

Plato  
The Republic

## BOOK VIII.

And so we have arrived at the conclusion, that in the perfect State wives and children are to be in common; and the education and pursuits of men and women, both in war and peace, are to be common, and kings are to be philosophers and warriors, and the soldiers of the State are to live together, having all things in common; and they are to be warrior athletes, receiving no pay but only their food, from the other citizens. Now let us return to the point at which we digressed. 'That is easily done,' he replied: 'You were speaking of the State which you had constructed, and of the individual who answered to this, both of whom you affirmed to be good; and you said that of inferior States there were four forms and four individuals corresponding to them, which although deficient in various degrees, were all of them worth inspecting with a view to determining the relative happiness or misery of the best or worst man. Then Polemarchus and Adeimantus interrupted you, and this led to another argument,—and so here we are.' Suppose that we put ourselves again in the same position, and do you repeat your question. 'I should like to know of what constitutions you were speaking?' Besides the perfect State there are only four of any note in Hellas:—first, the famous Lacedaemonian or Cretan commonwealth; secondly, oligarchy, a State full of evils; thirdly, democracy, which follows next in order; fourthly, tyranny, which is the disease or death of all government. Now, States are not made of 'oak and rock,' but of flesh and blood; and therefore as there are five States there must be five human natures in individuals, which correspond to them. And first, there is the ambitious nature, which answers to the Lacedaemonian State; secondly, the oligarchical nature; thirdly, the democratical; and fourthly, the tyrannical. This last will have to be compared with the perfectly just, which is the fifth, that we may know which is the happier, and then we shall be able to determine whether the argument of Thrasymachus or our own is the more convincing. And as before we began with the State and went on to the individual, so now, beginning with timocracy, let us go on to the timocratical man, and then proceed to the other forms of government, and the individuals who answer to them.

But how did timocracy arise out of the perfect State? Plainly, like all changes of government, from division in the rulers. But whence came division? 'Sing, heavenly Muses,' as Homer says;—let them condescend to answer us, as if we were children, to whom they put on a solemn face in jest. 'And what will they say?' They will say that human things are fated to decay, and even the perfect State will not escape from this law of destiny, when 'the wheel comes full circle' in a period short or long. Plants or animals have times of fertility and sterility, which the intelligence of rulers because alloyed by sense will not enable them to ascertain, and children will be born out of season. For whereas divine creations are in a perfect cycle or number, the human creation is in a number which declines from

perfection, and has four terms and three intervals of numbers, increasing, waning, assimilating, dissimilating, and yet perfectly commensurate with each other. The base of the number with a fourth added (or which is 3:4), multiplied by five and cubed, gives two harmonies:—the first a square number, which is a hundred times the base (or a hundred times a hundred); the second, an oblong, being a hundred squares of the rational diameter of a figure the side of which is five, subtracting one from each square or two perfect squares from all, and adding a hundred cubes of three. This entire number is geometrical and contains the rule or law of generation. When this law is neglected marriages will be unpropitious; the inferior offspring who are then born will in time become the rulers; the State will decline, and education fall into decay; gymnastic will be preferred to music, and the gold and silver and brass and iron will form a chaotic mass—thus division will arise. Such is the Muses' answer to our question. 'And a true answer, of course: —but what more have they to say?' They say that the two races, the iron and brass, and the silver and gold, will draw the State different ways;— the one will take to trade and moneymaking, and the others, having the true riches and not caring for money, will resist them: the contest will end in a compromise; they will agree to have private property, and will enslave their fellow-citizens who were once their friends and nurturers. But they will retain their warlike character, and will be chiefly occupied in fighting and exercising rule. Thus arises timocracy, which is intermediate between aristocracy and oligarchy.

The new form of government resembles the ideal in obedience to rulers and contempt for trade, and having common meals, and in devotion to warlike and gymnastic exercises. But corruption has crept into philosophy, and simplicity of character, which was once her note, is now looked for only in the military class. Arts of war begin to prevail over arts of peace; the ruler is no longer a philosopher; as in oligarchies, there springs up among them an extravagant love of gain—get another man's and save your own, is their principle; and they have dark places in which they hoard their gold and silver, for the use of their women and others; they take their pleasures by stealth, like boys who are running away from their father—the law; and their education is not inspired by the Muse, but imposed by the strong arm of power. The leading characteristic of this State is party spirit and ambition.

