

CHAPTER V

CHANCE AND FORTUNE

1. Accidental Causality in Common
and the Definition of Fortune.

Intrinsic contingency is spoken of most properly in regard to effects that do not have a per se cause. The margin of passive indetermination found in every finite cause is the proper reason why that which is beyond the intention of such an agent sometimes comes about; this is true whether the agent be a free, intelligent cause or nature. A finite cause mixed with potency is not perfectly determined in existence or in causing.

Created causes, then, are subject to a passive indetermination when they operate. This passive indetermination sometimes results in effects that were not intended by the cause. It is the accidental cause of what is unintended and unforeseeable that we must now investigate, for this is contingency in the strictest sense of the word.

In Book II of his general introduction to the Philosophy of Nature, Aristotle investigates the causes of the science. He first defines nature, and then proceeds to a discussion of the four causes, the material, efficient,

formal and final, since it pertains to the philosopher of nature to demonstrate from all of these. In addition, since many things in nature seem to happen by chance it will be important to consider what chance is, and whether it can be a cause of knowledge about natural things.

With reference to accidental causality, in order to begin with what is more familiar, Aristotle first takes up the question of fortuitous happenings. This is because fortune is easier to approach since we ourselves have experience of being the kind of cause fortune is. That is, we are aware that we operate for an end and that sometimes things come about without our intending them when we are really acting for the sake of something else. Hence, a consideration of fortune will make us more familiar with what is common to both fortune and chance, and will help us to grasp the difference between these two species of accidental cause.

As St. Thomas explains in his commentary, there were certain ancient philosophers who denied that anything came about by chance. One of the reasons they gave was that

1. In II Phys., lect. VII, n. 2: "Dicit ergo primo quod quidam dubitaverunt an fortuna et casus essent: et negaverunt ea esse duobus rationibus. Quarum prima est, quia omnia ista quae dicuntur fieri a casu vel fortuna, inveniuntur habere aliquam causam determinatam, aliam a fortuna. Et ponit huiusmodi exemplum: si enim aliquis veniens ad forum, inveniat aliquem hominem quem volebat invenire, de quo tamen non opinabatur ante quod esset eum inventurus, dicimus quod inventio illius hominis sit a fortuna: sed huius inventionis causa est voluntas emendi, propter quam ivit ad forum, ubi erat ille quem invenit."

for the chance event there always seems to be a determined cause of what happens. Even though these ancient thinkers held such a view they still said that some things happen by chance. Thus it is at least necessary to investigate what chance and fortune are, for it appears that things in nature such as animals and plants have a determined cause, and yet occasionally there occurs something extraordinary, which does not seem to have any determined reason; and we say that such things happen by chance.

In what way fortune and chance are reduced to a per se cause remains to be seen after these two kinds of accidental causes have been distinguished, for they are not reduced to the same kind of cause, although they are in the same genus, and the differences between them must be noted first. As has been mentioned, the first kind of accidental cause to be discussed is fortune, because it is better known to us than chance.

Since fortune, then, is said to be a cause, and since a cause is known when we know the kind of things of which it is a cause, it is necessary in the first place to observe that effects are of three kinds: First, there are things that always take place; secondly, there are those which do not always come to be but frequently; thirdly, there are things that do not always come to be, nor for the most part, but seldom or rarely. An occurrence of the

(2)

latter kind is said to happen by accident.

Even in the case of a rational potency that is indifferent it is true to say that its effects fall within the threefold division just given. This is because the rational potency, in order to be a cause in act, must be determined to one or the other of two opposite possibilities. Hence, nothing follows from the motive power alone, considered as it is in potency to opposites, unless this indifference be removed by the determination furnished by the appetite in act.

In order to arrive at a definition of fortune, let us begin with a consideration that is indispensable to the notion of accidental causality; the failure to recognize the importance of it has led to much of the present confusion about chance, and the unwarranted identification of chance in the true sense with chance as it is spoken of in reference to mathematical laws of probability. What must be noted is that finality or action for an end, is required, both for the existence of fortune and for the definition of it. It should be observed that what occurs by necessity, or

2. St. Thomas, op.cit., lect.VIII, n.2: "Circa primum ponit tres divisiones. Quarum prima est, quod quaedam fiunt semper, ut ortus solis; quaedam sicut frequenter, ut quod homo nascatur oculatus: neutrum autem horum dicitur esse a fortuna. Sed quaedam fiunt praeter haec, idest ut in paucioribus, sicut quod homo nascatur cum sex digitis vel sine oculis: et omnes dicunt huiusmodi fieri a fortuna."

comes about frequently, is the effect either of nature or will, and in both of these there is purposeful activity. Both nature and will operate for an end. Thus, the various parts of the animal, the eye, the ear, the nose etc., are not for nothing, but are intended to fulfill some purpose. And in the activity of agents who act with knowledge and freely determine themselves, there is even more clearly an end in view when they perform some action. Now when something that was not intended comes about in the action of voluntary agents, but is such that it could have been intended, and when this happens seldom, we say that it has happened by fortune. (3) An example will help to make this clear: A grave-digger while engaged in his work happens upon a buried treasure. He is fortunate to have discovered the treasure, for without intending such a boon it befalls him nonetheless. But if he had known that there was a treasure in that place he would have dug there in order to find it. Thus, what has come about by fortune is the kind of thing that could have been a reason for digging in the ground, although in this case it was not the reason.

At this point the difference between an accidental cause on the part of the cause, and on the part of the effect, should be noted. If a man who is a doctor builds a house,

3. Aristotle, Physics, Book II, c.5, (Transl. by W.D. Ross, Oxford, 1936)

he does not build the house insofar as he is a doctor, for the art of medicine, in virtue of which he is called a doctor, is not directed to the construction of houses. It is the ability to build that enables this man, who is also a doctor, to build a house. Hence, the house is built *per se* by a builder, and the man *qua* builder, is the *per se* cause of the building. At the same time, however, this man is also a doctor; it is accidental that he be at once a builder and a doctor, not in the sense that he has not chosen to be a doctor and also to be a builder, but in the sense that these two talents are not together in the man by any *per se* unity. The two arts together cannot be the end of one operation by which the man would become both a builder and a doctor. We say, therefore, that the doctor is the *per accidens* cause of the house since it happens to the builder who is the *per se* cause to be at the same time
(4)
a doctor.

In another way a cause is accidental on the part of the effect. If a man builds a house and later on in that

4. St. Thomas, In II Phys., lect. VIII, n.8: "Sed considerandum est quod causa *per accidens* dicitur dupliciter: uno modo ex parte causae; alio modo ex parte effectus. Ex parte quidem causae, quando illud quod dicitur causa *per accidens*, coniungitur causae *per se*; sicut si album vel musicum dicatur causa domus, quia accidentaliter coniungitur aedificatori. Ex parte autem effectus, quando accipitur aliquid quod accidentaliter coniungitur effectui; ut si dicamus quod aedificator est causa discordiae, quia ex domo facta accidit discordia. Et hoc modo dicitur fortuna esse causa *per accidens*, ex eo quod effectui aliquid coniungitur *per accidens*; utpote si fossariae sepulchri adiungatur *per accidens* inventio thesauri."

house dissension arises, the builder is said to be an accidental cause of the dispute. This is because the builder intended only to build a house and not to cause a dispute, which has nevertheless occurred. (The dispute is something other than that which was intended *per se* and it happens rarely as an effect of building.)

In the preceding example there is one cause, the builder, who is at once a *per se* cause and a cause per accidens, in relation to two different effects. The formal multiplicity is on the part of the effect, for the only cause in question is the builder *qua* builder. Hence, the builder *qua* builder is the *per se* cause of the house and the per accidens, or accidental cause of the argument that ensues because he built a house. A cause is called accidental, then, on the part of the effect when something is conjoined accidentally to the intended *per se* effect, whether this intended effect actually comes about or not.

