

should not himself study examination papers, or speculate on the most profitable course, but should trust to his tutor, who will tell him that the best way to get marks is to learn honestly, as if for learning's sake alone. The stimulating effect of examinations leading to gain acts on parents and on schoolmasters. It leads parents to exert themselves to procure, not the best education for their sons they can, but the most direct preparation for competitions. This fosters low notions of education: people overlook the value of developed faculties and good mental habits, and seem to think that if there were no examinations their sons would want no schooling. Often it is of great importance for a youth to pass an examination when there is no time for him to get genuine knowledge; this knowledge must then be simulated by a process called "cram," which means that the "portative memory," or carrying power, must serve as a make-shift for all other faculties. Schoolmasters find a zest given to their work by looking to the places their pupils may gain, but the course which will earn the best place is not always that which will be the best for the youth in the end; and then the master is pulled in the wrong direction by the eagerness of the boy or his parents, and sometimes of his own subordinates, all of whom look first to success. Masters, let it be said, for the most part resist nobly, and aim at doing real good; but the pressure put on them adds to the wear and tear of their work.

Secondly, examinations serve as guides. A youth may seem to be listless only because his energies have not been turned into a definite channel; when he is shown his work, and is started in the way to do it, he becomes quite another being. Besides, a good examination shows what is meant by knowing a subject. The pupil or even a teacher by looking over a thoughtfully drawn up paper of questions gets a higher standard of knowledge; he sees the way of dealing with the subject *secundum artem* as opposed to any slipshod easy-going way of handling it. On the other hand, examination papers which are so meagre that the pupil finds no call on him for intelligence, or in which he can pass by doing a very small portion of the paper, have a most injurious effect. They give the pupil a low view of knowledge, and cripple the teacher, because the pupil is confident of passing with what he thinks he can learn in a week or two before the examination.

Thirdly, examinations oblige a person to be able to produce his knowledge, and encourage him to bring it out in a terse and lucid style. They give no credit to loose or floating knowledge. Notions that are in solution are not available; they must be crystallized in definite form before an examiner will accept them. Great difference is also made between an answer which is perfect and one which is not; and this exerts a good influence, for one of the commonest defects of loosely trained minds is that they are very deficient in exactitude, and do not appreciate the enormous difference between going "somewhere near" the mark and hitting the precise point.

But examinations, even when well conducted, have ill as well as good effects. They destroy spontaneity. Nine young people out of ten may quite rightly be made to move in a good "regulation groove," but the tenth would be better for having room to expatiate. The candidate who is getting up his books is busy about learning, not in thinking. If independent thoughts suggest themselves he puts them aside; his business is with his "books," for his own thoughts cannot be set. This tendency may be obviated by allowing scope in the answers for some discursiveness (but this has its evils also) or by introducing essays, but a man's mind no doubt becomes "examination bound" if he is subjected to repeated definite mechanical examinations. He is kept in a state of pupilage, and only reads to recollect when he is of an age to reflect, to examine, and to judge.

This leads to the question of age. Examinations, though good for boys, are bad for men. Those which deal with general education should not be continued beyond the age of 22. Professional examinations, or examinations in the highest parts of science, intended for those who mean to give their lives to study, must come later, but should be as little competitive as possible. By a "competitive" examination is meant one in which a candidate is depressed or excluded by the superiority of another.

Another point is the strain on the mind produced by competition. This strain is much greater, as has been said above, when many "information subjects" have to be carried in the head at once, than when the pupil has only to exercise in his examination a power which he keeps about him; because, in the former case, he is constantly harassed by the fear that he is dropping something. It is bad for a student when he is interested in his chemistry to feel a panic about his English literature. Nothing wears out the mind so much as being pulled many ways at once, especially if this state of distraction is prolonged. Yearly trials, for instance, for some appointment, a new subject being now and then added to increase the candidates' weight of metal, so habituate the mind to an artificial stimulus that pupils become incapable of studying without it. They can feel no interest in a subject if it is not to be set in an examination; and in time their power of attention is weakened, and their minds become like india-rubber bands which have been too long on the stretch. On the other hand, young people may be expected to be equal to one great effort or perhaps to two. Such occasions may call out some heroism or self-denial, and these qualities are much needed. But for this purpose the teacher should regard the examination with respect, and teach his pupils to respect it,—he must not help them to outwit the examiners. In this view it is well that the teachers should have some influence in framing or altering the examination scheme. They will then regard it as in part their own. Moreover, the pupil should have the examination in view at the end of a long vista of study; the preparation for it should not be hurried. The feeling of being short of time adds to worry, and prevents good work.