And what manner of man answers to such a State? 'In love of contention,' replied Adeimantus, 'he will be like our friend Glaucon.' In that respect, perhaps, but not in others. He is self-asserting and ill-educated, yet fond of literature, although not himself a speaker,—fierce with slaves, but obedient to rulers, a lover of power and honour, which he hopes to gain by deeds of arms,—fond, too, of gymnastics and of hunting. As he advances in years he grows avaricious, for he has lost philosophy, which is the only saviour and guardian of men. His origin is as follows:—His father is a good

man dwelling in an ill-ordered State, who has retired from politics in order that he may lead a quiet life. His mother is angry at her loss of precedence among other women; she is disgusted at her husband's selfishness, and she expatiates to her son on the unmanliness and indolence of his father. The old family servant takes up the tale, and says to the youth:—'When you grow up you must be more of a man than your father.' All the world are agreed that he who minds his own business is an idiot, while a busybody is highly honoured and esteemed. The young man compares this spirit with his father's words and ways, and as he is naturally well disposed, although he has suffered from evil influences, he rests at a middle point and becomes ambitious and a lover of honour.

And now let us set another city over against another man. The next form of government is oligarchy, in which the rule is of the rich only; nor is it difficult to see how such a State arises. The decline begins with the possession of gold and silver; illegal modes of expenditure are invented; one draws another on, and the multitude are infected; riches outweigh virtue; lovers of money take the place of lovers of honour; misers of politicians; and, in time, political privileges are confined by law to the rich, who do not shrink from violence in order to effect their purposes.

Thus much of the origin,—let us next consider the evils of oligarchy. Would a man who wanted to be safe on a voyage take a bad pilot because he was rich, or refuse a good one because he was poor? And does not the analogy apply still more to the State? And there are yet greater evils: two nations are struggling together in one—the rich and the poor; and the rich dare not put arms into the hands of the poor, and are unwilling to pay for defenders out of their own money. And have we not already condemned that State in which the same persons are warriors as well as shopkeepers? The greatest evil of all is that a man may sell his property and have no place in the State; while there is one class which has enormous wealth, the other is entirely destitute. But observe that these destitutes had not really any more of the governing nature in them when they were rich than now that they are poor; they were miserable spendthrifts always. They are the drones of the hive; only whereas the actual drone is unprovided by nature with a sting, the two-legged things whom we call drones are some of them without stings and some of them have dreadful stings; in other words, there are paupers and there are rogues. These are never far apart; and in oligarchical cities, where nearly everybody is a pauper who is not a ruler, you will find abundance of both. And this evil state of society originates in bad education and bad government.

Like State, like man,—the change in the latter begins with the representative of timocracy; he walks at first in the ways of his father, who may have been a statesman, or general, perhaps; and presently he sees him 'fallen from his high estate,' the victim of informers, dying in prison or exile, or by the hand of the executioner. The lesson which he thus

receives, makes him cautious; he leaves politics, represses his pride, and saves pence. Avarice is enthroned as his bosom's lord, and assumes the style of the Great King; the rational and spirited elements sit humbly on the ground at either side, the one immersed in calculation, the other absorbed in the admiration of wealth. The love of honour turns to love of money; the conversion is instantaneous. The man is mean, saving, toiling, the slave of one passion which is the master of the rest: Is he not the very image of the State? He has had no education, or he would never have allowed the blind god of riches to lead the dance within him. And being uneducated he will have many slavish desires, some beggarly, some knavish, breeding in his soul. If he is the trustee of an orphan, and has the power to defraud, he will soon prove that he is not without the will, and that his passions are only restrained by fear and not by reason. Hence he leads a divided existence; in which the better desires mostly prevail. But when he is contending for prizes and other distinctions, he is afraid to incur a loss which is to be repaid only by barren honour; in time of war he fights with a small part of his resources, and usually keeps his money and loses the victory.

Next comes democracy and the democratic man, out of oligarchy and the oligarchical man. Insatiable avarice is the ruling passion of an oligarchy; and they encourage expensive habits in order that they may gain by the ruin of extravagant youth. Thus men of family often lose their property or rights of citizenship; but they remain in the city, full of hatred against the new owners of their estates and ripe for revolution. The usurer with stooping walk pretends not to see them; he passes by, and leaves his sting—that is, his money—in some other victim; and many a man has to pay the parent or principal sum multiplied into a family of children, and is reduced into a state of dronage by him. The only way of diminishing the evil is either to limit a man in his use of his property, or to insist that he shall lend at his own risk. But the ruling class do not want remedies; they care only for money, and are as careless of virtue as the poorest of the citizens. Now there are occasions on which the governors and the governed meet together,—at festivals, on a journey, voyaging or fighting. The sturdy pauper finds that in the hour of danger he is not despised; he sees the rich man puffing and panting, and draws the conclusion which he privately imparts to his companions,—‘that our people are not good for much;’ and as a sickly frame is made ill by a mere touch from without, or sometimes without external impulse is ready to fall to pieces of itself, so from the least cause, or with none at all, the city falls ill and fights a battle for life or death. And democracy comes into power when the poor are the victors, killing some and exiling some, and giving equal shares in the government to all the rest.

