

extent, we have even the free choice of the arm-length, because, whatever l or W be, if only the centre of gravity of the empty beam is brought to the proper distance from the central edge, we can give to the sensibility any value we please. What is actually done is so to construct the beam that its centre of gravity lies decidedly lower than one would ever care to have it, and then to connect with the beam a small movable weight (called the "bob") in such a manner that it can be shifted up and down along a wire, the axis of which coincides with the Y-axis, and thus the value s_0 of the distance of the centre of gravity of the beam from the central edge be caused to assume any value, from a certain maximum down to nothing, and even a little beyond nothing. As to the relative independence of the sensibility of the charge, equation 5 shows that a given balance will possess this quality in the higher a degree the less the distance h of the central edge is from the plane of the two terminal ones, and, supposing h to be constant (i.e., the adjustment to be finished), the less the initial sensibility α , exhibited by the empty instrument. Passing from one balance to the other, but supposing h and α_0 to remain constant, we readily see that the sensibility is the more nearly independent of the charge p in the pans, the greater the arm-length l is. From what has been said above, it would appear that by means of a balance provided with a gravity-bob, we could attain any degree of precision we liked, but evidently this is not possible practically, because in the actual instrument neither the knife-edges and their bearings nor the arrestment are what we have hitherto supposed them to be; and, consequently, both l and l' as well as h , instead of being constants, are variable quantities. Obviously, the non-constancy of the ratio $l : l'$ is the most important point, and to this point we shall therefore confine our attention. Let us imagine that the imaginary balance hitherto considered has been charged equally on both sides (with $P = p_0 + p$), so that its normal position is its position of rest, and then assume, first, that the middle edge (which hitherto has been an absolutely rigid line) is now a narrow and slightly, but irregularly, curved rough surface. The effect will be, that, supposing the balance to be repeatedly arrested and made to vibrate, the axis of rotation, instead of being constant, will shift irregularly between $x = +\lambda$ and $x = -\lambda$ where λ means a small length. But this comes to the same as if the central pivot were absolutely perfect, but had the common centre of gravity C_0 , instead of being fixed at $x = 0$, oscillating between $x = \pm \lambda_0$. In other words, the balance may possibly come to rest at any position within a certain angle $\pm \beta$, which, as an angle of deviation, corresponds to the overweight

$$\epsilon_0 = \{2(p_0 + p) + W\} \frac{\lambda_0}{l}$$

Assume now, secondly, that, say, the right terminal edge was slightly turned so as no longer to be parallel to the middle edge. This in itself would not matter much; because although it might produce a change in the length of the right arm, this change would be permanent, and the arm-length again be constant, provided the hook-and-eye arrangement for the suspension of the pan, and the arrestment, were ideally perfect. But, practically, they are not, and, moreover, the knife-edge and its bearing are not what theory supposes them to be; and the effect is the same as if the virtual point of application A of the charge $p_0 + p$, instead of being at the constant distance l from the centre, oscillated irregularly between $l + \lambda'$ and $l - \lambda'$, where λ' has a similar meaning to that of λ_0 . The joint effect of the imperfections of the three pivots is that the indications of the balance, instead of being constant, are variable within $\pm \epsilon$, where ϵ means a small weight determined approximately by the equation—

$$\epsilon = \frac{1}{l} \{ [2(p_0 + p) + W] \lambda_0 + 2(p_0 + p) \lambda' \} \quad (7)$$

Hence, in a balance to be constructed for a given purpose, l must be made long enough to make sure of its compensating the effects of the λ 's, which, for a given set of knife-edges, and a given degree of absolute exactitude in their adjustment, may be assumed to have constant values. Evidently in a given balance ϵ has nothing to do with the sensibility, and consequently it would be useless to increase the sensibility beyond what is required to make the angle β , corresponding to ϵ (i.e., that angle within which the balance is, so to speak, in indifferent equilibrium), conveniently visible. To go further would, in general, be a mistake, because the greater the sensibility the more markedly it varies with the charge, the less is the maximum overweight which can be determined by the method of vibration, and, last not least, the more slowly the balance will vibrate, because the time of vibration t is governed by the equation—

$$t = \sqrt{\frac{kW + 2(p_0 + p)}{W s_0 + 2h(p_0 + p)}} \cdot \frac{l}{\sqrt{R_0}}$$

where k is a constant which depends on the shape of the beam, and for the ordinary perforated rhombus is about $\frac{1}{2}$, while R_0 stands for the length of the pendulum beating seconds at the place. Introducing the sensibility—

$$\alpha = \frac{l}{W s_0 + 2h(p_0 + p)}, \text{ we have } t = c \sqrt{\alpha}, \text{ where } c \text{ is a constant.}$$

4. Compound Lever Balances.—Of these numerous inventions—in all of which a high degree of practical convenience is obtained at the expense of precision—we must content ourselves with noticing two which, on account of their extensive use, cannot be passed over. We here allude, in the first place, to that particular kind of equal-armed lever balances, in which the pans are situated above the beam, and which are known as "Roberval's balances;" and secondly, to those peculiar complex steel-yards which are used for the weighing of heavy loads by means of comparatively small weights.