There are always some students of an anxious disposition who will over-fag themselves at the approach of an examination. This is more frequently the effect of over-worry than of over-work. It will usually be found on inquiry that the hours of work *per diem* have not been excessive, but the evil is that they have had no rest; when not at their books they are letting their minds run on their work, fancying they are forgetting something,—they are haunted by the idea of the examination, and become physically unfit for it. But we must not throw the blame of the mischief that may thus accrue to them on the examinations. Such cases do not commonly occur among those who are aiming at the highest places, and are most exposed to the strain of competition; very often the sufferers are merely pass men, and they are in fact unequal to any call on their nervous energies. The examination is the first call they encounter, and their weakness is shown in that; but they would probably have been in the same condition the first time they were called on to face any responsibility, such as to make a speech, or preach a sermon, or write an article by a given day. After an examination or two this nervousness is overcome by the stronger sort. No doubt young men have to encounter a severe strain at some examinations, and this should be reduced by lessening the load on the memory at one time. It may be very desirable for young men to learn something of six or eight subjects, but they should not be examined in all at once. It is also desirable that those who are exposed to strain of any kind should be under the eye of one who knows the laws of mental and

physical hygiene—who can detect the first symptoms of morbid anxiety, and will have authority enough with the pupil to enforce exercise, proper diet, and mental relaxation. If the mind cannot rest, it must have a change of occupation.

The most important examinations are those which lead to university emoluments, and those by which candidates are selected for the civil service and the army.

A clever youth, destined for the university, is at present subjected to examinations from the age of 14 to 23 or 24. First he is brought on at a preparatory school, to compete for a scholarship at one of the large schools. The credit of his schoolmaster is involved in his success, and great pains are taken with the candidates. Usually the examiners understand boys, and the papers are set with judgment; but a boy at 14 should be extending the roots of his knowledge, not arranging it for display; and if he be trained in order to have something to show, there is a danger that solidity may be sacrificed to the early production of results. An examiner taking a school unawares, and questioning the boys, would probably detect the cleverest without doing any harm; but when boys work up to papers, even if they are carefully set, there is a danger of their developing the fatal facility of remembering words with little care for ideas, which belongs to their age. It is said that those who are elected scholars often seem to fall off at first. They have worked under pressure, and the pressure is removed. They most commonly, however, rally for the next contest, which is that for open scholarships at the university. The examinations for these are now almost always in special branches of knowledge,—classics, or mathematics, and natural science. The colleges too often aim at securing, not the youth who is well-educated all round, but one who is likely to obtain a high degree in a school of university honours. They want men of power; and *special* distinction is held to be the best criterion of this. Schoolmasters often grieve over the necessity of having to put a boy apart to be prepared for the classical or mathematical market; but the public looks in the newspapers for notices of scholarships gained, and a school which may do admirable work with the staple of its boys will yet be carped at if wanting in university success. Boys are hawked from college to college till they find one which will give the price,—that is to say, a scholarship of the value which the parent or master thinks the boy ought to fetch. Of these youths many have little taste for things intellectual, but they have hard heads, and a keen desire to get a scholarship, without which their friends will not send them to the university. By diligent work they may get such a place in a class list as can be won without special ability. Some, of course, are of a higher order, and of a perfectly satisfactory description; and others, on the withdrawal of the pressure that was on them at school, or under their tutors, turn idle and disappoint their purchasers.

At Cambridge, unless the students are at Trinity College, the "trips" brings their examinations to an end. At Trinity College and at Oxford an examination by the college is held for fellowships. There are thus two systems for awarding these,—that of special examinations, and that of being guided by the university honours obtained. It is in favour of the first that it gives two or three chances, and that, by affording a long period from the first admission to the university, it enables a young man to retrieve himself if his early education has been mismanaged by his friends. In some cases, too, very good work is done in the intervening years, but for this to be the case the candidate must not be anxious about the examinations. Those who profit in this way are those who may reckon pretty certainly on success. Against this special examination it is urged that it retains men in pupilage up

to 24 or 25, that with many it is a question whether their chance is worth the investment of the time, and that it gives an advantage to the richer men who can study at leisure, while the poorer must support themselves at schools or by private pupils.

We now come to Government competitive examinations, such as those for the army and civil service. The object of the system was twofold. First of all it was desired to get rid of patronage, with the solicitation and trouble attending it, and, secondly, to secure the ablest men which the situations can command. The first object, no doubt, is attained, and is well worth attaining; with regard to the second, experience seems to show that the system answers quite satisfactorily for the army, and moderately so for the civil service. The reasons of the difference are that the pay in the army is not sufficient to attract those who have no turn for the profession, or who are deficient in the traditional qualities or bearing of the British officer. This examination also is the less distracting of the two, because the number of subjects that may be taken up, both in the case of the ordnance corps and of the line, is limited, and a preponderance is given to those subjects which furnish faculties over those which result in information. If by these examinations we had to pick out 10 men out of 500, the mechanism would be too rough for the purpose; but if we have to take 50, we get down to the great plateau of mediocrity, where we find a batch of candidates nearly on a level; and even if the sixtieth man were to be a trifle better than the fiftieth, either of them would be good enough for the purpose.