It is according as the cause is accidental on the part of the effect that we speak of fortune and that we call the rare and unintended events of which it is the cause, fortuitous. Fortune, then, is an accidental cause of what is accidentally joined to the intended effect. In the example of the grave-digger the intended end is the grave; but in making the grave the workman is also a cause of something unintended, namely, the finding of the treasure. Thus, whatever

is found in the effect outside of the intention of the agent, is per accidens, if it be rare, and chance (in the generic sense) is the cause of it. It must be added that what is outside the intention of the agent is something rare, for if it happens most of the time or always when such an operation is performed, it cannot be attributed to

(5) chance. If everytime a man goes to a certain place, he gets mud on his shoes - even though he would avoid this if possible - we cannot say that it happens by chance, for it must fall under the same intention that leads one to such a place, since it invariably accompanies this. (6)

To grasp the notion of accidental causality, a further difference between causes of this kind and causes per se must be considered. This difference is that the per se cause is finite and determinate; it is per se insofar as it is directed to a particular effect which follows the exigency of the agent's form, or happens by the agent's intention.

5. St. Thomas, op. cit., nn. 8-9: "Et hoc dico si id quod est praeter intentionem ut in paucioribus consequatur; quod enim vel semper vel ut frequenter coniungitur effectui, credit sub eadem intentione. Stultum est enim dicere quod aliquis intendat aliquid, et non velit illud quod ut frequenter vel semper adiungitur."

6. St. Thomas, ibid., n. 9: "...Si aliquis frequenter aut semper madescit sibi pedes, quando vadit ad locum luto-sum, et hoc licet non intendat, tamen hoc non dicitur esse a fortuna."

The cause that is per accidens, however, is infinite and indeterminate; the per se reasons that can lead to an accidental effect are indefinite and without number. The man who finds a treasure may do so while digging for any one of many per se reasons - to make a grave, to plant carrots, to hide a treasure, etc.,. In addition to this plurality on the part of the cause (in the sense that the possible ends are without number), there is also indetermination on the part of the effect; not in the sense that effects without number can simultaneously occur, but insofar as the accidental effects that can result are not determined. While digging in his garden, a man may find a treasure, be struck by lightning, sprain his ankle, etc.; what characterizes accidental causality is this indetermination.

From these considerations it can be said that fortune is an accidental cause in those things that come about according to intention, because of an end, and which happen seldom. Fortune belongs to agents who act with knowledge of the end as such. But the more prudent or provident a man is, the less is he subject to fortune, for by taking more things into account he is more perfectly the master

(7)
of his effects.

In a sense it is true to say that fortune is not the cause of anything. If a man goes to a city and unintentionally meets someone who owes him money, the trip to the city is an accidental cause of collecting a debt. He might go to the city for many reasons; to buy something, to get away from pursuers, to attend a festival etc., and any of these could be the accidental cause of his meeting a man who owed him money. There is no essential unity between the reason the man had for going to that place and the meeting that occurred with his debtor. Thus fortune is not the cause of anything, in the sense that it is not the cause of anything that is per se one. Since being and one are convertible, it follows that the effect of fortune is closer to non-being than it is to being. Fortune, then, is something obscure and unknown since the infinite possible combinations on the part of the effect cannot be known. If a man could know all the things that might happen to him when

7. St. Thomas, In II Phys., lect.VIII, n.10: "... Concludit ex praemissis definitionem fortunae. Et dicit manifestum esse ex praemissis quod fortuna est causa per accidens in his quae fiunt secundum propositum propter finem in minori parte. Et ex hoc patet quod fortuna et intellectus sunt circa idem: quia his tantum convenit agere a fortuna, quae habent intellectum; propositum enim vel voluntas non est sine intellectu. Et licet ea tantum agant a fortuna, quae habent intellectum, tamen quanto aliquid magis subiacet intellectui, tanto minus subiacet fortunae."

acting for any possible reason, he would not be subject to fortune at all. We shall see that a knowledge of this kind requires the cause to be absolutely universal, and that it is precisely because God is the universal cause of being as such that he cannot be an accidental cause in any way.

It is important to grasp the indeterminate character of accidental causality, in order to understand that what is by chance or fortune is, as such, completely unforeseeable. Many modern writers, ignoring this, attribute the chance effect to a series of converging causes that are determined, which are not causes of the accidental effect *qua* accidental, but rather already effects of chance. In this way they say that it is only by accident that we cannot foretell the coming into existence of what is by chance; for if we knew all the causes involved we would know with certitude that the chance event is in fact necessary. Beginning with part 3, this opinion and similar ones shall be treated in detail.

2. The difference between Chance and Fortune.

The following are common to chance and fortune:

1. They are accidental causes.
2. They are found in things that do not happen necessarily, i.e., always or frequently.
3. They are discovered only where there is action for an end.

The first thing to note in distinguishing between chance and fortune is that chance is the wider term: "Omne quod est

(8)

a fortuna est a casu, sed non convertitur"; fortune is found only in voluntary activity. Chance is found, not only among agents who act by deliberation, but also in the operations of nature. Here the term is used generically; but the same term, chance, is used to mean one species of accidental causality, and in this case it does not include fortune, but signifies rather the cause of things that come about by accident in the operations of nature. Two examples given in the *Physics* will help to make this difference plain: If a horse leaves a place of danger to seek food and not to flee from the danger, it is said to have come away from what was dangerous by chance, since it did not leave that place for the sake of obtaining safety, but because of the food in the other location; secondly, if a three-legged stool falls in such a way that it can be used for a seat, it has fallen in that position by chance, since there was no cause making it fall that way.

(9)

8. St. Thomas, *In II Phys.*, lect. X, n. 2

9. *ibid.*, n. 7: "Dicit ergo primo quod casus non solum est in hominibus, qui voluntarie agunt, sed etiam in aliis animalibus, et etiam in rebus inanimatis. Et ponit exemplum de aliis animalibus, sicut dicitur quod equus casu venit, quando salutem adeptus est veniens, licet non venerit causa salutis. Aliud exemplum ponit in rebus inanimatis: dicimus enim quod tripoda cecidit casu, quia sic stat per casum ut sit apta ad sedendum, licet non ista de causa ceciderit, ut staret apta ad sedendum."

Both of these occurrences are caused by chance and not by fortune, since they did not occur by the purposeful activity of some agent acting with knowledge and intending an end. Hence, among those things that happen by chance, i.e., those things that come about because of something, yet do not come to be for the sake of what happens, but come to be rather for the sake of something extrinsic, only those that happen to agents having deliberate intention are said to happen by fortune.⁽¹⁰⁾

Chance is similar to what is in vain. Something is said to be in vain when it does not accomplish the purpose for which it was intended. If one were to walk to improve the health of the body, and this did not follow, the walking would have been in vain. Hence, just as there is vain action only if something that is intended does not come about, so also chance can only be spoken of with reference to things that are done for some purpose. The sign of this is that the name in Greek for what is vain is similar to chance, i.e., "Automaton", which means "absolutely for no-

10. St. Thomas, *op. cit.*, n. 8: "Concludit ex praemissis quod in iis quae simpliciter fiunt propter aliquid, quando non fiunt causa eius quod accidit, sed fiunt causa alicuius extrinseci, tunc dicimus quod fiunt a casu. Sed a fortuna dicimus illa fieri tantum de numero eorum quae fiunt a casu, quaecumque accidunt in habentibus propositum."

thing".

But there is purposeful activity in nature as well as among deliberate agents. Thus, chance, as the genus embracing both species of accidental causality, is found where there is action for an end, whether this be voluntary action for an end, as the trip to a distant city undertaken by one who goes there deliberately, or the purposeful activity of nature, e.g., providing the animals with certain bodily parts to carry on their natural functions.

Although what is vain and what is by chance are both found in things that are because of some purpose, they differ in that something is called vain because what was intended does not follow; but a thing is said to be by chance when something besides what was intended comes about. (11) Accordingly, they are sometimes found together and sometimes one is found without the other. If what was intended does not happen but something else does, the cause is chance and also operates in vain; if what was intended comes about as

11. St. Thomas, *op.cit.*, n.9: "Quamvis autem casus et vanum convenient in hoc quod utrumque est in his quae sunt propter aliquid, differunt tamen, quia vanum dicitur ex hoc quod non consequitur illud quod intendebatur; casus autem dicitur ex hoc quod consequitur aliquid aliud quod non intendebatur. Unde quandoque est vanum et casus simul, puta cum non accidit illud quod intendebatur, sed accidit aliquid aliud; quandoque autem est casus sed non vanum, cum accidit et illud quod intendebatur et aliud; quandoque autem est vanum et non casus, quando non accidit illud quod intendebatur neque aliquid aliud."

well as something, that was unintended, then there is only chance; finally, if neither what was intended nor anything else comes about, the cause is vain, but there is no chance.

