stoic belief in the freedom of the will is found in their attitude toward suicide. Suicide is advocated in those cases where to go on living holds no moral advantage over dying, as when Zeno and Cleanthes reportedly committed suicide because of their extreme ages. It is also called for in cases where one is faced with an irresolvable moral dilemma. In such a situation, neither resignation nor acceptance is recommended, but suicide; and such a decision is seen not as an escape, but "absolutely as the highest expression of moral freedom," for it is the act of supreme self-determination. See Diogenes Laertius, VII, 130; Seneca, inter alia, Ep. 12, 10; De Providentia, 2, 9; Ep. 71, 16, in which suicide is seen as the highest triumph of the human will. See also Zeller, op. cit., pp. 335-340; Edelstein, op. cit., p. 7.

2 Cicero, De Fato, 42.

indeed furnish the beginning and cause of its rapid descent." ¹

The "sleeping, steep piece of ground" and the initial act of pushing the round stone represent the external sense-presentations or the "auxiliary and proximate" causes over which the individual has little or no control. It is these which represent the external impetus to action. The Gellius passage continues,

"soon it speeds onward, not because you make it do so, but because of its peculiar form and natural tendency to roll...."

That the stone continues a rolling descent, or that its motion subsequent to the initial impetus is as it is, is due to the stone. In this respect it is "self-determined," and to this extent it is acting "freely," i. e., in accordance with its nature. It naturally falls downward "because it contains gravity in itself which is the cause of its natural movement," ² and it rolls downward because of its peculiar shape.

As the stone is "free" in this sense, so man, when he acts in accordance with his nature, is a free agent. The natural movement of men is "impulse." ³

1 VII, ii, 11-12; in Cicero, Ibid., the illustrations used are those of an agricultural roller and a child's top. See Supra, Ch. II, p. 39.

2 Alexander of Aphrodisias, De Fato, Ch. 13, in Sambursky, The Physics of the Stoics, op.cit., p. 133.

3 Ibid. See also Nemesius, loc.cit., and Cicero, De Fato, 41, where it is called "desire" (appetitus); SVF II, 988, Origen, Clark, op.cit., "The rational animal...has reason also which judges the images rejecting some and accepting others that he may be led by them."

That is, human being naturally assume an attitude towards or make a judgement concerning the various sense-presentations they receive. This "natural movement" of "impulse" or judging is free, for men exercise it solely by virtue of their being men, just as the stone falls downward solely by virtue of the "gravity it contains."

The "particular" aspect of the self-determination in which freedom is found, is seen, in the case of the round stone, in the fact that it rolls down the hill. With men, also, the kind of judgement they make in respect to a sense presentation is determined or caused by the character of the particular man concerned.¹ Chrysippus supposedly said that,

"...the carrying out of our designs and thoughts, and even our actions, are regulated by each individual's own will and the character of his mind."²

Obviously, one cannot escape from himself; man does not exercise his will in a vacuum. Each choice he makes, each act of judgement, is, to a certain extent determined in general by his being a man and in particular by his own experiences,

1 The sources attributed to Zeno and Cleanthes on this subject are rare and what follows, therefore, is a reconstruction of Chrysippus' views. The sources discuss only his views. From this we may conclude that either the views of Zeno or Cleanthes agreed with those of Chrysippus, or, if they differed, Chrysippus' position came to be accepted as "orthodox."

2 Aulus Gellius, op. cit., VII, ii, 11-12. Stated in physical language, man's actions are determined by the degree of tension of the pneuma in him. See Supra, Ch. I, p. 12.

education, natural capabilities, character, etc.¹ Consequently, Chrysippus can maintain that all things happen by heimarmene, that all events have causes,

"Yet the peculiar properties of our minds are subject to fate only according to their individuality and quality. For if in the beginning they are fashioned by nature for health and usefulness, they will avoid with little opposition and little difficulty all that force with which fate threatens them from without. But if they are rough, ignorant, crude, and without any support from education, through their own perversity and voluntary impulse they plunge into continual faults and sin, even though the assault of some inconvenience due to fate be slight or non-existent."²

Still, because such choices or judgements are derived solely from ourselves - i. e., they are "in our power" - they are said to be free, in the sense of being free from external compulsion and being solely self-determined.

Some of the qualities of men are the product of inheritance, due to antecedent causes and therefore "fated."

"We admit that it is not in our power to be brilliant or stupid, strong or weak... Men may be born ingenious or slow, strong or weak..."³

¹ Ibid., 6-10. "For it is in the nature of things, so to speak, fated and inevitable that evil characters (for example) should not be free from sin and faults." This idea that character is man's fate (not that man's character is fated) is recorded in a fragment of Heraclitus (119, Diels 5th edition). It is also one of the preponderant themes in the Greek tragedies, in which the decisions and actions of the hero seem to follow, with a certain kind of inevitability and predictability, from the kind of person he is.