The English Government encounters a particular difficulty in such examinations, because there is no uniform national system of education as in Prussia, and advantage must not be given to particular schools. This makes it necessary to allow a wide option of subjects, and the result is that candidates will take, not what is best for them to know, but what will bring most "marks" within a given period of study. The tutor has to invest the pupil's time in that study which promises best for his score. This is not satisfactory to the educationalist, but as a fact, if these youths were not getting up their modicum of zoology or electricity, they would probably be doing nothing better. The money value of an Indian appointment attracts many youths of a different class from those who seek for commissions; these may be wanting in the qualities which are required to command the respect of Hindus, and they may regard their career too narrowly as an investment of brains and labour for which they expect a good return. Physical accomplishments might be allowed to carry some weight, and be required as a qualification.

The next class to be considered are "pass examinations." These are important from the large number of men they affect. By a pass examination we mean one in which the leading object is to ensure a certain standard. It does not follow that some credit may not be obtained by doing well; indeed, for the healthy operation of the examination it is desirable that those who pass should be classified alphabetically in three or four classes. The objects of a pass examination are to sift out incapacity, and to ascertain that the candidates have gone through a certain process of education. The pass examinations of universities, both in England and in France, were until lately framed on a wrong principle. It was thought that the examinations should comprise a specimen of every kind of knowledge that an educated man should possess. If the graduate should prove ignorant of any such branch, the university, it was thought, could absolve itself from responsibility by showing that he had known it at one time. Now, however, we recognize the fact that these scraps of knowledge soon disappear. The portion of chemistry or history which the candidate has

passed in is often only so much "book" learnt almost by heart; with those who do really well the case is different. The value of these examinations is only that they show that men can apply their minds, and can express themselves passably well. The subjects should be chosen much less for their value as information than for their requiring the exercise of thought. Pass men are apt to reduce all they can to the action of memory; hence subjects should be taken which require something more than memory. To detect "parrot-work," the examiners should be familiar with the text-books from which the subjects are learnt, and therefore such examinations should be in connexion with set courses of teaching. Translation of unseen passages, in Latin for instance, should be insisted on, but a dictionary might be allowed. Questions in geometry should be set in such a way that they cannot be answered by writing out Euclid by heart.

The difficulty of a pass examination depends both on the number of compulsory subjects it contains, and on the standard maintained in each. Feeble men can get through one examination in one or two subjects at a time, if the standard be moderate. Thus an examination which can be passed piece-meal, like the Cambridge "Little-go," is a poor criterion of brains, while an examination embracing many subjects ensures a certain strength of head, but not lasting knowledge of any one thing. When an examination has to be extemporized in order to ascertain whether candidates have heads on their shoulders, it will be sufficient to read over to them once or twice some short narrative or argument, or a correspondence on business matters, and to call on them to give an account of it on paper. This will test sufficiently well many of the qualities which go to make an efficient subordinate.

It remains to say something as to practical methods of examining. Originally examinations were conducted *viva voce*, and they still are so in part. Examinations in experimental philosophy and natural science are valueless without something of the kind. The student must perform experiments and explain them, and must identify and describe specimens. *Viva voce* examination is not well adapted for discriminating between candidates who are nearly equal, because they have not the same questions put to them, and nervousness is a disturbing element. The value of *viva voce* lies chiefly in detecting shallow knowledge. It convicts an impostor. On paper a candidate may avoid a searching question; in *viva voce* he has no escape. The objection to its employment is its great expense. It requires very skilled examiners, two of whom ought to sit together; and the examination should last a quarter of an hour for each man. When the numbers are large this involves a long period of examination and great cost. The German system of giving only one question in each subject for a pass examination, and allowing plenty of time, but requiring a very full and perfect answer, is well suited for fairly prepared men, who have only to be roughly classified as "excellent," "good," "fair," and "indifferent." This forces the candidate to study the whole subject carefully, while if a dozen questions are given, as in England, candidates will speculate on passing with a knowledge of only half the subject.

Essays may be used in examinations in two ways. Subjects of a general nature, like a maxim or topic of the day, may be proposed, in which case readiness and fertility of ideas are tested, but a kind of superficiality and glibness is engendered; or the student may be required to write on some subject belonging to his course. The classical student, for instance, might write on a point of Greek history. A dissertation written at leisure is an excellent means of judging of qualifications, and may be used for those who are past the proper age for examination.

