Plagiarism – why blame it on the internet?

The very basis of unethical practices is that we often choose an easy path which though seems attractive and lucrative, leads us nowhere. Plagiarism is one of the many such roads taken as a short cut to academic growth and success, which in fact is a mockery of science. Though the causes of unethical publication practices need to be elaborated, it is not justifiable to blame the internet for the rise in plagiarism. In this regard, we are not in agreement with the views of Abrol[1] and feel that the statement made on drawbacks of easy access to internet, its misuse as an easy platform for plagiarism and on retention of knowledge of the younger generation are too generalized and lack evidence. Increasing use of internet sources rather than libraries does not mean that the quality of research has deteriorated. The advent of the internet has given a new dimension to the field of research where updated and precise information regarding any subject is available in a matter of seconds and the results of an experiment conducted in one part of the world can be compared with those at the other end by just a click of a button.

Plagiarism was prevalent even before the arrival of the internet, the only difference being that defaulters used to cut and paste information from books/journals available in the library or even copy from dissertations or papers without any fear of being caught. In fact, technological advancement and internet have made the capture of such defaulters easier now, which probably is a reason for the apparent rise in cases of plagiarism in recent times. The causes for rise in unethical publication practices in recent years may be multifactorial and can be related to the stress put forth by academia[2]. The blame for unethical publication practices in any case should solely be on the individual indulging in it, and not on technological advancement.

Unethical publication practices such as plagiarism need to be severely discouraged and dealt with stringently. It is imperative for a researcher to have a complete and sound knowledge of the work he has in hand before initiating any project and finally publishing it. Plagiarism can be curbed by increasing awareness about this unethical practice and its adverse consequences among students and young scientists during their early days of research activities. This can be achieved by organization of regular workshops for researchers and use of plagiarism detection tools at the institution level to detect intentional and unintentional incidents of plagiarism for its timely rectification.

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Truthfulness: the ultimate ethics in scientific writing

Scientific inquiry requires inventiveness and imagination intensely influenced by logic and realism. Scientists in general are aware of the existing ethical codes of conduct while performing research and presenting their results to the scientific audience. In spite of this, several cases of high-profile scientific misconduct have been reported in recent years, and the retractions by leading journals continue to increase. *Nature*, for example, reported that the retractions have increased tenfold during the past decade[1].

Fraud, suspected fraud and plagiarism were reported to be the major cause for two-thirds of retracted life sciences papers in the *Proceedings of the National Academy of Sciences of the United States of America*[2] (2013 impact factor 9.809). Another journal published by Sage, the *Journal of Vibration and Control* (2013 impact factor 4.355) retracted 60 papers published by a single author and his associates[3]. The lead author ingeniously used the on-line technology to his advantage by setting up numerous fake reviewer names and e-mail accounts to manipulate the peer-review system. What motivated the scientist to do so? Journals have a habit of asking authors to suggest preferred reviewers and editors, but never check whether the reviewers exist in reality or not. They simply take the list of reviewers provided by authors at face value. Why? Authors are supposed to have ethical integrity by being truthful to themselves, science and society.

While reviewing scientific papers for various journals, I have noticed numerous cases of plagiarism. Many papers have been written on the problems of plagiarism, but the most powerful, hands-on analysis was done by a former associate editor of *Current Science*, the late K. R. Rao, who had dutifully documented several cases of plagiarism and subsequent exchanges with scientists[4]. All scientific writers need to critically read this paper. In fact, the journal continues to publish letters concerning plagiarism and allows authors to respond to the charges[5,6]. I wonder though however why no one admits in print that they have made a mistake. So the 'catch me if you can' attitude goes on when it comes to queries involving plagiarism in scientific writing. Instead of engaging readers and authors to battle it out with claims and counter claims, journals should form an ethics committee of experts who can serve as judge and jury to review plagiarism cases more rationally and unbiased and then take disciplinary actions, including retracting papers to minimize future invasion and infestation of plagiarism in science.