The manner of life in such a State is that of democrats; there is freedom and plainness of speech, and every man does what is right in his own eyes, and has his own way of life. Hence arise the most various developments of

character; the State is like a piece of embroidery of which the colours and figures are the manners of men, and there are many who, like women and children, prefer this variety to real beauty and excellence. The State is not one but many, like a bazaar at which you can buy anything. The great charm is, that you may do as you like; you may govern if you like, let it alone if you like; go to war and make peace if you feel disposed, and all quite irrespective of anybody else. When you condemn men to death they remain alive all the same; a gentleman is desired to go into exile, and he stalks about the streets like a hero; and nobody sees him or cares for him. Observe, too, how grandly Democracy sets her foot upon all our fine theories of education,—how little she cares for the training of her statesmen! The only qualification which she demands is the profession of patriotism. Such is democracy;—a pleasing, lawless, various sort of government, distributing equality to equals and unequals alike.

Let us now inspect the individual democrat; and first, as in the case of the State, we will trace his antecedents. He is the son of a miserly oligarch, and has been taught by him to restrain the love of unnecessary pleasures. Perhaps I ought to explain this latter term:—Necessary pleasures are those which are good, and which we cannot do without; unnecessary pleasures are those which do no good, and of which the desire might be eradicated by early training. For example, the pleasures of eating and drinking are necessary and healthy, up to a certain point; beyond that point they are alike hurtful to body and mind, and the excess may be avoided. When in excess, they may be rightly called expensive pleasures, in opposition to the useful ones. And the drone, as we called him, is the slave of these unnecessary pleasures and desires, whereas the miserly oligarch is subject only to the necessary.

The oligarch changes into the democrat in the following manner:—The youth who has had a miserly bringing up, gets a taste of the drone's honey; he meets with wild companions, who introduce him to every new pleasure. As in the State, so in the individual, there are allies on both sides, temptations from without and passions from within; there is reason also and external influences of parents and friends in alliance with the oligarchical principle; and the two factions are in violent conflict with one another. Sometimes the party of order prevails, but then again new desires and new disorders arise, and the whole mob of passions gets possession of the Acropolis, that is to say, the soul, which they find void and unguarded by true words and works. Falsehoods and illusions ascend to take their place; the prodigal goes back into the country of the Lotophagi or drones, and openly dwells there. And if any offer of alliance or parley of individual elders comes from home, the false spirits shut the gates of the castle and permit no one to enter,—there is a battle, and they gain the victory; and straightway making alliance with the desires, they banish modesty, which they call folly, and send temperance over the border. When the house has been swept and garnished, they dress up the exiled vices, and, crowning

them with garlands, bring them back under new names. Insolence they call good breeding, anarchy freedom, waste magnificence, impudence courage. Such is the process by which the youth passes from the necessary pleasures to the unnecessary. After a while he divides his time impartially between them; and perhaps, when he gets older and the violence of passion has abated, he restores some of the exiles and lives in a sort of equilibrium, indulging first one pleasure and then another; and if reason comes and tells him that some pleasures are good and honourable, and others bad and vile, he shakes his head and says that he can make no distinction between them. Thus he lives in the fancy of the hour; sometimes he takes to drink, and then he turns abstainer; he practises in the gymnasium or he does nothing at all; then again he would be a philosopher or a politician; or again, he would be a warrior or a man of business; he is

‘Every thing by starts and nothing long.’

There remains still the finest and fairest of all men and all States— tyranny and the tyrant. Tyranny springs from democracy much as democracy springs from oligarchy. Both arise from excess; the one from excess of wealth, the other from excess of freedom. ‘The great natural good of life,’ says the democrat, ‘is freedom.’ And this exclusive love of freedom and regardlessness of everything else, is the cause of the change from democracy to tyranny. The State demands the strong wine of freedom, and unless her rulers give her a plentiful draught, punishes and insults them; equality and fraternity of governors and governed is the approved principle. Anarchy is the law, not of the State only, but of private houses, and extends even to the animals. Father and son, citizen and foreigner, teacher and pupil, old and young, are all on a level; fathers and teachers fear their sons and pupils, and the wisdom of the young man is a match for the elder, and the old imitate the jaunty manners of the young because they are afraid of being thought morose. Slaves are on a level with their masters and mistresses, and there is no difference between men and women. Nay, the very animals in a democratic State have a freedom which is unknown in other places. The she-dogs are as good as their she-mistresses, and horses and asses march along with dignity and run their noses against anybody who comes in their way. ‘That has often been my experience.’ At last the citizens become so sensitive that they cannot endure the yoke of laws, written or unwritten; they would have no man call himself their master. Such is the glorious beginning of things out of which tyranny springs. ‘Glorious, indeed; but what is to follow?’ The ruin of oligarchy is the ruin of democracy; for there is a law of contraries; the excess of freedom passes into the excess of slavery, and the greater the freedom the greater the slavery. You will remember that in the oligarchy were found two classes—rogues and paupers, whom we compared to drones with and without stings. These two classes are to the State what phlegm and bile are to the human body; and the State-physician, or