In marking a paper the examiner distributes his marks to the questions according to the difficulty or the time they take to answer. The aggregate of the marks may not coincide with his impression, and it may be well to keep back one quarter of the marks, to be allotted afterwards, according to the impression obtained when the papers are read over again, not question by question, but as wholes. It may be well sometimes to use *negative* marks, as an answer may reveal such ignorance as to show that some of the correct answers were "parrot-work." When different subjects are compared, a little knowledge should go for nothing, and excellence should count for much. It is a good plan to add to the marks got the excess above half the full value assigned to the paper, and then deduct one quarter of the full value, e.g., if the full value be 500 and the candidate obtain 400, his score will stand thus:—

$$400 + 150 - 125 = 425.$$

Candidates for honours may be arranged in order of merit, as is common at Cambridge, or alphabetically classed, as at Oxford. In the first case brackets should be used, so as to class as equal those who fall within certain limits of uncertainty. These limits will be wider where there is room for difference of opinion among the examiners, as in composition or philosophy, than in mathematics. If the candidates whose marks differ by as much as twelve per cent. are bracketed together, we come to something like an alphabetical arrangement in classes. When the alphabetical system is adopted those who are sure of a first class are freed from anxiety. But many are in suspense about their class, and the difference between being in a first or second class alphabetically arranged is greater than that between being last in the first class or first in the second class, where the lists are in order of merit.

Out of 1000 young men who come to a university with a view to taking a degree, we find from experience that, roughly speaking, the following proportions will hold good:—250 will have both good abilities and the requisite power of will, and will take creditable honours; about 200 more will be comparatively weak in one or other of these qualifications, but may still get a place in an honour school or tripos; the next 150 will be the more vigorous pass men, who will show intelligence in subjects of but moderate difficulty, will enter keenly into the life of the place, and will pass their examinations respectably; 200 more will pass without failure; the 100 that follow will meet with failures more or less frequently; and the remaining 100 will never pass any university examination at all. Some of these last instances may almost be regarded as cases of disease, arising from infirmity of will or the want of the power to fix the attention. Neglect of the early acquisition of good mental habits is the cause of many failures. A youth may be rejected once from love of amusement or from underrating the examination, but he does not fail again if he can help it. A second failure shows moral or intellectual incapacity.

On this subject see—"Remarks on State of Education at Cambridge," in Dr John Jebb's works, 1774 (here we find the first plan for examining the pass men); Peacock, *On the Statutes of the University of Cambridge*, 1840; Whewell, *Of a Liberal Education*, 1848; *Reports of her Majesty's Commissioners on Oxford*, 1852, and *on Cambridge*, 1854 (in the latter see the evidence of Dr Philpott, Prof. Stokes, Dr Merivale, Mr R. Leslie Ellis, and Mr W. Hopkins); *Suggestions on Academical Organization*, Mark Pattison, B.D. (referring to Oxford); L. Wiese, *German Letters on English Education*, translated by L. Schmitz, 1877; *Education in Oxford: its methods, its aids, and its rewards*, James E. Thorold Rogers; *Conflict of Studies*, I. Todhunter, F.R.S., 1873; *Higher Schools and Universities in Germany*, M. Arnold, 1874; *On the Action of Examinations*, H. Latham, 1877; *Report to the French Government on Education in England*, by M. Demogeot and M. Montucci, 1870; *Third Report of Royal Commissioners on Scientific Instruction*, 1873; M. Burrows, *Pass and Class*, Oxford, 1873; *Student's Guide to*

the University of Cambridge, 1874; *Twentieth Report of Civil Service Commissioners*, 1876. PERIODICALS.—*Mind*, No. 1, 1873, "Philosophy at Oxford," Mark Pattison, B.D.; *Fortnightly Review*, June 1875, "The Examination System at the Universities," A. H. Sayce; *Contemporary Review*, April 1876, "Idle Fellowships," H. Sidgwick, and November 1877, "The Civil Service Examination Scheme in relation to Sciences and to Languages," Alex. Bain, LL.D.; *Nineteenth Century*, April 1878, "The Good and Evil of Examination," Canon Barry; *Quarterly Journal of Education*, April and July 1872, "On the Leaving Examinations of Prussia," by W. C. Perry; *Macmillan's Magazine*, June 1877, "On German Schools," W. C. Perry, and March 1878, "German Views of Oxford and Cambridge." (H. L.A.)

EXARCH (*ἐξαρχος*, a chief person or leader), a title that has been conferred at different periods on certain chief officers or governors, both in secular and ecclesiastical matters. Of these, the most important were the exarchs of Ravenna, the first of whom was appointed by Justinian, emperor of the East, as governor of the middle part of Italy, which was made a province of the Eastern empire after Narses had entirely subdued the Goths and their allies in Italy, 552–554 A.D. Ravenna, with the whole exarchate, was conquered by Astolphus, king of the Lombards, in the year 752; but three years later it was taken by Pepin, king of the Franks, who bestowed it on the pope (Stephen III.), from which time Ravenna and its territory remained united to the papal dominions. The exarch of a diocese was anciently the same as primate. This dignity was intermediate between the patriarchal and the metropolitan, the name patriarch being given only to the heads of the more important dioceses. Metropolitans are also sometimes called exarchs, but apparently not in a technical sense. Exarch is used, in the ecclesiastical antiquities of the Eastern Church, for a general or superior over several monasteries, and is also applied to certain ecclesiastics deputed by the patriarch of Constantinople to collect the tribute payable by the church to the Turkish Government. In the modern Greek Church, an exarch is a deputy, or legate *a latere*, of the patriarch, whose office it is to visit the clergy and churches in the provinces allotted him.