In Roberval's balance (fig. 8), the beam consists of a parallelogram, in which each of the four corners A, B, A', B' is a joint, and which by means of two joints situated in the centres of the two longer sides AB and $A'B'$ is suspended from a vertical rod so that the two shorter sides AA' and BB' under all circumstances stand vertical. With these two sides the pans are rigidly connected; and the main feature in the machine is, that wherever the charge in the pan may lie, i.e., whatever may be the virtual point of application of the whole charge P in regard to the vertical side of the beam, its static effect is the same as if P was concentrated in a point D in the axis of the rod AA' or BB' . That this really is so is easily proved. Imagine the particle weighing P units to be rigidly connected with, say, AA' , but situated to the left of that line, and, whatever may be its distance from AA' , when the beam descends through a certain angle, the vertical projection of the path described by the point D , i.e., its fall h , has the same value whatever its distance from AA' . Hence the work done, say, against an elastic string tending to hold the beam in its place, invariably is $= Ph$ as it would be if D was situated in AA' .

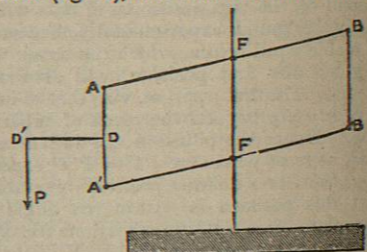


FIG. 8.—Roberval's Balance.

The ordinary Decimal Balance is a combination of levers illustrated by fig. 9. a, c, b, d, e, g, h, f , are all joints or pivots; a and h rest on the fixed framework of the machine, and consequently indirectly on the ground; c rests on the lever ab . In the actual machine cd supports the "bridge," which accommodates the load, while at f is suspended a pan for the weight. The pan is so adjusted

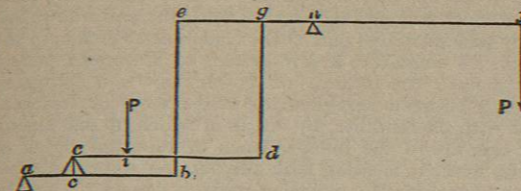


FIG. 9.—Decimal Balance.

that it balances the bridge. Suppose the load P to be placed so that its centre of gravity is at i , and a portion P_c of P will press on the knife-edge at c , the rest P_a will pull at d and, with the same force, at g . Now, $P_c = P \cdot \frac{ia}{ca}$, equivalent to $\frac{ac}{ab} P$, pulling at b or e , equivalent to $P \cdot \frac{ac}{ab} \cdot \frac{ia}{ca} \cdot \frac{cb}{gh}$ pulling at g . The dimensions are so chosen that $\frac{ac}{ab} = \frac{gh}{ch}$, hence the effect of P_c at g is equivalent to a weight $P \cdot \frac{ia}{ca}$. The other portion of P , viz., P_a , pulls at d , and consequently also at g , with a force $P \cdot \frac{ic}{cd}$. Hence the effect of the total load is equivalent to $P \cdot \left(\frac{ia+ic}{ca} \right) = P$ units suspended at g , and if, for instance, $gh = \frac{1}{10} hf$, one pound in the pan will counterpoise ten pounds at any point of the bridge.

5. Torsion Balances.—Of the several instruments bearing this name, the majority are no-balances at all, but machines for measuring horizontal forces (electric, magnetic, &c.), by the extent to which they are able to distort an elastic wire vertically suspended and fixed at its upper end. In the torsion balances proper the wire is stretched out horizontally, and supports a beam so fixed to it that the wire passes through its centre of gravity. Hence the elasticity of the wire here plays the same part as the weight of the beam does in the common balance. An instrument of this sort was invented by Ritchie for the measurement of very small weights, and for this purpose it may offer certain advantages; but, clearly, if it were ever to be used for measuring larger weights, the beam would have to be supported by knife-edges and bearings, and in regard to such application therefore (i.e., as a means for serious gravimetric work), it has no *raison d'être*. See ELECTRICITY and MAGNETISM.