legislator, must get rid of them, just as the bee-master keeps the drones out of the hive. Now in a democracy, too, there are drones, but they are more numerous and more dangerous than in the oligarchy; there they are inert and unpractised, here they are full of life and animation; and the keener sort speak and act, while the others buzz about the bema and prevent their opponents from being heard. And there is another class in democratic States, of respectable, thriving individuals, who can be squeezed when the drones have need of their possessions; there is moreover a third class, who are the labourers and the artisans, and they make up the mass of the people. When the people meet, they are omnipotent, but they cannot be brought together unless they are attracted by a little honey; and the rich are made to supply the honey, of which the demagogues keep the greater part themselves, giving a taste only to the mob. Their victims attempt to resist; they are driven mad by the stings of the drones, and so become downright oligarchs in self-defence. Then follow informations and convictions for treason. The people have some protector whom they nurse into greatness, and from this root the tree of tyranny springs. The nature of the change is indicated in the old fable of the temple of Zeus Lycaeus, which tells how he who tastes human flesh mixed up with the flesh of other victims will turn into a wolf. Even so the protector, who tastes human blood, and slays some and exiles others with or without law, who hints at abolition of debts and division of lands, must either perish or become a wolf—that is, a tyrant. Perhaps he is driven out, but he soon comes back from exile; and then if his enemies cannot get rid of him by lawful means, they plot his assassination. Thereupon the friend of the people makes his well-known request to them for a body-guard, which they readily grant, thinking only of his danger and not of their own. Now let the rich man make to himself wings, for he will never run away again if he does not do so then. And the Great Protector, having crushed all his rivals, stands proudly erect in the chariot of State, a full-blown tyrant: Let us enquire into the nature of his happiness.

In the early days of his tyranny he smiles and beams upon everybody; he is not a 'dominus,' no, not he: he has only come to put an end to debt and the monopoly of land. Having got rid of foreign enemies, he makes himself necessary to the State by always going to war. He is thus enabled to depress the poor by heavy taxes, and so keep them at work; and he can get rid of bolder spirits by handing them over to the enemy. Then comes unpopularity; some of his old associates have the courage to oppose him. The consequence is, that he has to make a purgation of the State; but, unlike the physician who purges away the bad, he must get rid of the high-spirited, the wise and the wealthy; for he has no choice between death and a life of shame and dishonour. And the more hated he is, the more he will require trusty guards; but how will he obtain them? 'They will come flocking like birds—for pay.' Will he not rather obtain them on the spot? He will take the slaves from their owners and make them his body-guard; these are his trusted friends, who admire and look up to him.

Are not the tragic poets wise who magnify and exalt the tyrant, and say that he is wise by association with the wise? And are not their praises of tyranny alone a sufficient reason why we should exclude them from our State? They may go to other cities, and gather the mob about them with fine words, and change commonwealths into tyrannies and democracies, receiving honours and rewards for their services; but the higher they and their friends ascend constitution hill, the more their honour will fail and become 'too asthmatic to mount.' To return to the tyrant—How will he support that rare army of his? First, by robbing the temples of their treasures, which will enable him to lighten the taxes; then he will take all his father's property, and spend it on his companions, male or female. Now his father is the demus, and if the demus gets angry, and says that a great hulking son ought not to be a burden on his parents, and bids him and his riotous crew begone, then will the parent know what a monster he has been nurturing, and that the son whom he would fain expel is too strong for him. 'You do not mean to say that he will beat his father?' Yes, he will, after having taken away his arms. 'Then he is a parricide and a cruel, unnatural son.' And the people have jumped from the fear of slavery into slavery, out of the smoke into the fire. Thus liberty, when out of all order and reason, passes into the worst form of servitude...

In the previous books Plato has described the ideal State; now he returns to the perverted or declining forms, on which he had lightly touched at the end of Book IV. These he describes in a succession of parallels between the individuals and the States, tracing the origin of either in the State or individual which has preceded them. He begins by asking the point at which he digressed; and is thus led shortly to recapitulate the substance of the three former books, which also contain a parallel of the philosopher and the State.