EXCAMBION, or EXCHANGE. Excambion (a word connected with a large class of Low Latin and Romance forms, such as cambium, concambium, scambium, from Latin *cambire*, and Greek *κάμβειν* or *κάμπειν*, to bend, turn, or fold) means in Scotch law the exchange of one heritable subject for another. Its meaning is extended by Lord Stair (*Inst.*, i. 14, 1) to every case of exchange or barter, the *permutatio* or innominate contract (*Datur res ut vicissim res detur*) of the civil law, about which a fierce controversy raged between the Proculian and Sabinian schools, as to whether it was truly a sale or a separate contract. Both schools used to quote the words of Homer, "And thence, too, wine was got by the long-haired Achæans, some bartering it for bronze, and others the glistening steel, some hides, and some the cows themselves, and some again slaves." This Roman contract was not constituted by consent, but by a formal stipulation; it did not pass the property of movables, if the seller had not a title; and it was liable to be rescinded on proof of great inequality. In each of these features it has been modified by the modern law of most European states. Erskine says (*Inst.*, iii. 3, 13), "This doctrine (of property not passing apart from title) may be equitable if directed only against the party himself and his heir; but there could be little security in the commerce of movables if it were extended against a singular successor who had *bona fide* bought the subject from the party after the exchange." In other points, such as the risk of a subject being destroyed, or the remedies on breach of contract, permutation of movables falls under the same rules as sale. The feudal lawyers amused themselves by discussing what name

should be given to a contract in which the consideration consisted partly of money. They called it sale where *major pars in pretio quam in re permutata*. In the more limited sense of the exchange of heritable subjects, this contract received from the feudal law some advantages not given to sale. Thus, the burdensome right of the superior called *protimesis*, or pre-emption, did not apply to excambions. The *decuriones*, or town councils, of the imperial *municipia* were allowed to excamb, although they could not sell, the town-lands; and so with regard to church lands, the *fundus dotalis*, and other subjects partly withdrawn from commerce, excambions, but not sales, were permitted. Sovereigns, too, were allowed to excamb parts of the royal domain, although, as may be seen from the Scotch annexation and dissolution statutes of the 16th century, it required special authority to feu or alienate such subjects. The modern Scotch excambion may consist in the exchange of any heritable subjects whatever, e.g., a patronage or, what often occurs, a portion of a glebe for servitude. The older form of an excambion was in separate dispositions by each "copermutant," as Pothier calls him, in favour of the other, or sometimes mutual charters, each party becoming in turn vassal and superior. And according to the *Leges Burgorum*, c. 55, where lands or houses in burgh were exchanged, the form of delivering sasine consisted in the *apertio* and *clusio* of the door, or the passing out and in of the parties respectively, each of whom gave two pennies (*duo nummi*) to the bailie. But this early form was soon superseded by one contract of excambion (originally drawn by Gilmour and Nisbet, and preserved in the MS. Style Book of Bain of Pitcairly) containing both dispositions, and proceeding generally on the narrative that the parcels of land excambied lie remote from or at least discontinuous to the mansion-house or the principal estate, and, being intersected by the lands of the other party, form a run-rig possession. This contract gives to each party a sufficient narrative of his own title to the lands he is disposing, and it provides, although the law implies this in every express excambion, that on eviction the contract and sasine shall be void and null, and that immediate "recurrency" or regress be given *brevis manu* to the lands which were excambied by the party evicted. Such real warrandice, as it is called, affects excambied land in the hands of singular successors who have purchased *bona fide*, and hence it is often provided that notice of any action of eviction shall be given to the excambier or his heirs. This exceptional severity reminds one of the civil law which distinguished between sale, where delivery of possession with warrandice against eviction was sufficient performance by the seller, and exchange, where an absolute title of property must be given. Writing, however, is not, by the law of Scotland, essential to an excambion. Chiefly in favour of the class of cottars and small feuars, and for convenience in straightening marches, the law will consider the most informal memoranda, and even a verbal agreement, if supported by the subsequent possession. The power to excamb was gradually conferred on entailed proprietors. The Montgomery Act, which was passed in 1770, to facilitate agricultural improvements, permitted 50 acres arable and 100 acres not fit for the plough to be excambied. This was enlarged by the Rosebery Act in 1836, under which one-fourth of an entailed estate, not including the mansion-house, home farm, and policies, might be excambied, provided the heirs took no higher grassum than £200. The power was applied to the whole estate by the Rutherford Act of 1848, and the necessary consents of substitute heirs are now regulated by the Entail Amendment Act of 1875.

