

IDENTIFICATION.

TO THE EDITOR OF THE TIMES.

Sir,—In consequence of a resolution passed by the general meeting of the British Association at Edinburgh, its council has urged the Government to institute inquiries into the efficiency, cost, and general utility of the system of anthropometric identification in use in France and elsewhere. I was absent and had no share in framing the original resolution, but the subject has long interested me, and I was appointed a member of the committee to whom the council referred that resolution for report. Much corroborative evidence is in my possession that was not and could not have been brought forward at Edinburgh, but which confirms the propriety of the resolution. Perhaps you will permit me to refer to it here, as I believe the subject to be one of considerable importance. The precise terms of the resolution as it now stands are as follows (copies of it have been sent to the Secretaries of State for the Home Department, Army, Navy, India, and the Colonies):—

Considering the recognized need of a better system of identification than is now in use in the United Kingdom and its dependencies, whether for detecting deserters who apply for re-enlistment, or old offenders among those who are accused of crime, or for the prevention of personation, more especially among the illiterate, the Council of the British Association express their opinion that the anthropometric methods in use in France and elsewhere deserve serious inquiry, as to their efficiency, the cost of their maintenance, their general utility, and the propriety of introducing them, or any modification of them, into the Criminal Department of the Home Office, into the Recruiting Departments of the Army and Navy, or into Indian and colonial administration.

I am told that the chief information submitted to the Edinburgh meeting was through a very interesting memoir by Professor Manouvrier on the Paris system, which is there popularly known as *bertillonage*, from the name of its inventor and director, Alphonse Bertillon, and a no less interesting description by Professor Benedict of the modified system used in Vienna. It might have been added that some of our leading statisticians had availed themselves of a congress held in Paris to see the working of the Bureau d'Identification at the Préfecture de Police, and were greatly impressed by the celerity and apparent sureness of the work. I myself carried away the same impression after two visits, the one a few years and the other not many weeks since. An account of the Paris system has been published quite recently in a somewhat more complete form than hitherto, under the title of "Identification Anthropométrique" (Imprimerie Administrative de Mélan, 1893); but for a description of its administration and cost reference should be made to an anonymous pamphlet, "L'Anthropométrie Judiciaire à Paris en 1889" (published by Steinhil, Paris). Since the Edinburgh meeting the results of my own inquiries into finger prints have been published in a book bearing that title, as well as a supplementary chapter to it, on the decipherment of blurred finger prints, which is just out. Again, the memoir on identifying deserters in the United States by Colonel Greenleaf and Major Smart, of the United States Army Medical Department, is only lately published in full. It was communicated to the International Congress of Hygiene and Demography in 1891, and now appears in their transactions, vol. 10, p. 294. The memoir by Jacques Bertillon a few pages further on ought to be read in connexion with it, lest an erroneous impression should be drawn from the purely American experiences as to the working of the Paris system. Many other sources of information exist, the number and variety of which may be gathered from the following passage by Alphonse Bertillon in the book mentioned above, p. 81:—"The countries which at the present hour have officially adopted Anthropometric Identification are—the United States, Belgium, Switzerland, Russia, the greater number of the States of South America, Tunis, British India, Roumania, &c." This is certainly an overstatement of the fact, if taken in its literal sense; nevertheless it indicates directions for inquiry, and shows that there must be a great deal of scattered information now procurable, though very difficult for private persons to get at.

The results of my own inquiries are that we may consider it to be almost proved, that Anthropometric Records, including measures of the head and limbs, bodily marks, and finger prints, admit of being so classified that a register, or rather a collection of assorted cards, consisting of considerably more than 100,000 different records, may be searched with surprisingly little trouble, somewhat on the principle of a dictionary, in order to learn whether a record of any suspected person is contained in the collection or not. Another safe conclusion is that, leaving finger-prints for the moment out of consideration, there can be little doubt whether or no two different records refer to the same person, it being supposed that both were taken when the person was adult and by