The greatest difference between chance and fortune is that chance is found in things that come about by nature but fortune is not. Consequently, when chance is spoken of as a species, it is distinguished from fortune, as nature is distinguished from intellect and will. For example, when someone is born with six fingers this is by chance, but not by fortune, since it happens in an operation of nature which is for some purpose, namely, that the parts of the body be normal. But this is not by deliberation because nature does not deliberate about the end. Further, what is by nature is from an intrinsic cause, for nature is an intrinsic principle of motion and rest. What comes about as a result of deliberate intention, on the other hand, is due to an extrinsic cause, for reason and will are extrinsic principles of what they bring about. Therefore, the cause of what is by chance is intrinsic; but the cause of what is by fortune is extrinsic:

Ostendit in quibus maxime casus differat a fortuna. Et dicit quod maxime differt in illis quae fiunt a natura; quia ibi habet locum casus, sed non fortuna. Cum enim aliquid fit extra naturam in operationibus naturae, puta cum nascitur sextus digitus, tunc non dicimus quod fiat a fortuna, sed magis ab eo quod est per se frustra, id est

a casu. Et sic possumus accipere aliam differentiam inter casum et fortunam, quod eorum quae sunt a casu, causa est intrinseca, sicut eorum quae sunt a natura; eorum vero quae sunt a fortuna, causa est extrinseca, sicut eorum quae sunt a proposito. (12)

It can now be seen to what genus of causality chance and fortune are reduced. Since nature and intellect are both principles from whence there is movement, chance and fortune are both reduced to the genus of moving cause, for they are causes of what comes about by nature and by intention, respectively, without being per se causes. Hence just as what is per accidens is posterior to what is per se, so chance and fortune are causes posterior to nature and intellect. (13) It is a natural agent operating for a determined end, and at the same time producing something rare and unintended, that is

12. St. Thomas, In II Phys., lect. X. n. 10

13. St. Thomas, op. cit., nn. 11-12: "...Ostendit ad quod genus causae casus et fortuna reducuntur: ...dicit ergo primo quod tam casus quam fortuna reducuntur ad genus causae moventis: quia casus et fortuna vel est causa eorum quae sunt a natura, vel eorum quae sunt ab intelligentia ut ex dictis patet; unde cum natura et intelligentia sint causa ut unde est principium motus, etiam fortuna et casus ad idem genus reducuntur. Sed tamen, quia casus et fortuna sunt causae per accidens, eorum multitudo est indeterminata, ut supra dictum est...Et dicit quod quia casus et fortuna sunt causae per accidens eorum quorum intellectus et natura sunt causae per se; causa autem per accidens non est prior ea quae est per se, sicut nihil per accidens est prius eo quod est per se; sequitur quod casus et fortuna sint causae posteriores quam intellectus et natura."

called chance, insofar as it happens to a natural agent to be an accidental cause; it is a deliberate agent operating for a determined end and at the same time bringing about something rare and unintended that is called fortune; in fortune, then, as it is distinguished from chance, the cause is a free agent, while in chance the cause is nature. Chance, in the specific sense as opposed to fortune, is an accidental cause in those things that come about according to nature, because of an end, and which happen seldom.

With these notions and distinctions in mind, the teaching of the modern scholastics on accidental causality may now be considered. An attempt will be made to show that the position of these authors is not that of Aristotle and St. Thomas but is, in fact, a categorical denial of chance as a true cause of what is accidental and unforeseeable in nature. Indeed, these authors would have a per se created cause of what is casual, and would hold a position fundamentally opposed to the teaching of Aristotle and St. Thomas; namely, that everything that happens in nature, even the casual event, happens necessarily.

3. Chance is a Cause, and not an Effect.

Aristotle and St. Thomas consistently state that chance is an indeterminate and infinite cause, while nature is a determinate and finite cause. "Causa per se est finita et

determinata; causa autem per accidens est infinita et indeterminata, eo quod infinita uni possunt accidere."⁽¹⁴⁾

It is important to recall that chance is a cause and not an effect. If chance were an effect it would be necessary to inquire the cause of it and the cause of this cause and so on to infinity.⁽¹⁵⁾ Thus, care must be exercised when one speaks of reducing chance and chance events to a per se cause. Confusion here has led to serious error. It is true that every per accidens cause is reduced to some cause that is per se, but this axiom must be interpreted correctly. It can be interpreted to mean that every accidental cause is reduced to a proximate and particular per se cause, from which the cause per accidens is derived as an effect, and as originating from the cause that is per se. This interpretation is false for there are many effects per accidens that do not have a per se cause, as to be white and musical at the same time. This is not derived from some per se cause since it does not constitute an unum per se. What is not

14. In II Phys., lect.8, n.3; see also - lect.9, nn.2-4

15. John of St. Thomas, Curs. Phil., T.II, p.510: "Dicuntur autem fortuna causa per accidens reductive, sicut id, quod est per accidens tale, reducitur ad id, quod est per se. Dicuntur autem causa, et non effectus, quia id, quod est effectus, est fortuitum seu ex fortuna proveniens, non fortuna ipse. Si enim fortuna esset effectus, et non causa, restaret inquirendum, a qua causa proveniret, et cum non sit a causa per se, debet esse per accidens."

(16)

one per se does not have a per se cause. The proper interpretation is that every effect or cause per accidens is reduced to a cause per se, in as much as what is per se is presupposed to what is per accidens. Thus, the accidental effect is joined to a per se effect, and the accidental cause to a per se cause. In this sense, the finding of a treasure while digging in the garden is joined to what is per se, namely, the digging that is done for some definite purpose other than the finding of treasure, and is reduced to that which was per se intended - for if (17) nothing were intended and no action taken, nothing could happen by accident, since nothing would happen at all.

Perhaps the failure to distinguish the casual event, which is determined, from its cause, chance, which is altogether indeterminate, is what has led some to deny the existence of chance, a position which was, as Aristotle

16. St. Thomas, Ia, Q.115, a.6, c.: "Et ideo, secundo, oportet dicere quod omne quod est per se, habet causam, quod autem est per accidens, non habet causam, quia non est vere, ens, cum non sit vere unum."; see the commentary of Cajetan, nn.10-14.

17. The accidental effect is reduced to the per se end, as that which accidentally and rarely accompanies the latter.

(18)

tells us, also held by some ancients. This is reflected in the following interpretation of chance given by a modern writer:

Casus est effectus, qui ex aliqua causa determinata explicabilis non est, eo quod extra ambitum huius causa positus est. Hic effectus contingit per accidens, i.e., propter alias causas accedentes, quae non considerantur. Ita dicitur casus, si cui domum redeunti obviam fit amicus; et casus, seu fortuna dicitur, si quis terram fodiens ad arborem plantandum, invenit thesaurum. Domum reditio, sicut etiam actio fodiendi, ad hos effectus non sunt ordinatae. Casus igitur non dicitur, nisi quatenus ad causam partialem tantum, non vero ad causam totalem respicitur. Causa concursione cum amico non tantum est domum reditio unius, sed etiam via alterius. Et causa inventionis thesauri non tantum est actio fodiendi, sed etiam opus illius, qui thesaurum in hoc loco abscondit. Casus igitur revera in rerum natura non existit, sed tantum in mente eius, qui causam partialem tantum considerat. (19)

18. St. Thomas, In II Phys., lect.VII, n.2: "Dicit ergo primo, quod quidam dubitaverunt an fortuna et casus essent: et negaverunt ea esse duabus rationibus. Quarum prima est, quia omnia ista quae dicuntur fieri a casu vel fortuna, inveniuntur habere aliquam causam determinatam, aliam a fortuna. Et ponit huiusmodi exemplum: si enim aliquis veniens ad forum, inveniat aliquem hominem quem volebat invenire, de quo tamen non opinabatur quod esset eum inventurus, dicimus quod inventio illius hominis a fortuna: sed huius inventio causa est voluntas emendi, propter quam ivit ad forum, ubi erat illi quem invenit. Et similiter est in omnibus aliis quae dicuntur esse a fortuna; quia habent aliquam aliam causam praeter fortunam. Et sic fortuna non videtur esse causa alicuius, et per consequens nec aliquid esse: quia non ponimus fortunam nisi in quantum aliqua ponimus esse a fortuna."