Exchange, in English law, is defined as the mutual grant of equal interests, the one in consideration of the

other. The peculiarities of this very ancient common law conveyance or assurance were—(1) equality of estates, not in value or in subject matter, but in legal right of ownership; (2) the use of the word exchange (*excambium*, e.g., in Domesday book, *hanc terram cambiavit Hugo, &c.*); (3) that, though formal delivery of seisin was not required, possession or entry was required to complete the transaction by making it notorious; (4) that, in the case of incorporeal hereditaments, and where the lands lay in different counties, a deed was required; (5) an implied condition of re-entry on the lands of him whose title failed (Coke on Littleton, 50 a; Blackstone by Sweet, ii. p. 323), the liability to re-entry affecting an alienee, but the right to re-enter being personal to the exchanger and his heirs. This condition, however, did not long survive the statute *Quia emptores*; and exchanges are now generally effected by mutual conveyances with the usual covenants for title, which the Act 8 and 9 Vict. c. 106 declares not to imply any condition, whether the word "exchange" be used in the *testatum* or not. Exchanges are also very frequently made, by order of the inclosure commissioners, under the various Acts of Parliament for the inclosure, exchange, and improvement of lands, from 8 and 9 Vict. c. 118 to 31 and 32 Vict. c. 89 (see Cooke *On Inclosures*). In these cases, the property taken is simply impressed with the title of the property given in exchange. So also statutory exchanges are made under the Acts for the Sale and Exchange of Charity Estates, the Charitable Trust Acts, from 16 and 17 Vict. c. 137 to 32 and 33 Vict. c. 110, which now apply to Roman Catholic charities, formerly under 23 and 24 Vict. c. 134. There are also statutes enabling ecclesiastical corporations to exchange, with the approval of the church estate commissioners. Powers of exchange are generally given to trustees under English settlements, and these are exercised by revocation of the original uses and appointment of new uses, all ancillary powers being given by implication under 23 and 24 Vict. c. 145 (see Davidson's *Precedents in Conveyancing*, vols. ii., iii., and v.).

In what may be called international conveyancing, the exchange of territories is accomplished by treaties, of which there is no fixed style. A well-known example is Art. XII. of the Treaty of Nimeguen, "Les terres enclavées seront échangées contre d'autres qui se trouveront plus proches et à la bienséance," &c. The Italian duchies and islands have very frequently been exchanged. Thus, in the Quadruple Alliance of 1720, Philip V. exchanged a reversionary title to Sicily for a reversionary title to Sardinia. The exchange of prisoners in war is often regulated by documents called cartels, which specify a certain agreed on value for each rank of prisoners. The transference of prisoners is often carried out by cartel ships, which, though prohibited from carrying cargo or passengers, are entitled to certain privileges. It was in the 17th century that this practice (which seems to have been unknown to Grotius) superseded the older one of ransom at the end of the war.

See Wheaton's *Elements of International Law*, Lawrence's edition, p. 590, and App. A. in Robinson's *Adm. Rep.*, vol. iii. The early law of military exchange will be found discussed by Albericus Gentilis, *De Jure Belli*, cap. xvi., "De permutationibus et liberationibus." (W. C. S.)

EXCHANGE. The system by which commercial nations discharge their debts to each other has been termed "Exchange," or "the Exchanges." It has been subject of much study both by merchants and bankers who have to deal with its phenomena in the course of business, and by economists desirous to discover the causes of the phenomena, and to explain the laws or method of their operation. In rude times the people of neighbouring countries brought their staple or surplus produce to common fairs, where one kind of goods

was valued and bartered for another; and the dealers brought a little gold and silver with them to settle the small balances. But this, though a rough type of international trade still, is a wholly different affair from modern commerce, with its transactors multiplied a millionfold, and conducting their transactions far apart in widely distant countries. Money itself does little to obviate the difficulties arising from this multiplicity of crossing and recrossing currents; and whoever, therefore, was the first introducer of the idea of "Exchange" is entitled to a high place in the commercial annals of the world—whether it was the stranger mentioned by Isocrates, who came to Athens with some cargoes of corn, and gave an order on a town on the Euxine where money was owing to him, with recourse on an Athenian merchant in the event of the order being dishonoured; or Cicero, in paying for the studies of his son at Athens by an assignment from a creditor in Rome on his debtor in the Greek city; or the pope, whose lending merchants of Siena and Florence drew upon Henry III., or rather on the prelates and abbots of England, with some English merchants as remitters, for the expenses of depositing Manfred, king of Sicily, in which act of deposition Henry was an interested and obligant party—thus avoiding in these various cases the difficulty and risk of transporting coin. The idea, wherever first exemplified, was too good to be lost. It was early developed into a system in Venice, later in Amsterdam, and is now of world-wide application.