operators who had been instructed in their duties. If, however, fairly clear impressions of the fingers are included in the records, the strong probability becomes changed into practical certainty, at whatever age the first impression may have been taken and however long may have been the interval between its date and that of the second case. The evidence of this is published in my two books, as above. The trustworthiness of these conclusions may safely be accepted provisionally, so far as to justify two preliminary inquiries, which Government could easily make, but which are almost beyond the powers of private persons. They have merely to frame appropriate questions to their own officials, and ask for brief reports in reply. The first is as to the various economies which would result from a sure and easy method of identification such as the Paris method professes to supply. This question is touched upon in Bertillon's book, p. 75. Under our present system a considerable total of annual expenditure appears to be incurred, partly in summoning police from a distance as witnesses to previous convictions, partly through prolonging the period of detention of prisoners before the required evidence of identity can be collected to justify the case being sent for trial. It ought not to be difficult to obtain through official inquiries a useful approximation to the annual cost under these heads. Again, the opinions might be gathered of persons well versed in conducting prosecutions, as to the annual number of cases in which justice has presumably failed, where, under the Paris system, always supposing it to be as efficient, as is said, there would have been a conviction, together with the cost of these futile prosecutions. I have asked lawyers, but failed to obtain a trustworthy estimate of the average cost of each criminal trial, taking into account the shares of the paid-for time of all the officials concerned in it, from the Judge down to the policeman, and, further, including the average cost of the prisoner during his imprisonment before the trial, and such other items as may fairly be put down to the score. Lastly, the probable gain has to be considered that would be due to the deterrent effect of increased probability of identification. According to Bertillon's statement, foreign pick-pockets now frequent Paris in steadily diminishing numbers; the statistics of crime show it, and the prisoners themselves acknowledge it on the ground that their previous careers are more easily traced under the present system than heretofore. Leaving moral considerations aside, each crime that is prevented is a money gain, inasmuch as the expense of prosecution and imprisonment is also prevented. In other words, each crime that is committed which a better system of identification would have prevented, is to be counted as so much cost. The cost due to desertions in the army and navy, and that due to the personation of deceased pensioners, could similarly be traced out. As to India and some of the colonies, the hindrances in the way of justice, and the consequent cost of an ineffective means of identification, are greater than here. This is partly due to the large proportion of their illiterate populations, who make marks but cannot write, partly on account of the difficulty felt by most Europeans in accurately distinguishing the features of men of the darker races, and partly on account of the prevalence of false witness among them. I have published evidence of all this in my book on finger-prints.

So much for one side of the account; we have next to consider the other side, to which the second branch of the inquiries would be directed—namely, the cost of an effective system of identification. That of the French method is, of course, procurable officially; it is given in part in the pamphlet above mentioned, and which is stated to be taken from official sources, together with the allotment of the times of the officials to the several portions of their work. It is not possible to go far into this in an already too long letter, so I will dwell only on broad facts—namely, that the clerks who work eight hours a day, are engaged during the morning half of their time in making measurements and during the afternoon half in verifications, searches, copying, and correspondence. Again, the time occupied in measuring is such that two clerks, working together, the one being engaged in making the measurements or observations and in calling them out the other clerk being occupied in registering them, can thoroughly deal with six prisoners in the space of an hour. Consequently it costs the third part of the hourly pay of a single clerk to measure a man, say 4d. The cost of the afternoon time would be the same, and let an additional 4d. be thrown in for all kinds of additional expense, including that of superintendence, these amount to a total of 1s. per prisoner. These are the two preliminary inquiries that are much needed; then, since one of them will afford a rough estimate of the gain that would follow a more efficient system of identification than we possess in England, and the other would tell us the cost of *bertillonage*, with or without modifications, we can strike the balance between them. I do not myself doubt that the estimated gain will be found to exceed the estimated cost very considerably, and that a strong case will then be made out for inquiring, thoroughly into the truth of the alleged efficiency of the French and of other methods. It would probably become necessary to send an intelligent clerk to Paris for a couple of months at the Bureau d'Identification in order to obtain a thorough insight into what is done there. The affiliated establishments at Lyons and Marseilles are also of considerable importance. The power of surely classifying the records of measures admits of being easily tested when the necessary materials are at hand, as they are in these places. I, too, have a considerable collection of certain of the measures taken at different dates of the same persons, which would help in the inquiry.

As to finger-prints, my collection is ample. Only a few days since I received complete sets of the impressions of all the ten digits of no less than 364 natives of India, mostly prisoners, that had been very kindly taken for me by Surgeon-Lieut.-Col. Hordley at Jeypore. They are printed in water colour, which is a less good method than that of printer's ink; nevertheless, although they are blurred, nearly all of them can be surely classified by entering each successive digit under one or other of three or four very distinct heads, in the way I have published. I possess between two and three thousand complete sets of English prints, made at my laboratory, and some 300 repeated impressions, all of which are beautifully printed, and, in consequence, very easy to deal with and excellent for purposes of sure identification. It occupies my assistant about one minute to take one complete set of impressions of the ten digits of each person. This collection affords abundant material for testing the powers of finger-print classification, the addition of which to *bertillonage* would multiply the registering power of the latter by considerably more than a hundredfold. Whatever small trouble the existing form of *bertillonage* may give to hunt out a required record from a collection of 10,000, less than that same small amount of trouble certainly suffices to hunt out a particular set of finger-prints from a collection of 100 of them. As the measures and the patterns of the finger-prints are proved to be wholly unrelated to one another, it follows that two dozens of the same small trouble would suffice to hunt out any one complete record from a collection of a million different ones, in each of which the finger-prints had been included.