² Aulus Gellius, Ibid.

³ SVF II, 951, Cicero, Clark, op.cit.

But there are things "in our power;" viz. our will and desires. It does not follow from the fact that some qualities are "fated" in the sense that they are part of our inherited characteristics, that, for example,

"We do not voluntarily (will or desire to) sit or walk, or...do anything...." ¹

We should briefly note here the difference between freedom of choice and freedom of action. It is only the former which Chrysippus, through the distinction he draws between causes, is interested in preserving. Freedom of choice can be defined ² as entailing those "factors responsible for a man's decision to commit himself to one alternative rather than another." The factors involved in choice are Chrysippus' "perfect and principal" causes; those causes related to the "disposition" of and controlled by the ^{entity} ~~entity~~ "in which they are present." ³ Freedom of action, on the other hand, is determined by those factors "responsible for a man's ability to achieve his ends, once he has committed himself to one alternative rather than another." ⁴ These factors would be the antecedent causes of Chrysippus and they can limit man's freedom in so far as choice is realized. That is, choice may be free, may be independent of these external conditions, but

1 Ibid.

2 Philosophical Problems, op. cit., p. 303.

3 SVF II, 974, Cicero; 991, Nemesius.

4 Philosophical Problems, loc. cit.

the action which would represent the realization of his choice may not be free. This can be illustrated by turning to the following passage in Cicero attributed by him to Chrysippus.

"...the reign of Cypselus at Corinth was not necessary although it had been announced by the oracle of Apollo a thousand years before."¹

That is, Cypselus was free to decide to rule or not to rule over Corinth - in this sense his reign was not "necessary;" i. e. he was not forced to that decision. Despite the fact that his forthcoming reign was known to the oracle, and upon the basis of this knowledge the oracle made his prediction, the foreknowledge of an event in itself does not entail that event's being determined. But, Cypselus' free decision to reign might never have been realized because of external conditions.² In that case, his free choice would have been in conflict with heimarmene, with the sequence of antecedent and auxiliary causes and,

"Even if (he) does not wish to follow, he will be... forced to enter into the fated event."³

There are situations, however, in which the individual has the power,

1 De Fato, 13.

2 Cf. Reesor, "The Stoic Categories", op. cit., p. 60, who says that the external conditions which might have prevented his rule could have been the refusal of the people of Corinth to accept his reign.

3 SVF II, 975, Hippolytus, Clark, op. cit.

"although antecedent causes have occurred, . . . to make the event turn out otherwise. . . ." ¹

To summarize the Stoic position, we can say that all things happen by fate (heimarmene) - that all things have a cause. But there are two kinds of causes operative within heimarmene in respect to human decision-making. One comprises all those natural, causal events external to the human mind - including sense presentations to that mind; the other comprises events whose causes are to be found entirely within the human being. These include willing, desiring, judging, choosing, those acts which carry moral connotations. In the broad sense, the events observable in both of these sequences are determined by preceeding causes: "All things are subject to an inevitable and fundamental law and are closely linked to fate. . . ." ² But, the "principal and perfect" sequence of causes, through which man wills or judges or chooses, is free; for, in Stoic terms, freedom consists in self-determination in acting in conformity with one's nature. These principal and perfect causes "participate in the determined chain of events independent of external conditions. . . (and) this participation appears in the consciousness of the human mind as free will." ³

This, then, is, in effect, the Stoic "case" for freedom of the will within the

1 Cicero, De Fato, 45.

2 Aulus Gellius, op. cit., VII, ii, 6.

3 Sambursky, The Physics of the Stoics, op. cit., p. 65.

context of heimarmene. That it appears unsatisfactory in some respects may be due to the scarcity of sources from the thought of the early Greek Stoics. We may suppose that had we as complete a statement of their philosophical system as we do for Plato and Aristotle, the reconstruction of their views on the reconciliation of free will and determinism would be more convincing.