Of the first decline he gives no intelligible account; he would not have liked to admit the most probable causes of the fall of his ideal State, which to us would appear to be the impracticability of communism or the natural antagonism of the ruling and subject classes. He throws a veil of mystery over the origin of the decline, which he attributes to ignorance of the law of population. Of this law the famous geometrical figure or number is the expression. Like the ancients in general, he had no idea of the gradual perfectibility of man or of the education of the human race. His ideal was not to be attained in the course of ages, but was to spring in full armour from the head of the legislator. When good laws had been given, he thought only of the manner in which they were likely to be corrupted, or of how they might be filled up in detail or restored in accordance with their original spirit. He appears not to have reflected upon the full meaning of his own words, 'In the brief space of human life, nothing great can be accomplished'; or again, as he afterwards says in the Laws, 'Infinite time is the maker of cities.' The order of constitutions which is adopted by him represents an order of thought rather than a succession of time, and may

be considered as the first attempt to frame a philosophy of history.

The first of these declining States is timocracy, or the government of soldiers and lovers of honour, which answers to the Spartan State; this is a government of force, in which education is not inspired by the Muses, but imposed by the law, and in which all the finer elements of organization have disappeared. The philosopher himself has lost the love of truth, and the soldier, who is of a simpler and honester nature, rules in his stead. The individual who answers to timocracy has some noticeable qualities. He is described as ill educated, but, like the Spartan, a lover of literature; and although he is a harsh master to his servants he has no natural superiority over them. His character is based upon a reaction against the circumstances of his father, who in a troubled city has retired from politics; and his mother, who is dissatisfied at her own position, is always urging him towards the life of political ambition. Such a character may have had this origin, and indeed Livy attributes the Licinian laws to a feminine jealousy of a similar kind. But there is obviously no connection between the manner in which the timocratic State springs out of the ideal, and the mere accident by which the timocratic man is the son of a retired statesman.

The two next stages in the decline of constitutions have even less historical foundation. For there is no trace in Greek history of a polity like the Spartan or Cretan passing into an oligarchy of wealth, or of the oligarchy of wealth passing into a democracy. The order of history appears to be different; first, in the Homeric times there is the royal or patriarchal form of government, which a century or two later was succeeded by an oligarchy of birth rather than of wealth, and in which wealth was only the accident of the hereditary possession of land and power. Sometimes this oligarchical government gave way to a government based upon a qualification of property, which, according to Aristotle's mode of using words, would have been called a timocracy; and this in some cities, as at Athens, became the conducting medium to democracy. But such was not the necessary order of succession in States; nor, indeed, can any order be discerned in the endless fluctuation of Greek history (like the tides in the Euripus), except, perhaps, in the almost uniform tendency from monarchy to aristocracy in the earliest times. At first sight there appears to be a similar inversion in the last step of the Platonic succession; for tyranny, instead of being the natural end of democracy, in early Greek history appears rather as a stage leading to democracy; the reign of Peisistratus and his sons is an episode which comes between the legislation of Solon and the constitution of Cleisthenes; and some secret cause common to them all seems to have led the greater part of Hellas at her first appearance in the dawn of history, e.g. Athens, Argos, Corinth, Sicyon, and nearly every State with the exception of Sparta, through a similar stage of tyranny which ended either in oligarchy or democracy. But then we must remember that Plato is describing rather the contemporary

governments of the Sicilian States, which alternated between democracy and tyranny, than the ancient history of Athens or Corinth.

The portrait of the tyrant himself is just such as the later Greek delighted to draw of Phalaris and Dionysius, in which, as in the lives of mediaeval saints or mythic heroes, the conduct and actions of one were attributed to another in order to fill up the outline. There was no enormity which the Greek was not today to believe of them; the tyrant was the negation of government and law; his assassination was glorious; there was no crime, however unnatural, which might not with probability be attributed to him. In this, Plato was only following the common thought of his countrymen, which he embellished and exaggerated with all the power of his genius. There is no need to suppose that he drew from life; or that his knowledge of tyrants is derived from a personal acquaintance with Dionysius. The manner in which he speaks of them would rather tend to render doubtful his ever having 'consorted' with them, or entertained the schemes, which are attributed to him in the Epistles, of regenerating Sicily by their help.

Plato in a hyperbolic and serio-comic vein exaggerates the follies of democracy which he also sees reflected in social life. To him democracy is a state of individualism or dissolution; in which every one is doing what is right in his own eyes. Of a people animated by a common spirit of liberty, rising as one man to repel the Persian host, which is the leading idea of democracy in Herodotus and Thucydides, he never seems to think. But if he is not a believer in liberty, still less is he a lover of tyranny. His deeper and more serious condemnation is reserved for the tyrant, who is the ideal of wickedness and also of weakness, and who in his utter helplessness and suspiciousness is leading an almost impossible existence, without that remnant of good which, in Plato's opinion, was required to give power to evil (Book I). This ideal of wickedness living in helpless misery, is the reverse of that other portrait of perfect injustice ruling in happiness and splendour, which first of all Thrasymachus, and afterwards the sons of Ariston had drawn, and is also the reverse of the king whose rule of life is the good of his subjects.