19. Joseph Gredt, O.S.B., Elements Philosophiae (Fribourg, 1937), p.179, n.773

Oddly enough, with reference to Fr. Gredt's remarks, it is precisely the intellect that can grasp as one what cannot be one in nature per se. Thus, the master, because he causes with knowledge, can send two servants to the same place so that they will meet, although the meeting still remains simply a fortuitous encounter for the two servants. Indeed, universally speaking, casual and fortuitous events can be the per se effects only of One Who causes with infinite knowledge and by means of it. Since God's science is the cause of things, and since He is the cause of being as such, He is altogether above chance and fortune. (20) The conclusion in the text quoted above completely reverses this order. It is said that chance is spoken of only with reference to the partial cause of what is by chance,

20. St. Thomas, Ia, Q.116, a.1, c.: "Et ideo dicendum est quod ea quae hic per accidens aguntur, sive in rebus naturalibus sive humanis, reducuntur in aliquam causam praedeterminantem, quae est providentia divina. Quia nihil prohibet id quod est per accidens, accipi ut unum ab aliquo intellectu... Et sic nihil prohibet ea quae hic per accidens aguntur, ut fortuita vel casualia, reduci in aliquam causam ordinantem, quae per intentionem agat, et praecipue intellectum divinum."; see also - In I Periherm., lect.XIV, nn.20-22; In VI Metaphys., lect.III, n.1216, St. Thomas says: "Relinquitur igitur quod omnia, quae hic fiunt, prout ad primam causam divinam referuntur, inveniuntur ordinata et non per accidens existere; licet per comparationem ad alias causas per accidens esse inveniuntur."; In the same place, n.1220, St. Thomas gives the reason why only God can be the per se cause of what is, in itself, accidental.: "Sicut autem dictum est, ens inquantum ens est, habet causam ipsum Deum: unde sicut divinae providentiae subditur ipsum ens, ita etiam omnia accidentia entis inquantum est ens, inter quae sunt necessarium et contingens."

and not if one considers the total cause. (This is rather equivocal, for by total cause might be meant divine providence added to the proximate cause. But even if this were the meaning, the assertion would still be false, since divine providence alone is the per se cause of the casual, and chance, the cause of the casual event as such, cannot be understood to contribute in any way to the cause per se of what is accidental, for this cause per se is nothing other than God Himself. It is clear, however, from the context, that this is not the author's intention.)

According to Fr. Gredt's interpretation, what is indeterminate becomes determinate if we include more of the reasons for what is accidental. He says quite plainly what reasons he has in mind: "Et causa inventionis thesauri non tantum est scire fodiendi, sed etiam opus illius qui thesaurum in hoc loco abscondit...et...Causa concursus cum amico non tantum est domum reditio unius, sed etiam via alterius." But the reason for the cause of the casual effect's being fortuitous or rather indeterminate, is not that we do not know the total of causes that go to produce such an accidental event. For indeed, there is no such total because the infinite is beyond any number, and chance is "Causa per accidens, infinita et indeterminata." (It should be noted, further, that our knowledge is not the cause of things. Fr. Gredt seems to

imply that it is.) In the first place, these multiple causes coming together are already effects of chance and have only an accidental unity, "Et propter hoc, id quod ex tali concursu sequitur, non reducitur in aliquam causam praexistentem, ex qua ex necessitate sequatur." (21) The action that was done for the sake of planting a tree and which resulted in the finding of a treasure, could have been performed for many other reasons and still have resulted in the finding of a treasure. There is no necessary connection at all between planting a tree and finding buried treasure. That is why it is a fortunate occurrence. Otherwise it would be impossible to plant a tree without finding a treasure, and such an event could not then be by chance in any sense.

The distinction between the accidental cause and its effect, that is, between chance and what is casual or by

21. St. Thomas, Ia, Q.115, a.6, c; In I Perihern., lect.XIV, n.10: "Hoc igitur quidam attendentes posuerunt quod potentia quae est in ipsis rebus naturalibus, sortitur necessitatem ex aliqua causa determinata ad unum quem dixerunt fatum. Quorum Stoici posuerunt fatum in quadam serie, seu connexione causarum, supponentes quod omne quod in hoc mundo accidit habet causam; causa autem posita, necesse est effectum poni. Et si una causa per se non sufficit, multae causae ad hoc concurrentes accipiunt rationem unius causae sufficientis; et ita concludebant quod omnia ex necessitate eveniunt. Sed hanc rationem solvit Aristotelis in VI Metaphysicis interimens utramque propositionem assumptarum. Dicit enim quod non quod fit habet causam, sed solum illud quod est per se. Sed illud quod est per accidens non habet causam; quia proprie non est ens, sed magis ordinatur cum non ente, ut etiam Plato dixit."

chance, must be carefully observed, for between these two there is all the difference of the undetermined and the determined. The effect of chance is something determined and as such, not contingent but necessary.

Nec distingui debet inter contingentiam, et indifferentiam seu indeterminationem, ut aliqui faciunt: quia contingens dicitur aliquid ex causa indifferenti ad utrumlibet in actu primo, et antequam de facto producat; ergo antequam effectus producat, ex eadem parte, ex qua habet contingentiam, habet indeterminationem, scilicet ex causis: extra causas autem nondum aliquid habet, vel si aliquid habet determinate, ibi amittet contingentiam ubi habet determinationem. (22)

The failure to distinguish clearly chance from its effects has led many to a rigorously deterministic view of nature. Consider the following example of "chance" given in "The Philosophy of Nature", by Andrew G. Van Melsen:

The ignition of the gas mixture in the combustion chamber of an engine is not a chance effect, but the result of the structure of the engine. The spark is produced by a series of causes which differ from the series of causes that take care of

22. John of St. Thomas, Cursus Theologicus, T.II, p.420a; - ibid., p.412a: "Veritas contingens sub statu futuritionis est sub statu indeterminationis et indifferentiae ut sit vel non sit...quia res contingens quamdiu non est producta, nec in se ipsa sed in sua causa, non potest fundare nisi futuritionem contingentem et impedibilem: siquidem si illa futuritio non esset contingens neque impedibilis ex propria natura, res illa esset necessaria et non contingens: neque enim contingentia rei consistit nisi in ordine ad futurum, quia quod jam est praesens vel praeteritum, extra contingentiam est in eo in quo jam est; solum autem est contingens in eo quod deest, et quod futurum restat. Si ergo res contingens fundat de se futuritionem contingentem et impedibilem, ergo indeterminatam; et ita quamdiu est in statu futuritionis, est in statu indeterminationis."

the supply of gas. Both series of causes, however, are regulated by the structure of the engine. This structure can be considered as the formal cause, for it combines the two series of events in such a way that the spark ignites the gas mixture at the right time. Compare this situation with the casual ignition of a gas mixture by a casual spark, as sometimes happens in a plane or automobile accident. Note that in such an accident both the presence of gas mixture and that of the spark are causes; two different series of causes are responsible for the presence of the gas and the spark at a particular moment and at a particular place, but there is no cause which regulated the meeting of both series. The meeting was by pure chance.

