

the matter, but readily pardoned. It does seem surprising—and surprise has not infrequently passed into resentment—that Vattel, with a mind on a much lower plane than the master-mind of Grotius, should yet have “certainly won a success equal to that of Grotius, perhaps even greater.” Vattel himself would probably be as much surprised as his most caustic critic, for he was very humble indeed in his claims and expectations. Yet Vattel had the merit, and therefore is entitled to the reward, of clear statement and of popular presentment; he was fortunate in being more accessible through his language; if both sides could cite him for their opposing views, the fact stands to the credit of his fairness and candour; and if he translated Wolff’s ideas into intelligible form, it was at least a good service to the science. But Prof. de Lapradelle takes pains to demonstrate that Vattel was considerably more than a populariser of Grotius and Wolff—that he broke away from them on important points, and that, even when he followed them, he improved upon them. For example:—“While Grotius and Wolff still held to the patrimonial character of the State, Vattel was the first of the writers on the Law of Nations to have a clear and concise, systematic, and co-ordinated conception of the modern State as a Nation truly free, founded on the adherence of its members, and exempt from tyranny, just as he was among the first, in the realm of municipal law, to conceive of the modern State, not as a maintainer of order, but as a promoter of happiness. This whole section of the work is truly that of a master.” Again, on certain aspects of arbitration, on the interpretation of treaties, on the difficult question of diplomatic immunities, the work of Vattel cannot be ignored. And, not to cite further examples or to go into details, “without Wolff’s help Vattel clearly excels Grotius in his formulation of the laws of war and of neutrality.” “What Vattel lacks is a legal philosophy.” Granted: the distinction between perfect and imperfect rights, though utilisable so far, yields only an apparent reconciliation of the sovereignty of the State with the subjection of the State to law. Still, is Vattel the only writer that has not managed to solve the problem?

“At a time when diplomacy recognised no other rules than caprice or interest Vattel mapped out its boundaries. At a time when the sovereignty of the State was still confused with the sovereignty of princes he formulated the rights of the Nation. Before the great events of 1776 and 1789 occurred, he had written an International Law, based on the principles of public law, which two Revolutions, the American and the French, were to make effective. . . . Vattel’s ‘Law of Nations’ is international law based on the principles of 1789—the complement of the ‘Contrat Social’ of Rousseau, the projection on the plane of the Law of Nations of the great principles of legal individualism. That is what makes Vattel’s work important, what accounts for his success, characterises his influence, and eventually likewise measures his shortcomings. Grotius had written the international law of absolutism; Vattel has written the international law of political liberty.”

(2) Rachel’s dissertations appear to have fallen into abeyance: “the original text is exceedingly difficult to procure.” Dr. Pawley Bate furnishes an accurate and spirited rendering—the first English translation of the work. The introduction, by the late eminent Göttingen professor, Ludwig von Bar, gives an interesting sketch of the strenuous life of Rachel, and a brief but pointed summary of the contents of the dissertations. Dr. Brown Scott, the general editor, states concisely the grounds for including the work in this series:—“Rachel’s Dissertations were, in the nature of a protest against the school of natural law, of which Pufendorf was the very head and front, and contributed in

no small measure to the conception of International Law as a system of positive law, and Rachel, by virtue of this work, occupies an honourable rank as a member or as a forerunner of the positive school.” “To attack this [Pufendorf’s] doctrine, which favoured arbitrariness, and based the Law of Nations solely upon the principles of Natural Law established by a *priori* reasoning, and at the same time to show that by the side of the *ius naturae* there exists a positive Law of Nations—this,” says von Bar, “was a signal service.” Rachel’s claim to originality, like Vattel’s, has been questioned; “writers of the late seventeenth and early eighteenth centuries, who dealt with his treatise ‘De Iure Naturæ et Gentium,’” says Nys, “have remarked that its fundamental ideas were borrowed from that man of immense talent, Hermann Conring,” whose lectures on public law he attended at the University of Helmstedt. Conring apparently needed an interpreter as much as Wolff did; but, however much Rachel may have been a populariser, or even (if you will) a plagiarist, he was undoubtedly a vigorous and sagacious man, capable of strong independent work, and Nys’s report may be left over for future investigation. It is interesting to note that Rachel deals at considerable length with the views of some English jurists and theologians who “have devoted themselves more than others to the systematic analysis of Natural Law”—John Selden first and best, then Sharrock, Herbert of Cherbury, Cumberland, and, last, Hobbes “and his worse than barbarous philosophy.” Whatever deductions may fall to be made, Rachel is still a strong link in the chain of development, and the Carnegie Institution has done good service in rediscovering him and re-introducing him to students of International Law.

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ANTHROPOLOGY AND ARCHÆOLOGY.

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RESEARCH IN INDUSTRIAL LABORATORIES.¹*The Organisation of Industrial Research.*

IT is generally conceded by those engaged in the direction of industrial research that, in order to be efficient, research laboratories of this type should be as thoroughly equipped as possible. In the case of industrial concerns having a number of plants and in the case of organisations of manufacturers, the tendency of organisation should undoubtedly be towards concentration and co-operation in the maintenance of one large well-equipped research laboratory, rather than towards the erection and support of a number of smaller separated laboratories. It is, of course, necessary, especially in the case of chemical plants, that the analytical and control work should be carried out *in situ*, but experience indicates that it is much better practice to centralise the research work.

Since the policy which ensures adequate guidance to a research organisation must be based upon the accumulation of facts, method in laboratory administration should provide for facilities for securing detailed information on a vast field, and for competent counsel from those who have a store of specialised knowledge. When the laboratory executive's work has passed the one-man stage, a division of labour comes about, and it is here that he must see to it that he surrounds himself with men who are capable of effective effort—alert, original investigators of initiative and leadership.

An organised research administrative staff should result not only in effective division of labour, but also

¹ Report of a Sub-committee on Research in Industrial Laboratories, consisting of Drs. R. F. Bacon (chairman), C. E. K. Mees, W. H. Walker, M. C. Whitaker, W. R. Whitney, and presented at the meeting of the Committee of One Hundred on Scientific Research, New York, of the American Association for the Advancement of Science, December 26, 1916.