Each of these governments and individuals has a corresponding ethical gradation: the ideal State is under the rule of reason, not extinguishing but harmonizing the passions, and training them in virtue; in the timocracy and the timocratic man the constitution, whether of the State or of the individual, is based, first, upon courage, and secondly, upon the love of honour; this latter virtue, which is hardly to be esteemed a virtue, has superseded all the rest. In the second stage of decline the virtues have altogether disappeared, and the love of gain has succeeded to them; in the third stage, or democracy, the various passions are allowed to have free play, and the virtues and vices are impartially cultivated. But this freedom, which leads to many curious extravagances of character, is in reality only a state of weakness and dissipation. At last, one monster passion takes

possession of the whole nature of man—this is tyranny. In all of them excess—the excess first of wealth and then of freedom, is the element of decay.

The eighth book of the Republic abounds in pictures of life and fanciful allusions; the use of metaphorical language is carried to a greater extent than anywhere else in Plato. We may remark,

(1), the description of the two nations in one, which become more and more divided in the Greek Republics, as in feudal times, and perhaps also in our own;

(2), the notion of democracy expressed in a sort of Pythagorean formula as equality among unequals;

(3), the free and easy ways of men and animals, which are characteristic of liberty, as foreign mercenaries and universal mistrust are of the tyrant;

(4), the proposal that mere debts should not be recoverable by law is a speculation which has often been entertained by reformers of the law in modern times, and is in harmony with the tendencies of modern legislation. Debt and land were the two great difficulties of the ancient lawgiver: in modern times we may be said to have almost, if not quite, solved the first of these difficulties, but hardly the second.

Still more remarkable are the corresponding portraits of individuals: there is the family picture of the father and mother and the old servant of the timocratical man, and the outward respectability and inherent meanness of the oligarchical; the uncontrolled licence and freedom of the democrat, in which the young Alcibiades seems to be depicted, doing right or wrong as he pleases, and who at last, like the prodigal, goes into a far country (note here the play of language by which the democratic man is himself represented under the image of a State having a citadel and receiving embassies); and there is the wild-beast nature, which breaks loose in his successor. The hit about the tyrant being a parricide; the representation of the tyrant's life as an obscene dream; the rhetorical surprise of a more miserable than the most miserable of men in Book IX; the hint to the poets that if they are the friends of tyrants there is no place for them in a constitutional State, and that they are too clever not to see the propriety of their own expulsion; the continuous image of the drones who are of two kinds, swelling at last into the monster drone having wings (Book IX),—are among Plato's happiest touches.

There remains to be considered the great difficulty of this book of the Republic, the so-called number of the State. This is a puzzle almost as great as the Number of the Beast in the Book of Revelation, and though apparently known to Aristotle, is referred to by Cicero as a proverb of obscurity (Ep. ad Att.). And some have imagined that there is no answer to

the puzzle, and that Plato has been practising upon his readers. But such a deception as this is inconsistent with the manner in which Aristotle speaks of the number (Pol.), and would have been ridiculous to any reader of the Republic who was acquainted with Greek mathematics. As little reason is there for supposing that Plato intentionally used obscure expressions; the obscurity arises from our want of familiarity with the subject. On the other hand, Plato himself indicates that he is not altogether serious, and in describing his number as a solemn jest of the Muses, he appears to imply some degree of satire on the symbolical use of number. (Compare Cratylus; Protag.)

Our hope of understanding the passage depends principally on an accurate study of the words themselves; on which a faint light is thrown by the parallel passage in the ninth book. Another help is the allusion in Aristotle, who makes the important remark that the latter part of the passage (Greek) describes a solid figure. (Pol.—‘He only says that nothing is abiding, but that all things change in a certain cycle; and that the origin of the change is a base of numbers which are in the ratio of 4:3; and this when combined with a figure of five gives two harmonies; he means when the number of this figure becomes solid.’) Some further clue may be gathered from the appearance of the Pythagorean triangle, which is denoted by the numbers 3, 4, 5, and in which, as in every right-angled triangle, the squares of the two lesser sides equal the square of the hypotenuse ( $9 + 16 = 25$ ).