It is well to observe, first, what is exchanged—values of commodities exported and sold from one place or country to another, debts thereby owing, interest, profits of capital invested abroad, foreign loans and subsidies, freights, banking and other commissions, expenses of foreign residence or travel, and, in short, claims of payment of every kind on one part, having their relative obligations of remittance on the other, and originally denominated, as the contract or the occasion may have been, in the money either of the places from which the claims proceed or of those where they are payable. Secondly, the means must be noticed by which the exchange is effected—pieces of paper, bearing express calculation to secure what is exactly due between debtor and creditor. A bill of exchange is an order drawn for a specified and definite sum, in favour of a person who is the buyer and becomes the "remitter" of the order, upon a third person, the "drawee," who is indebted for this sum to the drawer, and on presentation of the order becomes the "acceptor." The person or company in whose favour the order is drawn may pass it into other hands, and these, by writing their names on the back, become "indorsers." On much the same model there are "inland" and "foreign" bills of exchange. The whole system of exchange has its foundation in the drawing of the creditor on the debtor; for, as in every country there are both creditors and debtors of other countries, the debtors find it to their advantage to take up the drafts of the creditors in order to avoid direct remittances in cash.

Inland exchange is simpler in character and more easily comprehended than foreign exchange, but in reality presents the same phenomena and the same sequence of cause and effect as the other, so far as the circumstances of any country allow these to come into operation.

Mr McCulloch, in the article on "Exchange" in former editions of the present work, gave a familiar exposition of inland exchange, which it would be difficult to improve:—

"If the debts reciprocally due by London and Glasgow be equal, whether they amount to £100,000, £500,000, or any other sum, they may be discharged without the intervention of money, and the price of bills of exchange will be 'at Par,' that is, a sum of £100 or £1000 in Glasgow will purchase a bill for £100 or £1000 payable in London, and *vice versa*. But if these cities be not mutually indebted in equal sums, then the price of bills will be

increased in the city which has the greatest number of payments to make, and reduced in that which has the fewest. If Glasgow owe London £100,000, whilst the latter only owes the former £90,000, it is clear, inasmuch as Glasgow has a larger sum to remit to London than London has to remit to Glasgow, that the price of bills on London will rise in Glasgow because of the increased demand, and that the price of bills on Glasgow will fall in London because of the diminished demand. A larger sum would consequently be required to discharge a debt due by Glasgow to London, and a less sum to discharge an equal debt due by the latter to the former; or, which is the same thing, the exchange would be *in favour of London*, and *against Glasgow*. Bills on London would sell in Glasgow at a *premium*, and bills on Glasgow would sell in London at a *discount*; the premium in the one case being equal to the discount in the other.

"On the supposition that the balance of £10,000, due by Glasgow, depresses the exchange on London *one per cent.*, it appears, at first sight, that it will cost Glasgow £101,000 to discharge her debt of £100,000 due to London; and that, on the other hand, £89,100 would be sufficient to discharge the debt of London to Glasgow. But a very little consideration will serve to show that this would not be the case. Exchange transactions cannot take place between different cities until debtors and creditors of the one reside in the other. And hence, when the exchange became unfavourable to Glasgow, the premium paid by its merchants for bills on London would not go into the pockets of their creditors in the latter, but into those of their neighbours in Glasgow to whom London was indebted, and from whom the bills were purchased. The loss to Glasgow would, therefore, be limited to the *premium* paid on the balance of £10,000. Thus, supposing that A of Glasgow owes D of London £100,000, and that C of London owes B of Glasgow £90,000, A will pay to B £91,000 for a bill or order on C to pay D £90,000. In this way the £90,000 of London debt at Glasgow would be cleared off,—the premium, which is lost by the debtor to London in Glasgow, being gained by its creditor in the same place. If the business had been transacted in London, C, with £89,100, would have purchased of D a bill for £90,000, payable by A; so that, in this case, the gain would have fallen to the share of the debtor C, and the loss to that of the creditor D, both of London. The complexity of real transactions does not affect the principles on which they are founded. And whatever may be the amount of the debts reciprocally due by different places, the only disadvantage under which any of them could be placed by a fall of the exchange would be the unavoidable one of paying the expense of remitting the *balance of debt*.