The term "chance" does not indicate that there is no determinism involved. For a spark of necessity starts an explosion of a gas mixture. The term "chance" simply expresses the absence of a cause regulating the presence of the spark in the gas mixture. (23)

Mr. Van Melsen goes on to say that "the meaning of the term 'probability' is closely related to that of chance", and that, "there are cases in which we can calculate almost exactly the probability of something that happens by chance". (24)

Now there is a semblance of truth in these remarks, but unfortunately, they lead us far from a true understanding of chance as "causa per accidens, infinita et indeterminata." As to the assertion that chance and probability are akin to each other, it would be well to recall that quite a different view of chance is taken by Aristotle and St. Thomas; "Moreover, because it was said above that per acci-

23. Andrew G. Van Melsen, The Philosophy of Nature, Chapter 7, pp.223-224. (Duquesne U. Press, Pittsburgh, 1953)
24. ibid., pp.224-225.

dens causes are infinite and again that fortune is a per accidens cause, he concludes from the premises that there are infinite causes of that which is by fortune. Also, because the infinite, as infinite, is unknown fortune is not evident to man."⁽²⁵⁾

The use of the term "casual" to refer to the explosion that sometimes takes place in an airplane or automobile accident is rather inappropriate. The ignition of a gas mixture by a spark in such circumstances is not at all unlikely, as the author points out. Once the factors contributing to the existence of the accident are present, the accident is probable and the explosion is not at all unlikely. As soon as there is determination in the direction of the accident, the accident and the not unusual consequences are no longer a question of chance.

But these factors are not what cause the chance effect as such. They are an effect of chance. As soon as the series of causes is converging the effect is determined (unless by some other chance the determination which is an effect of chance be prevented from producing its effect), and it is because the series of converging causes has no determinate cause that the meeting is called accidental.

25. St. Thomas, In II Phys., lect. IX, n. 1, (Transl. by R. A. Kocourek, North Central Publishing Co., St. Paul, Revised ed., 1951)

The effect of their meeting is not called accidental because the converging causes were not per se ordered to produce it. If this were so the only thing necessary for prediction of the effect would be a knowledge of the direction of the determined causes. But as soon as there is a determination toward an effect there is no longer any chance involved. Chance is prior to this determination.

Indeed, it is sometimes said that the fortuitous encounter can be foreseen if the number and direction of the causes that produce it are known:

Chance, a fortuitous event, presupposes the mutual interference of independent lines of causation. Chance, and this is the basis of the ancient's notion of it, is the result of an irreducible pluralism, the plurality of the causal series that meet at a given moment. A fortuitous event can be foreseen, if its constituent factors are sufficiently simple. But it is a fortuitous event notwithstanding, since it is a mere encounter. (26)

This interpretation of chance completely destroys the true character of accidental causality. Compare these remarks with the assertion of St. Thomas that "Causae per accidens sunt infinitae...Et quia infinitum, secundum quod est infinitum, est ignotum, inde est quod fortuna immensifecta est homini."⁽²⁷⁾

26. Jacques Maritain, A Preface to Metaphysics. (New York, Sheed and Ward, 1939), pp. 141-142

27. In II Phys., lect. IX n.1; ibid. n.4: "Dicit ergo primo quod recte dicitur fortunam esse sine ratione: quia rationaliter non possumus nisi de iis quae sunt semper vel frequenter; fortuna autem est extra utrumque. Et ideo, quia causae tales, in paucioribus existentes, sunt per accidens et infinitae et sine ratione, sequitur quod fortunae sint causae infinitae et sine ratione: omnis enim causa per se producit effectum suum vel semper, vel ut frequenter."

To say that "a fortuitous encounter can be foreseen, if its constituent factors are sufficiently simple" is to say that it is not a fortuitous event at all, for the factors involved in a fortuitous event are never sufficiently simple, but are infinite. If what happens by chance is predicted, it is not predicted insofar as it happens by chance, but insofar as it is the effect of certain determined causes. The prediction is not made by knowing the proper cause of the chance event, which, as St. Thomas constantly reminds us, is unknowable because infinite and indeterminate, but is possible rather from a knowledge of what is already an effect of chance and determined. If God could know chance events only in their created causes, He could not know them until they had come to pass. (28)

Let us consider a further remark by the same author:

The explanation of the fortuitous fact or event must be sought in the causes active in each of these causal chains. But none of these causes is predetermined to produce it and this multiplicity of causes explains the chance event only on the supposition that these chains meet

28. St. Thomas, *Is.* Q.14, a.13, c.: "Alio modo potest considerari contingens ut est in sua causa. Et sic consideratur ut futurum, et ut contingens nondum determinatum ad unum; quia causa contingens se habet ad opposita. Et sic contingens non subditur per certitudinem alicui cognitioni. Unde quicumque cognoscit effectum contingentem in causa sua tantum, non habet de eo nisi coniecturalem cognitionem. Deus autem cognoscit omnia contingentia, non solum prout sunt in suis causis, sed etiam prout unumquodque eorum est actu in seipso." See also: *In I. Perih.*, lect.14, n.20; *Q.D. De Malo*, Q.16, a.7, c.; *II Sent.*, Dist., 6, q.2, ad 1. et passim

at a particular point of intersection. And there is nothing in the world which requires this, save the actual manifold of existents posited at the outset. (29)

(30)

This view is shared by many other scholastic writers.

29. J. Maritain, op.cit., p.148. (Italics ours)

30. Canon Fernand Van Steenberghen, Ontology, (Transl. by Rev. Martin J. Flynn, Wagner, New York, 1952), p.244: "We have just seen how the evolution of the created universe must be determined in duration. Further, it must also have a determined orientation. Here again a distinction must be made. In so far as the evolution of the universe results from the essential tendencies of created natures, it is completely determined by the First Cause who creates the order of natures. But in so far as the evolution of this universe is due to free agents, they can determine the direction of that evolution by their own free decisions. Every free act which expresses itself by impact on the material world, has indefinite repercussions on the future evolution of the world;" Charles A. Dubray, S.M., Introductory Philosophy (Longmans, Green, New York, 1932), Chapter IV, p.495: "Accidental effects prove nothing against the existence of natural laws, for, although they are not constant and uniform, they result from an unforeseen meeting of several causes, every one of which acts according to its own laws. Man may act intentionally, and in order to realize his purpose, he uses the 'natural' activities of various instruments and materials. Physical beings act naturally in the same way. But if several physical beings combine to produce a result both unusual, because this combination seldom occurs, and unforeseen, because unusual, we call this result accidental, although it is due to natural causes...Accidental is, therefore, a relative term which applies to results due to an unfamiliar and unforeseen course of circumstance."; - K.F. Reinhardt, A Realistic Philosophy, (Bruce, Milwaukee, 1944), Chapter I. P.68: "It is true, nevertheless, that we do not know and may never know the purpose of many things and it is likewise true that many occurrences in nature and life result from chance. However, it is necessary to distinguish between what may be called absolute and relative chance. If we admit that all agents act in view of ends in accordance with their natures, the possibility of absolute chance is thereby excluded, but the possibility of relative chance is not denied. It is quite conceivable that several independent causal series may have a chance encounter at a given point or moment and thereby produce a fortuitous event. While each series as such is causally determined, the intersecting of the different lines of causation is purely co-incidental..."

