

EDITORIAL

“How much simpler it would be if advances in physics were made anonymously, like ancient Egyptian achievements in art.” This we wrote almost a year ago in an Article bemoaning the difficulty of assigning credit to individual physicists for their contributions. It seems that we have reached that stage now. On page 257 is a Letter with, as byline, the names of three institutes; the participating physicists are not mentioned, not even in a footnote. At the end of the Letter valuable help from the colleagues of three other institutes is acknowledged, again without naming the individuals. The Letter reports the observation of a predicted hyperon, the anti- Ξ particle, produced in the collision of an antiproton with a proton. One such event was found in 10 000 hydrogen bubble chamber photographs which contained in total about 70 000 antiproton tracks.

In this same issue, on page 255, we publish another Letter on the identical subject but this Letter gives the names of seventeen authors from two institutions. They found one anti- Ξ particle after scanning 34 000 photographs containing about 470 000 antiproton tracks.

From these and from previous multiple-author papers it becomes clear that in such cases the role of the individual researcher is almost impossible to evaluate. The success of experiments of this kind arises from the combined effort of a large number of workers whose names cannot all be cited in the byline or the acknowledgment. Some physicists will go so far as to say that credit should go only to the accelerator and

its ancillary equipment, since it was designed and built for the express purpose of producing these particles and studying their properties. However, not all of this work consists of routine operation of equipment and electronic computers, since for progress in physics, skill and original ideas are still of major importance even when these are supplied by a group instead of an individual.

If this trend continues, and this seems to be inevitable, it will have a profound effect upon physics as a profession. In the past, physics research was a rather individualistic occupation with, as principal reward, the recognition by one's colleagues. It attracted those who believed that they could make a personal contribution to its progress. In the future it may require a different type of person, one who gets satisfaction from a cooperative achievement, in which he may eventually rise to a key position. However, whatever the changes may be, physics cannot advance without imaginative ideas and challenging controversies. We must hope that the decline of the role of the individual in this research will not imply a decrease in originality.

S. A. Goudsmit