6. For Hydrostatic weighing machines see the article HYDROMETER. (W. D.)

BALANCE OF POWER. The theory of the Balance of Power may be said to have exercised a preponderating influence over the policy of European statesmen for more than two hundred years, that is, from the Treaty of Westphalia until the middle of the present century; and to have been the principal element in the political combinations, negotiations, and wars which marked that long and eventful period of modern history. It deserves, therefore, the attentive consideration of the historical student, and, indeed, the motive cause of many of the greatest occurrences would be unintelligible without a due estimate of its effects. Even down to our own times

it has not been without an important influence; for the Crimean War of 1854 was undertaken by England and France for no other object than to maintain the balance of power in Eastern Europe, and to prevent the aggrandisement of Russia by the dismemberment of the Ottoman empire and the conquest of Constantinople. Nevertheless, there is, perhaps, no principle of political science, long and universally accepted by the wisest statesmen, on which modern opinion has, within the last twenty years, undergone a greater change; and this change of opinion is not merely speculative, it has regulated and controlled the policy of the most powerful states, and of none more than of Great Britain, in her dealings with the continent of Europe. At the date of the publication of the last edition of this work, the theory of the balance of power was believed to be so firmly established, both by reason and experience, that it was laid down, in the forcible words of Earl Grey, that "the poorest peasant in England is interested in the balance of power, and that this country ought to interfere whenever that balance appeared to be really in danger." At the present time no English statesman would lay down that proposition categorically; and probably no European statesman would be prepared to act upon it. In proportion as the theory of the balance of power has lost much of its former authority, the doctrine of non-intervention has gained strength and influence, and this has been accepted at the present day both by Whig and Tory ministers, so that no strong difference of opinion can at the present time be said to exist in the British nation on the subject. Within the last fifteen years political changes of extraordinary magnitude have been brought about in Europe by force of arms and by revolutions. In former times such changes would certainly have led to a general war, on the principle that it was essential to maintain the relative strength and independence of states, and to support the fabric of European policy. But, under the policy of non-intervention, the effects of these contests have been confined to the states which were directly engaged in them; and the other powers of Europe have maintained a cautious neutrality, which has probably not lessened their own strength, and which has saved the world from a general conflagration.

The theory of the balance of power rested on several assumptions. It was held, more especially from the time of Grotius, in the early part of the 17th century, that the states of Europe formed one grand community or federal league, of which the fundamental principle and condition was the preservation of the balance of power; that by this balance (in the words of Vattel) was to be understood such a disposition of things, as that no one potentate or state shall be able absolutely to predominate and prescribe laws to the others; that all were equally interested in maintaining this common settlement, and that it was the interest, the right, and the duty of every power to interfere, even by force of arms, when any of the conditions of this settlement were infringed or assailed by any other member of the community. The principle can hardly be more tersely expressed than in the words of Polybius (lib. i. cap. 83): "Neque enim ejusmodi principia contemnere oportet, neque tanta cuiquam astruenda est potentia, ut cum eo postea de tuo quamvis manifesto jure disceptare ex æquo non queas." Or, to borrow the language of Fénelon in his *Instructions*, drawn up by him for the guidance of the Duc de Bourgogne, "This attention to maintain a sort of equality and equipoise between neighbouring nations is the security of the general tranquillity. In this respect all neighbouring nations, trading with each other, form one great body and a sort of community. Thus, Christendom is a kind of universal republic, which has its interests, its fears, and its precautions to be taken. All the members

of this great body owe it to one another for the common good, and owe it to themselves for the security of their country, to prevent the progress of any other members who should seek to overthrow this balance, which would turn to the certain ruin of all the other members of the same body. Whatever changes or affects this general system of Europe is too dangerous, and draws after it infinite mischiefs." Whatever may be the value of these philanthropic principles, history reminds us that when they were most loudly professed they were most frequently violated, and that no cause of war seems to have been so frequent or so fatal as the spurious pretext of restoring peace and defending the general tranquillity of the world. Thus, it was to balance the power of the house of Austria that Cardinal Richelieu flung France into the quarrels of Germany in the Thirty Years' War, and even lent her aid to the Protestant cause. It was to balance the encroaching and aggressive power of Louis XIV. that numerous combinations were formed between England, Austria, and Holland, which, after nearly half a century of almost uninterrupted contests and bloodshed, ended in the peace of Utrecht. The pretext of Frederick II., when he was meditating some act of rapine, generally was that he believed some hostile combination had been formed against him, which it was wise to anticipate. In short, no cause of war has been more frequently alleged and acted upon, than that a proper consideration for the balance of power rendered it necessary to take forcible measures to avert some remote or hypothetical danger.