Plato begins by speaking of a perfect or cyclical number (Tim.), i.e. a number in which the sum of the divisors equals the whole; this is the divine or perfect number in which all lesser cycles or revolutions are complete. He also speaks of a human or imperfect number, having four terms and three intervals of numbers which are related to one another in certain proportions; these he converts into figures, and finds in them when they have been raised to the third power certain elements of number, which give two ‘harmonies,’ the one square, the other oblong; but he does not say that the square number answers to the divine, or the oblong number to the human cycle; nor is any intimation given that the first or divine number represents the period of the world, the second the period of the state, or of the human race as Zeller supposes; nor is the divine number afterwards mentioned (Arist.). The second is the number of generations or births, and presides over them in the same mysterious manner in which the stars preside over them, or in which, according to the Pythagoreans, opportunity, justice, marriage, are represented by some number or figure. This is probably the number 216.

The explanation given in the text supposes the two harmonies to make up the number 8000. This explanation derives a certain plausibility from the circumstance that 8000 is the ancient number of the Spartan citizens (Herod.), and would be what Plato might have called ‘a number which

nearly concerns the population of a city'; the mysterious disappearance of the Spartan population may possibly have suggested to him the first cause of his decline of States. The lesser or square 'harmony,' of 400, might be a symbol of the guardians,—the larger or oblong 'harmony,' of the people, and the numbers 3, 4, 5 might refer respectively to the three orders in the State or parts of the soul, the four virtues, the five forms of government. The harmony of the musical scale, which is elsewhere used as a symbol of the harmony of the state, is also indicated. For the numbers 3, 4, 5, which represent the sides of the Pythagorean triangle, also denote the intervals of the scale.

The terms used in the statement of the problem may be explained as follows. A perfect number (Greek), as already stated, is one which is equal to the sum of its divisors. Thus 6, which is the first perfect or cyclical number, =  $1 + 2 + 3$ . The words (Greek), 'terms' or 'notes,' and (Greek), 'intervals,' are applicable to music as well as to number and figure. (Greek) is the 'base' on which the whole calculation depends, or the 'lowest term' from which it can be worked out. The words (Greek) have been variously translated—'squared and cubed' (Donaldson), 'equalling and equalled in power' (Weber), 'by involution and evolution,' i.e. by raising the power and extracting the root (as in the translation). Numbers are called 'like and unlike' (Greek) when the factors or the sides of the planes and cubes which they represent are or are not in the same ratio: e.g. 8 and  $27 = 2$  cubed and 3 cubed; and conversely. 'Waxing' (Greek) numbers, called also 'increasing' (Greek), are those which are exceeded by the sum of their divisors: e.g. 12 and 18 are less than 16 and 21. 'Waning' (Greek) numbers, called also 'decreasing' (Greek) are those which succeed the sum of their divisors: e.g. 8 and 27 exceed 7 and 13. The words translated 'commensurable and agreeable to one another' (Greek) seem to be different ways of describing the same relation, with more or less precision. They are equivalent to 'expressible in terms having the same relation to one another,' like the series 8, 12, 18, 27, each of which numbers is in the relation of (1 and  $1/2$ ) to the preceding. The 'base,' or 'fundamental number, which has  $1/3$  added to it' ( $1$  and  $1/3$ ) =  $4/3$  or a musical fourth. (Greek) is a 'proportion' of numbers as of musical notes, applied either to the parts or factors of a single number or to the relation of one number to another. The first harmony is a 'square' number (Greek); the second harmony is an 'oblong' number (Greek), i.e. a number representing a figure of which the opposite sides only are equal. (Greek) = 'numbers squared from' or 'upon diameters'; (Greek) = 'rational,' i.e. omitting fractions, (Greek), 'irrational,' i.e. including fractions; e.g. 49 is a square of the rational diameter of a figure the side of which = 5: 50, of an irrational diameter of the same. For several of the explanations here given and for a good deal besides I am indebted to an excellent article on the Platonic Number by Dr. Donaldson (Proc. of the Philol. Society).

