Editor, how do you select a referee?!

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It is a very important and delicate task of an editor to find suitable referees (reviewers), whose reports are helpful in reaching a fair and right decision. A notable fact is that each submission is different from the other, it needs to be treated on its own and so its editor should make an individual judgment. There is no machine or unique model for judgment even if a journal has a referee form that the referee is asked to fill it by assigning some suitable weights.

Usually an editor seeks for a report including a brief description of the main results of paper, a criticism of the paper preferably in details and some comments determining whether the results are new, correct, really significant, well organized, interesting and suitable for the journal, see [1]. In addition, the editor usually wants to have an explicit advice on whether (i) to accept the paper with or without minor revision (ii) to ask authors to make a (major) revision of the paper (iii) to reject the paper.

An editor selects a credible person, who preferably

- has broad established knowledge of the area of research (reliable);
- provides an substantial, efficient, informative and critical report (serious);
- helps authors to improve their papers (teacher);
- has no conflict of interest, bias or prejudice (fair) ;
- has no relationship/studentship/colleagueship with any one of authors (independent);
- is not too busy with other commitments (free-time);
- respects the time and replies in due time (punctual);
- is writing some good papers (productive).

Such a selection also depends on the general quality of paper, the reputation of authors, the significance of subject and the prestige of journal. Finding an almost ideal referee is really hard since the mathematics community is a fairly small world!

The country/nationality seems to be immaterial in general. Some editors/journals do not like to invite a mathematician, as a referee, who is a recent (past three years) co-

author of any one of the authors too. Any how to have more independence and diversity is important in the selection process of referees.

To find a suitable referee, an editor should have a look throughout the paper himself/herself and start to think about possible good referees by relying on his/her knowledge. The editor may consult a colleague to find an appropriate referee. Another way is to use the list of potential referees probably suggested by author(s) or the list of references at the end of the paper. Another recommended trick is to apply MathSciNet, Zentralblatt Math, Scopus or Web of Knowledge to take an important publication on the same or closely related problems of the paper and look where it has been cited, and who are the authors of the follow-up publications.

A question is that which one of the following items should an editor choose as a referee for a paper?
(a.1) a person some of whose works are cited in the paper;
(a.2) a person none of whose works is cited in the paper.

A cited referee, whose results basically used, is more likely familiar with the research. He/She may determine whether the authors used interesting techniques/ideas to establish new results or simply followed standard methods and gave a minor modification of known facts. In practice, such persons usually agree to review the paper while a non-cited referee may decline to review it since the paper may not be close enough to his/her research interests. Of course, if the paper is missing some key references, the editor should end up asking a suitable non-cited mathematician to serve as referee. The editor should also note that sometime the authors cite some papers that are not really related to the paper. For instance, they cite simply papers from the journal to which they submit in order to show that the paper is in the scope of the journal.

The editors that prefer to invite a non-cited referee think that their actions are more objective:

- In some cases, a cited referee may have tendency to accept the paper without a careful scientific analysis. So the editor should always check whether such a report is reasonable or not.
- Sometimes one may observe a small group of mathematicians working on a specific problem. They may produce many papers citing each other. To keep the standards of research, the editor should find a referee outside this group, if possible.
- It may happen that an author borrows some ideas/techniques from a paper of a mathematician without citing it or even related works. In such situation, a non-cited mathematician may probably recognize it.
- Once a subject is active or getting active, it helps to ask the opinion of more new people to be part of the evolution/development/progress.

To save the times of referees, a known model is to have a pre-evaluation by the editor itself or by an expert in order to decide whether a new submission is worthwhile and sufficiently interesting to send it out for a complete review. A manuscript having many technical problems such as poor English may be returned back to the authors probably with a list of missing or insufficient items.

An interesting question is that how many reports are needed to make an editorial decision on a paper? Without doubt, everything depends on the credibility of the selected referee(s) and the specialized field of the handling editor.

If the handling editor is familiar with the area dealt with in the paper or/and has confidence to a referee and referee is a distinguished expert, one report may often be sufficient and works well. On the other hand, the numbers of submissions to some prestigious journals are huge and therefore their editors do not like to take much time of their good referees who are usually busy people, so they follow the One-Referee-Per-Paper model.

To make a realistic decision or/and when the paper is far from the area of expertise of the handling editor, he/she may seek for two reports (of course, for rejection, one good report including at least a clear justification seems to be enough). A model is to invite a distinguished mathematician and a younger one based on the assumption that the first knows the field well and the second checks the details. If they include different recommendations, then the referee should ask a third referee or to make a decision based on the report which is of higher quality. For example, if a referee has found some basic and technical flaws in the paper and the other referee has simply recommended the paper for publication, then the editor should make a decision in the direction of the first report.

Some handling editors may like to have more than two reports. These are rare in mathematics. Of course, if the handling editor is not sure that a required number of the selected referees will agree to review the paper, it is better the editor invites more persons at the same time, otherwise if he/she invites referees one after one, then the referee process can be greatly slowed down.

Reference.

M.S. Moslehian, *Attributes of an Ideal Referee*, Notices Amer. Math. Soc., November 2010, 1245-1245.