It is obviously a maxim, not only of policy out of common sense and human nature, that the weak should combine to protect themselves against the strong, and that when the independence of minor states is threatened by the ambition or the overwhelming superiority of a power aiming at universal empire, they will do wisely to unite for the purposes of self-defence and resistance. Frederick II. himself says, in his *Anti-Machiavel*, where he laid down precepts which he did not practise, "When the excessive aggrandisement of one power threatens to overwhelm all others, it is the part of wisdom to oppose barriers to its encroachments, whilst there is yet time to stay the torrent. The clouds are seen to gather, the lightning announces a coming storm, and the sovereign who is unable to contend against the tempest will, if he is wise, unite himself with all those who are menaced by the same common danger. Had the kings of Egypt, Syria, and Macedonia confederated together against the Roman power, they would not have fallen under its oppressive yoke; an alliance prudently contracted, and a war carried on with energy, would have saved the ancient world from universal despotism." So too, Hume, in his celebrated *Essay on the Balance of Power*, endeavours to show that the ancients were familiar with the principle both as statesmen and historians, and, for example, he avers that whoever will read Demosthenes's oration for the Megalopolitans, will see the utmost refinements on this principle that ever entered into the head of a Venetian or European speculatist.

But with great respect to these illustrious authorities, they appear to have discussed, under the name of the balance of power, a principle which might more fitly be termed a theory of warlike alliances. The object of the balance of power, rightly understood, is not to carry on war with success, but to avoid war altogether, by establishing a common interest and obligation in the maintenance of the conditions of peace. When war is declared, public law is suspended, and each state must be guided by what it conceives to be its own interest and duty. If the theory of the balance of power has any value at all, it is not in the hour of violence and bloodshed, when the fate of nations may be decided on a field of battle, but rather in

those negotiations which must eventually terminate the contest, which commonly bring together for that purpose the representatives of all the belligerents, and which are designed to provide against the recurrence of these calamities.

The ablest and most eloquent champion of the system of equipoise in the present century was the Chevalier von Gentz, who published his *Fragments upon the Balance of Power in Europe* in 1806, under the influence of the catastrophe which had subjugated the Continent, and who subsequently took an active part at the Congress of Vienna in the attempts to constitute a new system of European policy. Gentz defines the balance of power as "a constitution subsisting between neighbouring states more or less connected with one another, by virtue of which no one among them can injure the independence or essential rights of another, without meeting with effectual resistance on some side, and consequently exposing itself to danger." And he rests this constitution on four propositions:—(1.) That no state must ever become so powerful as to coerce all the rest; (2.) That every state which infringes the conditions is liable to be coerced by the others; (3.) That the fear of coercion should keep all within the bounds of moderation; and (4.) That a state having attained a degree of power to defy the union should be treated as a common enemy. He argues that by a strict adherence to these principles war would be averted, excessive power restrained, and the independent existence of the humblest members of the confederacy secured. But, for the reasons we have previously assigned, it is a fallacy to suppose that even the civilised states of Europe have ever naturally formed a confederacy, or that their relations are governed by common rules of action, recognised alike by all of them. That theory supplies a very insecure basis for the balance of power and the maintenance of peace. The law of nations, not being imposed or sanctioned by any supreme and sovereign authority, is, in fact, reducible to the general laws of morality, which ought to regulate the dealings of mankind, except when it has been expressed and established in the form of a contract, binding on all the parties to that obligation. To determine the true character and limits of the balance of power, we must have recourse, not to vague general principles, but to positive law, framed in the shape of international contracts, which are termed treaties, and which have been sanctioned at different epochs of modern history by a congress of states. This historical treatment of the subject leads us to more tangible and solid ground; and it will be seen that on these occasions more especially attempts have been made to establish a balance of power in Europe upon the basis of general treaties; and that these attempts have been rewarded by considerable, though not by permanent, success in the 17th, 18th, and 19th centuries.