M. Louis de Raeymaeker in his book, "Philosophie de L'être", has this to say:

Au plan de l'être, la finalité exclut le hasard; car tout y est intelligible, tout y a sa raison d'être suffisante... Dans le monde matériel, il est naturel que des forces se rencontrent, parce qu'elles circulent dans un même espace. S'il s'agit d'opérations purement matérielles, elles ne donneront lieu à aucun hasard, parce qu'elles appartiennent à un seul système où tout se déroule dans un ordre naturel. Mais dès qu'interviennent des agents libres, il doit se produire des rencontres fortuites. En effet, chacun de ces agents poursuit sa fin personnelle, et ses opérations se déroulent dans un ordre qui est indépendant des autres agents. Et comme ils vivent tous dans le même monde matériel et qu'ils peuvent se servir des mêmes objets, ils risquent de se rencontrer et de se heurter. (31)

After denying the reality of chance in the natural world, M. de Raeymaeker goes on to deny that fortune is anything more than an ignorance of the causes at work; again, the only kind of contingency admitted is extrinsic:

Ces rencontres sont fortuites, en ce sens que l'une des causes libres ne peut prévoir ce que fera l'autre et qu'elle ne peut dès lors savoir d'avance tous les événements qui vont se produire. Ainsi donc, la multiplicité et par conséquent la limitation des systèmes personnels et libres qui exercent leur activité sur la même scène du monde, rendent inévitable des effets du hasard. D'où l'on peut conclure que s'il existait un Être parfait, doué d'une connaissance universelle, s'étendant non seulement à toutes les choses de l'univers mais également à toutes les personnes libres, rien ne pourrait échapper à sa connaissance et rien dès lors ne pourrait lui paraître imprévu et fortuit." (32)

31. L. De Raeymaeker, Philosophie De l'Être. (Louvain, 1947) pp. 314-15

32. Ibid., p. 315

The author admits that it is difficult to know beforehand the future existence of the fortuitous event but still maintains that such a knowledge is possible if enough factors are known. The declaration that what is accidental and relatively unforeseeable is to be found only in the actions of free agents, and not in nature, will be discussed later. What is important to note here is that all of the writers that hold such a view, speak of the plurality of causes and factors involved in the production of an accidental effect, as a determined plurality. But the plurality that Aristotle and St. Thomas refer to in relation to chance is not of this kind; it is not the plurality of the converging causes, the circumstances of time and place etc., of which it is a question in chance; it is rather the plurality found on the part of the cause that is undetermined. In the *Metaphysics*, Aristotle gives the example of a man who, being thirsty, leaves his house to obtain water, and as a consequence suffers a violent death:

This man, then, will die by violence, "if" he goes out; and he will do this if he gets thirsty; and he will get thirsty if something else happens; and thus we shall come to that which is now present, or to some past event. For instance, he will go out if he gets thirsty; and he will get thirsty if he is eating pungent food; and this is either the case or not; so that he will of necessity die, or of necessity not die. And similarly if one jumps over to past events, the same account will hold good; for this - I mean the past condition - is already present in something. Everything, there-

fore, that will be in the future will be of necessity; e.g. it is necessary that he who lives shall one day die; for already some condition has come into existence, e.g. the presence of contraries in the same body. But whether he is to die by disease or by violence is not yet determined, but depends on the happening of something else. This then will be the starting point for the fortuitous, and will have nothing else as cause of its coming to be. But to what sort of starting-point and what sort of cause we thus refer the fortuitous - whether to matter or to the purpose or to the motive power, must be carefully considered. (33)

It is not the plurality of the causes in the series that renders the effect fortuitous, but the accidental unity among these, which results from an irreducible plurality in the per accidens cause prior to the series. Let us consider the example above: It is not because the man goes out of his house to seek water, and because the water is where it is from some other causal series in nature, and because the robbers are running away and are hiding in the place of the spring etc., that the man's being killed is called fortuitous. - Even so, causes of that kind can be multiplied to infinity - It is rather because the man could have died for any number of other reasons that it is by chance that he dies this way, in such circumstances. This event has no per se unity. The man goes to the spring to drink and not to be killed. Therefore, when he is killed upon his arrival

33. Aristotle, Metaphysics, VI, c.III; St. Thomas, lect. III, nn.1197-1200 (Italics ours)

there it is by chance, since it is not intended, seldom occurs, and comes about as a result of something that was done for an entirely different purpose. To look upon such an occurrence in terms of the series of converging causes that produce it, is to view it, not as an effect of chance, but as something already determined. The accidental orientation of the causes is already an effect of chance. The cause of the casual event is not a multiplicity of per se causes, each determined to its own effect, and intersecting to produce some other, unintended effect; this is simply a collective determinism where there is no room for chance. Neither is the cause of the accidental effect some accident of a per se cause. A modern commentator on Aristotle seems to have given a conclusive explanation of this latter point:

Un effet de la fortune ne comporte pas une cause par soi et d'autres qui se rattachent à celle-là comme ses accidents; il ne comporte qu'une seule et même cause et, si cette cause est dite accidentelle, ce n'est pas parce qu'elle est l'accident d'une autre cause, c'est parce que à la fin qu'elle poursuit s'attache comme accident de cette fin un effet qu'elle n'a pas poursuivi intentionnellement. Dans le premier cas, en un mot, l'accident est un accident de la cause; dans le second, au contraire, l'accident est un accident de la fin et la cause n'est dite accidentelle que parce qu'elle est la cause d'un accident. Elle n'est point un accident de la cause. (34)

34. O. Hamelin, Aristote, Physique II, Traduction et commentaires, 2ed., p.117

The constant tendency of many present day scholastic writers is to identify chance with the intersection of several causal series. They say that the intersection of these various causes is accidental, and in this way seek to preserve the indeterminate character of chance. They add, however, that each of these causes is determined to act according to a pattern dictated by its nature, as we saw in chapter III, and that, therefore, the casual event is only a certain appearance of accidentality, but in fact (*de facto*), necessary. What is not observed in this characterization is that, given a number of causal lines tending to intersect, the effect can no longer be considered undetermined, since the intersection which is to bring about the effect is already determined by the converging causes. From this point of view, the effect is not casual, but is already determined in its causes.

4. Chance is an intrinsic cause;
Fortune, is an extrinsic cause;

The difference between chance and fortune is greatest when they are considered as species opposed in the genus of accidental causality, each with its specific difference. It has been shown that the term chance is often used to signify the genus. Hence, as St. Thomas remarks, "*Omne quod est a fortuna est a*

(35)
casu, sed non convertitur." When things take place in nature outside of nature's intention, they are not said to happen by fortune, but rather by what is pure chance. For example, if a man is born with six fingers, it is, in a sense, a misfortune for him, but he is not the cause of it. In this instance, it is not the operation of a voluntary agent that brings about a rare and unintended effect, but some cause in nature acting without deliberation. And just as nature is an intrinsic principle of the effect it brings about, (36) so also those things in nature that are brought about without their being intended have an intrinsic cause; this cause is nothing other than nature itself as productive of accidental effects, that is, as an accidental cause that is intrinsic. (But what shall we say here of the dictum "Natura, causa determinata ut in pluribus"? It is nature, as a limited agent, that can be an accidental cause. - "Ideo dico quod id quod est in pluribus est causa entis per accidens, quia quod non est semper neque secundum magis, hoc dicimus esse per accidens. Et hoc est defectus ejus quod est in pluribus..." (37)

35. In II Phys., lect.X, n.3

36. St. Thomas, Ibid., n.10: "Et sic possumus accipere aliam differentiam inter casum et fortunam, quod eorum quae sunt a casu, causa est intrinseca, sicut eorum quae sunt a natura; eorum vero quae sunt a fortuna, causa est extrinseca, sicut eorum quae sunt a proposito."

37. St. Thomas, In VI Metaph., lect.II, n.1184

On the other hand, when an intellectual agent causes a rare and unintended effect, this is said to have come about by fortune. And just as will and intellect are extrinsic causes of those things of which they are the principle by deliberation, so the unintended effects of the intellectual agent also have an extrinsic cause. It is one and the same cause that, as determined, produces a proper, intended effect; and as undetermined and limited in perfection, produces an effect that is not intended, but which nevertheless takes place.

Fortune, then, as a species of accidental cause, is spoken of in regard to intellectual agents, who, as limited and passively indeterminate in the order of efficient causality, can sometimes bring about effects that are rare and outside the deliberate intention. Chance, however, refers to nature, as nature can be a cause that fails to bring about the intended effect and causes something rare by accident. Nature is not a cause perfectly determined to its effects, and because of this insufficient determination, which also stems from an admixture of potency in the cause, there sometimes occur events that are rare and beyond nature's intention. Note that both chance and fortune are reduced to the genus of moving cause, since both nature and intellect are principles from whence there is movement. In the case

of fortune, however, the cause that is reduced to a per se cause is extrinsic, while in the case of chance it is intrinsic.