The conclusions which he draws from these data are summed up by him

as follows. Having assumed that the number of the perfect or divine cycle is the number of the world, and the number of the imperfect cycle the number of the state, he proceeds: 'The period of the world is defined by the perfect number 6, that of the state by the cube of that number or 216, which is the product of the last pair of terms in the Platonic Tetractys (a series of seven terms, 1, 2, 3, 4, 9, 8, 27); and if we take this as the basis of our computation, we shall have two cube numbers (Greek), viz. 8 and 27; and the mean proportionals between these, viz. 12 and 18, will furnish three intervals and four terms, and these terms and intervals stand related to one another in the sesqui-altera ratio, i.e. each term is to the preceding as  $3/2$ . Now if we remember that the number  $216 = 8 \times 27 = 3 \text{ cubed} + 4 \text{ cubed} + 5 \text{ cubed}$ , and  $3 \text{ squared} + 4 \text{ squared} = 5 \text{ squared}$ , we must admit that this number implies the numbers 3, 4, 5, to which musicians attach so much importance. And if we combine the ratio  $4/3$  with the number 5, or multiply the ratios of the sides by the hypotenuse, we shall by first squaring and then cubing obtain two expressions, which denote the ratio of the two last pairs of terms in the Platonic Tetractys, the former multiplied by the square, the latter by the cube of the number 10, the sum of the first four digits which constitute the Platonic Tetractys.' The two (Greek) he elsewhere explains as follows: 'The first (Greek) is (Greek), in other words  $(4/3 \times 5) \text{ all squared} = 100 \times 2 \text{ squared over } 3 \text{ squared}$ . The second (Greek), a cube of the same root, is described as 100 multiplied (alpha) by the rational diameter of 5 diminished by unity, i.e., as shown above, 48: (beta) by two incommensurable diameters, i.e. the two first irrationals, or 2 and 3: and (gamma) by the cube of 3, or 27. Thus we have  $(48 + 5 + 27) 100 = 1000 \times 2 \text{ cubed}$ . This second harmony is to be the cube of the number of which the former harmony is the square, and therefore must be divided by the cube of 3. In other words, the whole expression will be: (1), for the first harmony,  $400/9$ : (2), for the second harmony,  $8000/27$ .'

The reasons which have inclined me to agree with Dr. Donaldson and also with Schleiermacher in supposing that 216 is the Platonic number of births are: (1) that it coincides with the description of the number given in the first part of the passage (Greek...): (2) that the number 216 with its permutations would have been familiar to a Greek mathematician, though unfamiliar to us: (3) that 216 is the cube of 6, and also the sum of 3 cubed, 4 cubed, 5 cubed, the numbers 3, 4, 5 representing the Pythagorean triangle, of which the sides when squared equal the square of the hypotenuse ( $9 + 16 = 25$ ): (4) that it is also the period of the Pythagorean Metempsychosis: (5) the three ultimate terms or bases (3, 4, 5) of which 216 is composed answer to the third, fourth, fifth in the musical scale: (6) that the number 216 is the product of the cubes of 2 and 3, which are the two last terms in the Platonic Tetractys: (7) that the Pythagorean triangle is said by Plutarch (*de Is. et Osir.*), Proclus (*super prima Eucl.*), and Quintilian (*de Musica*) to be contained in this passage, so that the tradition of the school seems to point in the same direction: (8) that the

Pythagorean triangle is called also the figure of marriage (Greek).

But though agreeing with Dr. Donaldson thus far, I see no reason for supposing, as he does, that the first or perfect number is the world, the human or imperfect number the state; nor has he given any proof that the second harmony is a cube. Nor do I think that (Greek) can mean 'two incommensurables,' which he arbitrarily assumes to be 2 and 3, but rather, as the preceding clause implies, (Greek), i.e. two square numbers based upon irrational diameters of a figure the side of which is  $5 = 50 \times 2$ .

The greatest objection to the translation is the sense given to the words (Greek), 'a base of three with a third added to it, multiplied by 5.' In this somewhat forced manner Plato introduces once more the numbers of the Pythagorean triangle. But the coincidences in the numbers which follow are in favour of the explanation. The first harmony of 400, as has been already remarked, probably represents the rulers; the second and oblong harmony of 7600, the people.

And here we take leave of the difficulty. The discovery of the riddle would be useless, and would throw no light on ancient mathematics. The point of interest is that Plato should have used such a symbol, and that so much of the Pythagorean spirit should have prevailed in him. His general meaning is that divine creation is perfect, and is represented or presided over by a perfect or cyclical number; human generation is imperfect, and represented or presided over by an imperfect number or series of numbers. The number 5040, which is the number of the citizens in the Laws, is expressly based by him on utilitarian grounds, namely, the convenience of the number for division; it is also made up of the first seven digits multiplied by one another. The contrast of the perfect and imperfect number may have been easily suggested by the corrections of the cycle, which were made first by Meton and secondly by Callippus; (the latter is said to have been a pupil of Plato). Of the degree of importance or of exactness to be attributed to the problem, the number of the tyrant in Book IX ( $729 = 365 \times 2$ ), and the slight correction of the error in the number  $5040/12$  (Laws), may furnish a criterion. There is nothing surprising in the circumstance that those who were seeking for order in nature and had found order in number, should have imagined one to give law to the other. Plato believes in a power of number far beyond what he could see realized in the world around him, and he knows the great influence which 'the little matter of 1, 2, 3' exercises upon education. He may even be thought to have a prophetic anticipation of the discoveries of Quetelet and others, that numbers depend upon numbers; e.g.—in population, the numbers of births and the respective numbers of children born of either sex, on the respective ages of parents, i.e. on other numbers.