The first idea of a general congress, to put an end to the horrors of the Thirty Years' War, and to adjust the conflicting claims of rival creeds and hostile princes, appears to have originated with the emperor of Germany in 1640. The attempt to restore peace by the authority of the Germanic Diet had failed. It became necessary to have recourse to mediating powers, and after a protracted preliminary negotiation, the Congress of Münster or Westphalia opened on the 11th July 1643,—the Catholic and Protestant belligerents being represented on the one hand, and the mediating powers, France, Sweden, Venice, and the Pope, on the other. We do not propose in this place to follow the train of these complicated negotiations. It is enough for our present purpose to remark that the great treaty which resulted from them, and was signed on the 24th October 1648, became the basis of the public law of Europe, and the first official recognition of the existence of a European balance of power. The conditions established

in Germany left the Catholic, the Lutheran, and the Reformed Churches in possession of their respective independence, whilst they relieved the minor princes from their strict dependence on the empire; but, above all, they conferred on France and Sweden, as mediating powers, the right of intervention for the purpose of upholding the provisions of the treaty. In other words, the balance which had been established between the states of Central Europe was regulated by external weights, which could be brought to bear upon it. The result of this combination, due mainly to Cardinal Mazarin, was certainly injurious to the unity and independence of Germany, and it tended to aid the aggressive and dictatorial power of Louis XIV. Nevertheless, the fundamental principles of the Treaty of Westphalia were recognised and renewed as the conditions of the general peace of Europe down to the French Revolution; they were not wholly absent from the minds of the negotiators at Vienna in 1815; and they only received their death-blow from the hand of the Prussian Government in 1866 and 1870. Whatever might be the merits of the Treaty of Westphalia, it had not that of securing to Europe an unbroken or durable peace; and even the territorial relations of France and Germany were altered within thirty years of that time by the conquest of Franche Comté and Alsace. But the wars of Louis XIV. were not general wars, until he engaged in the fatal attempt to place his grandson on the throne of Spain, and to unite the two crowns in the house of Bourbon. Efforts had been made, in view of the approaching extinction of the Spanish branch of the house of Austria, to preserve the balance of power by a timely partition of the vast dominions of the Spanish empire—a remarkable example of an attempt to prevent a formidable catastrophe by an equitable arrangement. But it may be doubted whether any arrangement in which so little account was taken of the wishes and traditions of nations could possibly have succeeded; and it unquestionably failed, because Louis XIV. did not hesitate to repudiate the treaties he had signed, and to avail himself of the last will and testament of Charles II., which had been extorted from the Spanish court by his intrigues. That event raised again the whole question of the balance of power in Europe. It was received as a doctrine of political faith that the union of the French and Spanish crowns in one family must be fatal to the independence of all other states; that it would replace the Stuarts upon the throne of England, and establish the ascendancy of France and the Catholic party over Europe. It was therefore resisted by a coalition, of which England, Austria, and Holland were the principal members. France was at length reduced to the lowest point of humiliation, and in 1709 peace might have been obtained on every point but one. Louis refused to turn his arms against his own grandson, and the war continued till 1715. Philip V. retained the Spanish crown, and the relations of all the European states were once more adjusted with legal nicety at Utrecht. Great pains were taken to provide, by a system of renunciations, against the possibility of the union of the crowns of France and Spain on the same head, because it was held that such a contingency would be fatal to the balance of power in Europe. But these precautions did not prevent the conclusion, at a later period, of the family compact between the two branches of the house of Bourbon, which was regarded as a lasting danger to other countries, and was opposed by the whole strength of Britain and the genius of Chatham. The peace of Utrecht was denounced by Parliament and detested by the nation as an inglorious termination of a glorious war, and its authors were consigned to obloquy and exile; but it secured the peace of Europe for thirty years; it reduced the power of France; and had it not been for the German dominions of the house

of Hanover, it might have been still longer before England was drawn into another war.