Now it is with pure chance that we are chiefly concerned, for there is general agreement among modern scholastic philosophers that the effects of free agents are absolutely unforeseeable. Nevertheless, since the reason that these authors assign for the unpredictability of the free effect is too restricting, and covers only those effects that proceed from the liberty of action possessed by the deliberate agent, it must be added that a consideration of pure chance will reveal the universal principle of intrinsic contingency, which is in fact denied by these writers. We hope to see that this principle applies in the case of both a natural cause and an intelligent one if the intelligent cause is finite.

But before attempting to account for the appearance of chance events by explaining more fully the reason for the natural cause's occasional failure to be a cause of sufficient determination, it will be useful to point out briefly what is sometimes erroneously called, or described as, the external cause of the chance event. A few remarks will be pertinent to the problem for it is very important to note that the cause of the casual event is intrinsic and not external.

In Chapter VI of the second book of the *Physics*, Aristotle says:

Hence it is clear that in those things which simply speaking come to pass for the sake of something, when they do not come to be for the sake of that which happens, but come to be rather because of something extrinsic, when we say that they come about by chance. These chance events are said to be from fortune if they can be objects of deliberate intention and are caused by agents acting with the capacity to deliberate. (38)

From the explanation of St. Thomas, it is clear that that for the sake of which some action takes place, is extrinsic, when it is unintended, to that for the sake of which the action takes place *per se*, that is, the intended end. Thus, when a man buys a train ticket, boards a train, etc., for the sake of attending a convention in some distant city, and encounters unintentionally some friend who, most improbably, is in the same city, the meeting is extrinsic to the man's intention to attend a convention, and is extrinsic to the means taken in order to be present at the convention. These means, i.e., buying a ticket, boarding the train, etc., are intrinsically ordered to attendance at the convention, and not to meeting a friend, who was not expected to be in the same city at all. Hence, when something that is done for a definite purpose results in some-

thing else that is unexpected and rare, we say that such an action took place by chance for the sake of what it brought about by accident; this is true whether the action also brought about what was intended or not. The extrinsic, "for the sake of which", is not chance, but an effect of chance. In both chance and fortune there is something extrinsic in this sense. This extrinsic end, which is the effect of chance or of fortune, as the case may be, is attached to the final cause as a material end arrived at while not being intended. (39)

Chance and fortune, then, are not reduced to the genus of final cause, but to the genus of efficient cause, as has been explained. Nevertheless, there must be an accident attached to the end as a material result not intended but achieved anyway, in order for us to speak of chance or fortune. We may recall here the division made earlier, according to which a cause is called accidental on the part of the cause or on the part of the effect. It is only in

39. In III Contra Gentem, c. 74, comm. of Sylvester Farrer: "Videtur...Sanctus Thomas dicere contradictoria, cum sit evenire aliquid casualiter dum finis non intentus provenit. Nam de ratione finis est quod sit intentus: Est enim eius gratia aliquid fit. Ergo repugnat quod aliquid sit finis, et tamen non sit intentum."

Respondetur quod finis dupliciter accipi potest: uno modo, materialiter, quantum scilicet ad ipsam rem absolute quae terminat actionem; alio modo, formaliter, scilicet pro re quae terminat actionem ut habet rationem causae finalis. Secundo modo, repugnat quod aliquid sit finis, et non sit intentum. Primo vero modo, non repugnat. Et sic intelligitur dictum Sancti Thomae: nam constat quod effectus fortuitus, inquantum huiusmodi, non est finis actionis quam terminat nisi materialiter."

the latter sense of accidental cause that chance and fortune are said to be causes per accidens. Thus, when we speak of chance as an intrinsic cause, and fortune as an extrinsic one, the reference is to an intrinsic or extrinsic efficient cause.

The final cause implied in the definition of chance as "causa per accidens in his quae fiunt propter finem in minori parte", is not extrinsic as opposed to the intrinsic causes, the material and formal; it is extrinsic in so far as it is extrinsic to the intended end, to the agent's intention, and to the things brought about by the agent for the sake of the per se end. These same things are accidentally, or by chance, for the sake of the extrinsic end.

Emphasis on the end-like character of the event caused by chance, and a brief explanation of how the effect of chance is the kind of thing that could be an end formally, will help to clarify some further confusion on this point.

Aristotle and St. Thomas teach that the effect of chance must be the kind of thing that might have been an end intended by the agent. (40) It is necessary that it be sus-

40. Physics, II, c.IV; St. Thomas, lect.VIII, nn.8-9: "Ponit divisionem quae sumitur ex parte causae. Et dicit quod cum huiusmodi, quae scilicet a proposito sunt, propter aliquid, et in minori parte, fiunt a causa secundum accidens, tunc dicimus ea esse a fortuna...sicut si aliquis sciret se recepturum pecuniam in foro, ivisset ad deportandum eam; sed si non propter hoc venit, per accidens est quod adventus eius fiat reportationis gratia, id est habeat hunc effectum.

ceptible of being an end, not just materially, as it is when brought about accidentally, but also formally and intrinsically. (In the sense of intrinsic to, or within, the agent's intention.)

But if there occur in nature accidental effects that are beyond nature's intention and sometimes even contrary to it, how can we say that these events can have the character of a true end? Many authors have judged this to be a contradiction of the Aristotelian doctrine on accidental causality. They do not see, for example, how a monster can be in any way a possible end. And again, the same difficulty may be observed in the domain of the fortuitous; if a man goes to a well to get water, and by accident encounters bandits hiding there, and these bandits kill him, how could this possibly be something that the man might have intended?

The case of the monstrous birth in nature, in addition to the problem it presents when we consider that the effect of chance must be the kind of thing that might have been an end, also raises a difficulty in view of the fact that occurrences of this kind seem to have a determinate cause. Yet Aristotle and St. Thomas both mention this as an example of chance in nature:

Cum enim aliquid fit extra naturam in operationibus naturae, puta cum nascitur sextus digitus, tunc non

dicimus quod fiat a fortuna, sed magis ab eo quod est per se frustra, idest a casu. (41)

Even St. Albert sees a difficulty in this example, for he says:

Ego tamen in isto exemplo non multum video proprie esse casum, nisi large sumatur; et ideo ipse Aristoteles talia etiam nata libro de Animalibus vocat occasio nata et non casualiter nata. Casus enim est causa per accidens. Occasio enim minus dicitur quam causam, et est, ut diximus, quando propter aliquod accidens aliquid causatur, sicut in moribus dicimus aliquem dare occasionem quando innuit vel negligit aliquid propter quod aliquis damnificatur. (42)

A different view from either that of St. Thomas or St. Albert is taken by a modern author, who says that monstrosities are not products of chance at all, but are brought about necessarily; and the necessity in question is nothing other than the necessity of matter. This author, M. Augustin Mansion, even insists that these divergences from nature's intention were never attributed by Aristotle to chance:

Aussi Aristote attribue-t-il, comme on l'a déjà noté, au hasard, mais non à la nécessité, la génération spontanée d'organismes qui sont engendrés d'ordinaire par la voie normale. Inversement les monstruosités, qui répondent à des fins manquées, sont décrites par le Stagirite comme résultant de

- 41. In II Phys., lect.X, n.10
- 42. In II Phys., Tract.II, c.17

la nécessité, mais jamais il ne leur assigne, comme cause, le hasard. (43)

And in another place, Mansion says that the necessity of matter is included in chance, according to a wider sense of the term chance, so that the two are convertible as exceptional facts of experience:

Partant de là, on peut reprendre et résoudre assez facilement la question des rapports entre le hasard pris, cette fois, au sens restreint et la nécessité brute, qui s'oppose formellement à la finalité ou, du moins, ne s'y subordonne pas. Cette question, notons-le, n'est pas résolue d'avance du fait que le hasard ainsi spécifié n'est qu'un cas particulier du hasard entendu au sens large et que, d'autre part, on a ramené à celui-ci ce que relève de la nécessité. (44)

Finally, M. Mansion says that the necessity of matter and chance, the latter understood this time in a narrower sense, cannot be the same, since what happens by chance falls within the teleological order, accidentally. It is interesting to note the reason given for placing the casual event within the order of finality, for it does not serve at all to distinguish chance from necessity:

Dés lors, comme il n'y a pas d'opposition véritable entre le hasard et la fin naturelle, celle-ci demeurant en dehors de la sphère d'influence du hasard, on ne pourra pas dire qu'il se confond

43. A. Mansion, Introduction à la Physique Aristotelicienne, 2ed. Louvain, 1945, p.310

44. ibid., p.309

avec la nécessité brute. Car cette dernière a des effets ou bien indifférent au point de vue de la finalité, ou bien nettement contraires à l'ordonnance vers la fin naturelle, tandis que le hasard ne vas pas à l'encontre d'une telle ordonnance, mais produit un effet qui rentre par accident dans un ordre téléologique, cet effet étant un bien qui eût pu être pris comme fin. (45)

These notions are indeed very far from the teaching of Aristotle and St. Thomas. First of all, with reference to monstrous births in nature, it is plain from the words of St. Thomas that these are products of chance:

Cum enim aliquid fit extra naturam in operati-
onibus naturae, pote cum nascitur sextus digitus,
tunc non dicimus quod fiat a fortuna, sed magis
ab eo quod est per se frustra, idest a casu. (46)

The following words of Aristotle in the *Metaphysics* show the distinction that, apparently, is overlooked by Mansion and other writers when they assign a necessary cause for the monstrous effect, considered in itself:

Clearly then the process [namely, from accidental effect to cause] goes back to a certain starting-point, but this no longer points to something further. This then will be the cause of the casual event, and will have nothing else as cause of its coming to be. (47)

45. A. Mansion, *op.cit.*, pp.309-10

46. *In II Phys.*, lect.X, n.10

47. *Metaphys.*, VI, c.III, 1027a14-18 (In the translation by W.D. Ross, we have substituted "the cause of the casual event", for, "the starting point for the fortuitous.")

Commenting on the passage just cited, St. Thomas explains the truth:

Inferit quendam conclusionem ex praedictis; dicens: ergo ex quo non quodlibet, quod fit, habet causam per se, palam, quod in futuris contingentibus, effectus futuri reductio ad causam per se, vadit usque ad aliquod principium; quod quidem principium non reductitur in aliquod principium per se, sed ipsum erit ejus causa ((erit quodcumque evenit,)) idest causa casualis, et illius causae casualis non erit aliqua alia causa; sicut jam praedictum est, quod ens per accidens non habet causam neque generationem. Verbi gratia, quod iste occidatur a latronibus habet causam per se, quis vulneratur; et hoc etiam habet causam per se, quia a latronibus invenitur; sed hoc non habet nisi causam per accidens. Hoc enim quod iste qui negotiatur, ad negotium vadens, inter latrones incidat, est per accidens, ut ex praedictis patet. Unde ejus non oportet ponere aliquam causam. Ens enim per accidens, ut supra dictum est, non habet generationem, et ita ejus generationis causam per se quaerere non oportet. (48)

And by what is said here, St. Thomas also resolves the arguments brought forth by some that the fortuitous event, as such, can sometimes be foreseen, since the cause of it is the intersecting of causes operating per se, whose direction may be known. (49)

48. lect.III, n.1201

49. J. Maritsain, A Preface to Metaphysics - Seven Lectures on Being, p.141: "Chance, a fortuitous event, presupposes the mutual interference of independent lines of causation. Chance, and this is the basis of the ancient's notion of it, is the result of an irreducible pluralism, the plurality of the causal series which meet at a given moment. A fortuitous event can be foreseen, if its constituent factors are sufficiently. But it is a fortuitous event notwithstanding, since it is a mere encounter."

It is certain, however, that in its proper cause, the effect of chance or of fortune is altogether undetermined and, therefore, unforeseeable; because a thing is knowable only to the extent that it has some determination in itself or in its causes:

Et ideo praesentis cognoscit tanquam actu existentis et sensu aliquo qualiter perceptibilia; praeteritis autem cognoscit ut memorata; futura autem non cognoscere se potest in seipsis, quia nondum sunt, sed cognoscere potest in causis suis: per certitudinem quidem, si totaliter in causis suis sint determinata, ut ex quibus de necessitate evenient; per coniecturam autem, si non sint sic determinata quin impediri possint, sicut quae sunt ut in pluribus; nullo autem modo, si in suis causis sunt omnino in potentia non magis determinata ad unum quam ad aliud sicut quae sunt ad utrumlibet. Non enim est aliquid cognoscibile secundum quod est in potentia, sed solum secundum quod est in actu, ut patet per Philosophum in IX Metaphysicae. (50)

The effect of chance, when considered in relation to the conditions already present for its production, may indeed be known and predicted; and in reference to these conditions the effect may be necessary. Thus, it is possible to explain, up to a certain point, why the birth of an abnormal animal takes place, for example. The determinate reasons for this event may be known; such as, the disposition of the matter, the condition of the agent, facts of temperature, physiology, etc.; from the point of

view of various material conditions, the generation in question may necessarily result in the composition of parts that are not in conformity with the natural end. Nevertheless, it is certain that the first cause of the deformity is chance; for the effect is rare, comes about as a result of operations that are for the sake of some purpose - which is not the production of monsters - and has no per se relation to these means, nor to the measure of normalcy that may be found at the same time in generations of this kind.

To know that an event is caused by chance is one thing; to know the determinate reasons for the chance event - which are posterior to chance - is quite another matter. And in so far as determinate reasons can be assigned, the effect of chance is already outside of its proper cause and determined. But to foresee an effect in a cause that is undetermined, is impossible; for a thing is knowable only to the extent that it is in act. Chance, however, is this kind of cause; therefore, it is impossible to foresee or predict the casual event as such.

Mansion's assertion that Aristotle did not mean that monstrosities in nature are effects of chance, is based, (51) apparently, on an erroneous interpretation of Aristotle's

51. see pages 154-55, footnote 43

repeated references to casual effects as belonging to the sphere of those things that are for some purpose. In the second book of the Physics, for example, the Philosopher says:

Both are then, as I have said, incidental causes - both luck and chance - in the sphere of things which are capable of coming to pass not necessarily, nor normally, and with reference to such of these as might come to pass for the sake of something. (52)

In the Metaphysics, Aristotle refers to certain generations that take place by chance, yet which are not opposed to finality, but coincide with what nature might have produced:

Thus, then are natural things produced; all other generations are called 'makings'. And all makings proceed either from art or from a faculty or from thought. Some of them happen also by chance or by luck just as natural things sometimes do; for there also the same things sometimes are produced without seed as well as from seed. (53)

Mansion argues that the misinterpretation of these texts by most of the commentators after Averroes has been redressed by W.D. Ross, who understands Aristotle

52. Physics, Book II, c.5, 197a33-35

53. Metaphysics, Book VII, c.7, 1032a26-32

to exclude chance from being the cause of monstrosities; Ross's argument, with which Mansion agrees, is that a monster cannot be an object per se of a natural operation, and, therefore, cannot be a product of chance. (54)

Obviously, an unlucky effect considered in itself, is not something that could be directly desired. A man who, by accident, encounters robbers and suffers an untimely death at their hands, would not pursue what has befallen him by misfortune. The same holds true for chance. Nature could not pursue as a per se end the monstrosity that comes about contrary to nature's intention. Since this would appear to be quite evident it seems advisable to seek an explanation of why Aristotle and St. Thomas number such effects among those brought about by chance, and why they state at the same time that effects of chance are the kind that might have been intended. The difficulty should not be circumvented by insisting that their words must signify something else, or by saying that this teaching is opposed to what is said in another place, or finally, that it is due to an evolution of their thought. (55)

54. See W.D. Ross, Aristotle's Physics, (Oxford, 1936), p.524

55. A. Mansion, Intro. a la Physique Aristotelicienne, p.311: "Cette explication s'accorde fort bien avec l'hypothèse qui fait de la notion du hasard, précisée ainsi par Aristote, le résultat d'une évolution de sa pensée...C'est comme s'il reprenait, sans le corriger suffisamment, le texte d'un exposé plus ancien et se contentait d'y ajouter un développement nouveau, destiné à exprimer sa pensée actuelle, au risque d'y mettre celle-ci en contradiction formelle avec ce qu'il venait de dire."