It is interesting to note, however, that a modern philosopher¹ has employed strikingly similar arguments to establish the compatibility of a theory of universal causality with the ethical requirements of moral responsibility and freedom of action. Like Chrysippus he realizes that certain acts must be free if the ethical terms of praise or blame, or moral responsibility generally are to have any meaning. The author approaches the question by insisting that a distinction must be made between causes: only those acts which are self-determined can be said to be free. It is these kinds of acts which carry with them elements of moral responsibility, and it is only these kinds of self-determined acts which can be said to be praiseworthy or blameworthy. They include those acts which are the result of a process of deliberation - things men decide to do -; or those acts which men do because they desire to do them; or those acts which men do because of the kind of person they are, i. e. because of their character. All these kinds of acts are caused, but by a peculiar kind of cause. They are all self-determined acts; they are voluntary acts. In such instances, we do, as

¹ Patrick Nowell-Smith, "Free Will and Moral Responsibility", Mind, Volume 57, 1948.

a matter of fact, praise or blame the agent and hold him responsible for his actions.

Non-voluntary acts, in which no moral responsibility is imputed to the agent, are those in which there is evidence of external compulsion. For example, one is physically overpowered and forced to shoot a gun which causes the death of another person. Another class of non-free acts are those which result from certain inherited characteristics. Stupidity, for example, is the cause of a poor academic performance as opposed to laziness which brings about the same results. Stealing because of kleptomania is a non-free act and one, consequently, which carries no moral blame; whereas planned theft certainly does.

In conclusion, the author merely states, as did Chrysippus, that "moral actions are the effects of a peculiar kind of causes, namely the voluntary actions of the agent." To summarize his argument he quotes the words of A. J. Ayer.

"To say that I could have acted otherwise is to say, first, that I should have acted otherwise, if I had so chosen; secondly, that my action was voluntary in the sense in which the actions say of the kleptomaniac are not; and, thirdly, that nobody compelled me to choose as I did; and those three conditions may very well be fulfilled. When they are fulfilled, I may be said to have acted freely. But this is not to say that it was a matter of chance that I acted as I did, or, in other words, that my action could not be explained. And that my actions should be capable of being explained is all that is required by the postulate of determinism." ¹

1 "Freedom & Necessity", Polemic No. 5, p. 43.

Professor Ayer's statement might be taken as an equally relevant summary of the Stoic view on the compatibility of heimarmene and free will.

CONCLUDING REMARKS

The broad purpose of this paper has been to indicate, through an analysis of one of the key concepts of their system, that the early Greek Stoics made positive philosophical advances in fields other than ethics. Contrary to common belief, the Greek, if not the Roman, Stoics made significant contributions in the traditional Greek spirit of rational speculation.

In the opinion of the present writer, as this thesis has shown, it is not true that the Stoics were ~~primarily~~ ^{exclusively} concerned with practical matters - with ethics - and that the other parts of their system were constructed simply to lend support, somewhat in the manner of an afterthought, to an already established system of ethics. In fact, the Stoics believed that a viable ethics can only follow from a considered and consistent view of the nature of reality (which they expressed in their physics) and a complete analysis of the cognitive process whereby that reality can be known (which they expressed in their logic). The early Greek Stoics felt that unless it is clear just what reality is, and, in addition, how we can know that reality, ethical acts would have no rational direction or justification. Therefore, I have not treated heimarmene as primarily an ethical term, but as a concept lying at the center of a whole system, viz., as an expression of universal causal determinism.

I have attempted to show that this interpretation of the Stoic concept of heimarmene is supported by the sources. By virtue of this interpretation, rather than the highly equivocal fatalistic interpretation, we saw how the consistency of their system could be preserved. With their assertion of the universal "reign" of heimarmene, or the postulation of a theory of universal causality, they were led to a detailed examination of the cause and effect relationship which yielded insights into its nature which are important elements of the modern scientific view of causality. That is, both in respect to content and coherence, the interpretation of heimarmene as causal determinism is to be preferred to a fatalistic interpretation.

The treatment of related topics seemed to confirm this view. In regard to the highly controversial subject of divination, for example, it has been suggested that they were interested in it not for religious reasons, but because they saw in divination a theoretical confirmation of the universality of the causal law and an example of inductive, inferential reasoning. Their analysis of "possibility" and the "chance event", as we saw, is in conformity with their physical view of a causally determined world-structure, and bears striking similarities to the Laplacean views of many centuries later. Their attempt to reconcile the supposedly incompatible assumptions of a causally determined universe with the ethical demand for a free will may mark the starting point in the history of philosophy of this much discussed and involved topic. It is an issue, to some minds, still unresolved, but it is interesting to note that many of the arguments

employed by the Stoics in defense of their views are still in use today.

The time of the great philosophical system builders seems to have passed, or at least has passed out of "philosophical fashion." However, if we accept, for the moment, the categories of this past time, the system of the Greek Stoics deserves acknowledgement as one of the major contributors to this tradition. They seemed to have succeeded in constructing a consistent world-view based on a few key notions. In this paper I have attempted to analyze one of these notions and to indicate its relationship to the system as a whole.

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