Hitherto the political system of Europe had comprised little more than the states of France, Austria, Spain, Sweden, and Holland, with the occasional intervention of Great Britain, more for the defence of the interests of others than of her own. But the 18th century witnessed a total change in the politics of the world. A new empire, Russia, arose in the north, under the genius of Peter and of Catherine; the ambition and military skill of Frederick II. raised Prussia from a secondary member of the German empire to a powerful and independent kingdom; the colonial empires of Spain, France, and Britain had extended their territorial interests to the continents of Asia and America, and to the eastern and the western isles, inasmuch that wars, begun in Europe, soon raged on the banks of the Ganges and the St Lawrence; and the declaration of independence of the United States of America called into being a new and powerful people of the future. The partition of Poland, which was commenced in 1772, marked a new era of aggressive revolutionary policy; it was a gross invasion of the principle of the balance of power, effected by three powers, jealous of their respective strength, but indifferent to the rights of an independent nation and to the opinion of Europe.¹ That lawless act was the prelude to more violent attacks on the sovereignty and nationality of many countries, for before the century closed the French Revolution, and the wars that followed it, crushed to atoms the ancient fabric of Europe. Whilst events of this magnitude were occurring in the world, it is obvious that the theory of the balance of power was entirely displaced and dislocated. New elements were at work over a far wider area; new sources of power and influence were opened of far more importance than those territorial and dynastic questions which occupied the statesmen of Münster and of Utrecht; ancient land-marks were swept away; minor states were annihilated; and the temporary domination of Napoleon over a great portion of the continent of Europe seemed to have overthrown the balance of power for ever. In those dark and evil days public writers like Gentz and Mackintosh still maintained the principle that peace could only be restored by a due recognition of the rights and independence of every nation, and England adhered inflexibly to the policy of combining the scattered elements of Europe against the common enemy. Half a dozen times over these coalitions failed; but they succeeded at last, and this country had the glory of playing no inconsiderable part in the restoration of the liberties of all other nations against foreign aggression. Great as were the cost and the burden of that tremendous war, we still hold that the prodigious power of France and the boundless ambition of Napoleon left us no honourable alternative but to pursue it; and, as Mr Fox himself discovered when he conducted the negotiations of 1806, it was impossible to conclude peace with France without basely surrendering the whole interests of Europe to universal oppression, and without exposing this country to be at last the victim of a power which had devoured all the rest. The principle of the balance of power, in the sense of mutual defence, was never asserted with greater energy than it was by this country in that struggle, and we do not regret it. "As long," says Bacon, "as men are men, and as long as reason is reason, a just fear will be a just cause of a preventive war; but

¹ It deserves to be noticed that down to the partition of Poland, no state, however small, had been extinguished, annihilated, and "annexed" in the continuous wars of the two previous centuries—down to the republics of Geneva and San Marino all retained their national existence. The wars of the French Revolution, and still more the wars of our own times, have swept a multitude of the minor states and dynasties from the map of Europe, and incorporated them in larger empires.

especially if it be part of the case that there be a nation that is manifestly detected to aspire to new conquests, then other states assuredly cannot be justly accused for not paying for the first blow, or for not adopting Polyphemus's courtesy, to be the last that shall be eaten up."—(*Speech concerning a War with Spain.*)

Upon the fall of Napoleon in 1814 it became the common interest, and the universal desire, of all the sovereigns and nations of Europe to restore peace upon a settled basis, to re-establish the authority of public law, to reinstate the rightful owners in the possessions and dominions they had been forcibly deprived of, to reduce the military establishments which weighed so heavily on the finances and on the population of Europe, and to create anew a balance of power between the states of Europe, by which the greatest of them might be restrained and the least of them protected. A secret article had been annexed to the Treaty of Paris, declaring that "the allied powers had agreed among themselves on the bases which were to be given to the future system of equilibrium;" though what the nature of that agreement and of those bases was, has never been made clearly apparent. But the matter was unquestionably referred to the congress then about to open at Vienna, where the most powerful sovereigns and the most distinguished ministers of all the European states met for the first time in council. That congress was certainly the most complete, and in its action the most important, assemblage of independent political powers and their representatives which ever took place in the world. Its decisions were not all of them just, or wise, or disinterested. The broad general principles of pacification which had been laid down were more than once traversed and thwarted by particular interests and ambitions. The theory of the rights of legitimate sovereigns over their subjects was carried to an extravagant point, pregnant with danger for the future. Genoa was transferred to Sardinia, Venice to Austria, Norway to Sweden, Poland to Russia, part of Saxony to Prussia, and the sacred hopes and pledges of freedom which had animated the nations in the contest were forgotten by the leading courts of Europe in the division of the spoil. But in spite of these shortcomings and abuses, we cannot concur with writers who, like Hardenberg, denounce the Congress of Vienna as an auction of nations and an orgy of kings. It was said that every one withdrew from the Congress of Vienna disappointed, no one having obtained as much as he expected; but if so, that would suggest the inference that the general interest of Europe prevailed over the pretensions of each particular state. From the point of view we are now considering, which is the restoration of the balance of power, it cannot be denied that the Treaties of Vienna secured forty years of peace to Europe. They stood the brunt of two fresh convulsions in France in 1830 and in 1848, and their main provisions, though modified with respect to the Low Countries in 1832, and abrogated in Italy by the campaign of 1859, were not seriously impaired until the dissolution of the Germanic body in 1866, and the Franco-German War of 1870. During the whole of this period the warlike ambition of France, and the disposition of Russia to overawe Central Europe, were successfully held in check. At Vienna itself, and during the congress, the struggle was close and sometimes doubtful. Russia was resolved to retain the whole of Poland, which she occupied with her armies, and Prussia claimed the whole of Saxony as a compensation for her share of the Polish provinces. To counteract this combination of Russia and Prussia, an alliance was signed on the 3d January 1815 between Austria, England, and France, which might have led to hostilities between those powers and their recent allies. Perhaps it was fortunate that the return of Napoleon from Elba