"The expense of transmitting money from one place to another limits the fluctuations in the exchange between them. If 20s. sufficed to cover the expense and risk attending the transmission of £100 from Glasgow, to London, it would be indifferent to a merchant, in the event of the exchange becoming unfavourable to the former, whether he paid one per cent. *premium* for a bill on London, or remitted money direct to the latter. If the premium were less than one per cent., it would be clearly his interest to make his payments by means of bills rather than by remittances; and that it could not exceed one per cent. is obvious, for every individual would rather directly remit money than incur an unnecessary expense by purchasing bills on London at a greater *premium* than would suffice to cover the expense of a money remittance. If, owing to the badness of roads, disturbances in the country, or any other cause, the expense of remitting money from Glasgow to London were increased, the difference in the rate of exchange between them might also be proportionally increased. But in every case the extent to which this difference could attain would be limited by, and could not for any considerable period exceed, the cost of remitting cash.

"Exchange transactions become more complex when one place, as is often the case, discharges its debts to another by means of bills drawn on a third place. Thus, though London should owe nothing to Glasgow, yet if Glasgow be indebted to London, London to Manchester, and Manchester to Glasgow, the latter may wholly or partially discharge her debt to London by remitting bills on Manchester. She may wholly discharge it, provided the debt due to her by Manchester exceed or is equal to the debt due by her to London. If, however, it be not equal to the latter, Glasgow will either have to remit money to London to pay the balance of debt, or bills on some other place indebted to her.

"Transactions in inland bills of exchange are almost entirely conducted by bankers, who charge a certain rate per cent. for their trouble, and who, by means of their credit and connexions, are able, on all occasions, to supply the demands of their customers. Bills on London drawn in Edinburgh and Glasgow were formerly made payable at forty days' date, which was equivalent to a *premium* of about $\frac{1}{4}$ per cent.; but, owing to the greater facility of communication, this *premium* is now reduced to twenty days' interest, or to about $\frac{1}{8}$ per cent. Bills for remitting the revenue from Scotland are now drawn at thirty days; previously to 1819 they were drawn at sixty days."

The cost of remittance from Scotland to London has continued to fall during the last thirty years. Bills on revenue account are now drawn at eleven days, free of stamp, and bankers' drafts at seven days, or at a charge of 2s. per £100 up to £300, 6s. for all sums between £300 and £600, and 1s. additional for every £100 above £600. On the other hand, the London bankers remit money, paid over their counters to-day, to Scotland and other parts of the kingdom, payable at par to-morrow. To this extent the rate of exchange is still adverse to Edinburgh and Glasgow, and in favour of London. In like manner the holder of a bill of exchange in Edinburgh or Glasgow upon London finds himself in a somewhat better position than the holder of a bill in London upon either of the two Scotch centres. Yet it would be an error to suppose that the balance of trade is against Scotland and in favour of England. The balance of value of commodities exchanged between the two countries is in favour of Scotland, and might be greatly in her favour, and yet the rate of exchange be adverse; so that we are thus early admonished that the imports and exports of goods, though an important, are not, as was long supposed, a decisive element in the rate of exchange. The transmission of the revenue of Scotland (seven or eight millions annually), the rental of owners of land having their chief domicile in the metropolis, and the amount of obligations of Scotch merchants made payable in London under the increasing concentration of monetary business, would be sufficient to counteract the effect of a large balance of trade on the rate of exchange. Hence London bankers in taking money even in small sums payable at par next day in Edinburgh or Glasgow, are simply taking before hand what is already under course of remittance, and reducing *pro tanto* the balances to be remitted from Scotland.

The relations of inland exchange just stated are those of a country where the money is uniform; where the bank notes of Ireland and Scotland are payable on demand in the common imperial standard of value, as the country bank notes of England are similarly exchangeable for gold or for Bank of England notes, which latter are orders for the delivery of so much gold in the issue department; and where consequently, all inland bills are drawn in precisely the same money. The circumstances are thus highly favourable to an even exchange; and it may be conclusively held that the nearer the monetary system, whether in separate countries within themselves, or in nations closely related by commercial and financial transactions one with another, approaches to these conditions, the difficulties and oscillations of exchange, inland and foreign, will be reduced within narrower limits.

The history of inland exchange in the three kingdoms presents abundant proofs of the immediate effect of money of differing values in disordering the exchanges, or, in other words, the uniform payment of their debts one to another. In the early days of Scotch banking, when the natural limit of a free legal issue of notes was less understood than it soon became, and a structure of bills of exchange was reared upon this basis, it was found that bullion had to be raised by constant re-discounts in London, and that exchange, in short, became impracticable. Even within the same town, given two kinds of money or currency, one of superior value to another, a premium will be immediately established in favour of the money of superior value, and will affect every transaction, however small, by calculations of rate of exchange, as was long illustrated by the *banco* of Hamburg, a strict metallic money of given weight and fineness, in its contact with the worn or degraded coins of various mints in prevailing circulation. In 1689, when, by a proclamation of James II., one penny was added to the nominal value of the Irish shilling, £108, 6s. 8d. Irish money became equal