broke up the congress, and reminded all the powers that union and mutual concessions were the first duties of those who had devoted themselves to the cause of law, order, and peace. It was a sign of the wisdom of the congress, and of its respect for sound principles, that although France was the vanquished power and the author of the calamities of Europe, she was treated at Vienna with as much consideration as any other state. Her ambassador, M. de Talleyrand, had his full weight in the congress; and no attempt was made in 1814 to curtail her ancient territorial possessions or to lower her rank in Europe. On the contrary, the just influence of France was recognised as an essential condition of the balance of power.

For the first time, then, by this general act of the Congress of Vienna, the territorial possessions and frontiers of the Continental states were defined in one document, to which all the Governments of Europe were parties; the constitution of the Germanic body was incorporated in the same instrument, and the neutrality and independence of the smallest cities and commonwealths were established and guaranteed. Every state in Europe had therefore an equal right and interest to invoke the authority of the treaty, and to claim the execution of all its conditions. A complete fabric of European polity, such as had never existed before, was thus literally established by mutual contract; and every infraction of it might justly be brought under the consideration of the high contracting parties, or might even have been the ground of a declaration of war. In several instances this controlling power was wisely and beneficially exercised, and more than one burning question was adjusted by the conferences which met from time to time, always on the basis of the treaties of 1815. This certainly was the nearest approach ever made to a practical balance of power; and we owe to it, as we have seen, a long period of mutual confidence, respect for public law, and peace, which contributed enormously to the progress, prosperity, and happiness of the world.

But there are darker shades to the picture. The comprehensive interest which every state was thus held to have acquired in maintaining the general settlement might be held, and was held, to justify a dangerous and mischievous degree of intervention in the internal affairs of every other country, and this right was too often exercised in a manner injurious to liberty and independence. The northern powers, not content with the terms of the general alliance and the Treaties of Vienna, proceeded to connect themselves more closely by the mystic ties of the Holy Alliance, which provided that they were to act together on all subjects, and to regard their interests as one and indivisible. The construction they put upon the system recently established in Europe was that it gave the allied powers a right to interfere, not only for the prevention of quarrels, aggressions, and war, but in the internal government of states, for the purpose of preventing changes which they chose to regard as injurious to their own security and eventually to the balance of power. At the congresses and conferences of Troppau, Carlsbad, Aix-la-Chapelle, and Verona, these doctrines were avowed and acted upon to their furthest extent, and under pretence of maintaining and defending the common interests of Europe, the popular movements and constitutional progress of Italy were crushed, a French army entered Spain in 1823 to restore the authority of Ferdinand VII. against the Cortes, and even the independence of the South American colonies was represented as a blow to the peace and security of Europe. The British Government had early perceived that the interpretation thus given to the theory of the balance of power, and to what was termed the federal system in Europe, was only another name for an intolerable oppression, and that the right of intervention in the internal affairs of other countries

was claimed and exercised under false and dangerous pretences. The duke of Wellington, who represented this country at the Congress of Verona, under instructions framed by Lord Castlereagh, was the first to declare that England could be no party to such an application of the theory of the alliance, and that this country preferred isolation to any such system of combined policy. That was the germ of the modern doctrine of non-intervention. But as long as the Treaties of Vienna lasted, it was our duty and our right to endeavour to support their authority, and to vindicate the rights established by a compact to which this country was a party. We declined in 1852 to join with Prussia in enforcing the declaration made by the allied powers in 1815, which excluded any member of the family of Bonaparte from the throne of France; but we sought, in conjunction with France, to protest against the annihilation of the kingdom of Poland, the incorporation of Cracow, the admission of non-German provinces into the confederation, and the invasion of Schleswig; and we opposed the annexation of Savoy and Nice to France, but alone and without effect. The compact of Vienna was gradually set aside and violated in the course of years by those who were most interested in maintaining it; and when the Emperor Napoleon III. proposed, in 1863, a new congress for the purpose of revising and re-establishing the balance of power in Europe, under the name of an International Council, England refused to be a party to the negotiation, and rejected the scheme. Lord Russell replied, "There being no supreme authority in such an assembly to enforce the decision of the majority, the congress would probably separate, leaving many of its members on worse terms with each other than they had been before." This was the last attempt made to bring the authority of a congress, representing the collective authority of Europe, to bear on questions affecting the general peace. When this point was reached it was apparent that the whole theory of the confederated system in Europe had become, for a time at least, obsolete; that the treaties and mutual guarantees on which that system rested had lost their power; and that there was no controlling force to resist the ambitious or warlike designs of any state capable of giving effect to them. The Italian campaign of 1859 had considerably altered the condition of Southern Europe, and weakened Austria. Possibly, Prussia, in withholding her assistance at that time from her federal ally, foresaw in the defeat of Austria an event favourable to her own future pretensions. At any rate, for the first time, a war seriously affecting the balance of power was begun and ended by the two principal belligerents alone, and even the price paid by the house of Sardinia for the services of France—the cession of Savoy and Nice—was tacitly acquiesced in by Europe. Twenty years before, it would have been thought impossible that the doctrine of non-intervention should have acquired so great an ascendancy.

But the consequences of this novel state of affairs soon became manifest in the increasing disintegration of Europe. No state could have a greater claim than Denmark to the protection of the principles of the balance of power, for, as late as 1852, all the great powers had pledged themselves by treaty to maintain the integrity of her dominions, the unity of the monarchy, and the order of succession to the crown which was then established. Yet in 1864 the German powers proceeded to what was termed a Federal Execution against her; Holstein, Lauenburg, and, eventually, Schleswig were torn from her by Prussia, Austria acting a subordinate part. England in vain appealed by her diplomacy to the terms of the agreement of 1852, but France and Russia stood aloof, and the greatest injustice the world had witnessed since the partition of Poland was consummated. As every event in political

life is closely connected, Prussia now proceeded to ally herself with the crown of Italy against Austria, and to execute her grand design of the overthrow of the Germanic Confederation and the expulsion of Austria from that body, which had been regarded as the centre of gravity of the European system. As long as that body subsisted, war was impossible between its respective members, and France was incapable of attacking their united forces. The success of Prussia in the campaign of 1866 was rapid and complete, and Austria ceased to form part of the Germanic Confederation. The power of Prussia was further increased by the military conventions, which gave her the absolute command over the armies of the minor German states. This was undoubtedly the severest blow which had yet been inflicted on the balance of power in Europe; and the Emperor Napoleon III., who had recently given vent to his dissatisfaction with the treaties of 1815, now found himself confronted by an enemy infinitely more powerful and dangerous. The results of Sadowa were as fatal to the influence and security of France as if she herself had lost a campaign. The French nation, however, failed to understand the magnitude of the danger, though they were irritated by the approach of it. War was, on more than one occasion, on the point of breaking out; and at length France plunged into it with a recklessness and incapacity only to be equalled by the tremendous calamities that war caused her to endure. Again, no third state was drawn by political considerations into the conflict. The terms of peace were settled between the vanquished and the conquerors without reference to the general interests of other nations; and no attempt has been made to place these arrangements under the sanction of the public law of Europe. Russia took advantage of the agitated condition of Western Europe to abrogate, by her own will and pleasure, an important stipulation of the Treaty of Peace of 1856, and Europe again submitted to this breach of covenant.

The general result is that, at the present time, the military power of the German empire far surpasses that of any other state, and could only be resisted by a general combination of all the rest. The balance of power, as it was understood fifty years ago, and down to a more recent time, has been totally destroyed; no alliances can be said to exist between any of the great powers, but each of them follows a distinct course of policy, free from any engagements to the rest, except on some isolated points; the minor states can appeal to no certain engagement or fixed general principle for protection, except, perhaps, as far as the neutrality of Switzerland and Belgium is concerned; and for the last two centuries there has not been a time at which all confidence in public engagements and common principles of international law has been so grievously shaken. Where the reign of law ends, the reign of force begins, and we trace the inevitable consequence of this dissolution of legal international ties in the enormous augmentation of military establishments, which is the curse and the disgrace of the present age. Every state appears to feel that its security depends on arming the whole virile population, and maintaining in what is called a state of peace all the burdens of a complete armament; indeed, in the most barbarous ages and the most sanguinary wars there were, doubtless, fewer men under arms, and less money was spent in arming them, than at the present day.

We have shown in the preceding observations that we do not retain the faith of our forefathers in the balance of power. It is impossible to equalise the strength of nations. It is impossible to regulate or control the growth and development of their forces, which depend not on territorial possessions alone, but on their industry, their credit, their natural resources, and their internal institutions. It is