When I was writing three decades ago, I had to use paper and pen to prepare several drafts to complete a simple scientific letter and those lettering days are now over. Today, writers largely rely on technology. The open access journals and

search engines like *Google* now make it easier to download files free and fast on mobile phones/iPads, while providing prospects for copying without remorse. No journal is immune to plagiarism since the foundation of wrong doing basically lies within the individual scientist's choice to uphold responsible intellectual honesty, straightforwardness and truthful conduct.

Most science writers are often scientists; hence they become instant teachers. Subsequently, students flock around them to learn the art of scientific writing and other techniques needed to shine in the scientific world. Therefore, it is absolutely fundamental for scientists to uphold truthfulness at all cost and at all times. Besides, they should set an example of honesty in their chosen field of expertise. It is perhaps the only way to go forward to tackle the plague of plagiarism in a long run. In the meantime, scientific writers can wish for one thing as the American author Ernest Hemingway once wrote, 'All you have to do is to write one true sentence'.

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Effect of El Niño on southwest monsoon rainfall and agriculture in India

The southwest (SW) monsoon (June–September) impacts over 1.7 billion people of the Indian subcontinent and is crucial for the agriculture-dominated economy of India. Weather prediction agencies from all over the world forecast El Niño conditions in 2014 with imminent danger of drought. The frequency of such events has been high in the last decade with droughts in 2002, 2004 and 2009. El Niño-like conditions leave countries like India, Indonesia and Australia drier, increasing chances of wildfires and lower crop production, while leading to heavier rainfall in the eastern Pacific and South American nations, raising the spectre of floods and landslides. India is expected to be the first to suffer, with weaker monsoon rains, undermining the nation's fragile food supply. El Niño is a weather condition that occurs when surface temperatures in the Pacific Ocean continuously rise above average for several months, which in turn affects wind patterns and triggers floods and droughts in different parts of the world. Usually, average increase of more than 0.5°C during a specific duration culminates in the El Niño effect and the current forecasts indicate that this year's warming will most probably lie between 0.5°C and 1.5°C (ref. 1). On an average, El Niño occurs every 3–5 years, often begins to form during June–August, and typically lasts 9–12 months. The latest El Niño prediction has come from the European Centre for Medium-range Weather Forecasts (ECMWF), which is considered to be one of the most reliable prediction centres around the world[1]. According to their prediction, the amount of warm water in the Pacific is now significant, perhaps the biggest since the worst El Niño of 1997–98 which is regarded as the biggest such event of the 20th century that caused widespread droughts in the tropics leading to forest fires, with an estimated economic loss exceeding 20 billion USD in Southeast Asia[2]. The El Niño produced the hottest year on record at that time and had major global impacts, including a mass die-off of corals. Various findings indicate that El Niño likely improves the global mean soybean yield by 2.1–5.4%, but appears to change the yields of maize, rice and wheat by –4.3% to 0.8% (ref. 3).

India Meteorological Department (IMD) has forecast a 60% probability of El Niño in 2014 along with a below-normal monsoon projection. The SW monsoon is more important as it accounts for over 75% of the annual rainfall in most parts of India. The country had 43% deficit in rainfall in June, which was reduced to 22% by the end of July 2014. Overall, monsoon was 90.3% of normal in July. But, the worrying factor is the higher rainfall deficit of 58% and 54% in Punjab and Haryana respectively, which are considered as the graneries of India. Among all the regions, northwest India reported the highest rainfall deficiency of 34% followed by 26% in the east and North East. The central region reported 12% deficiency, while the South Peninsular region had 19% rain deficit by the end of July. There is a strong relation between El Niño and Indian droughts since 1950, as the country has faced 13 droughts and 10 of these were in the El Niño years[4].

It may be worth noting that since 1980, all the six droughts faced by India were in the El Niño years, but still not all El Niño years led to drought in the country. Since 2000, there were four El Niño years (2002, 2004, 2006 and 2009), and three of these (except 2006) resulted into drought years. The year 2006, which was an El Niño year, however, received normal monsoon rainfall. This situation has been explained by the phenomenon of equatorial Indian Ocean oscillation (EQUINOO)[5]. EQUINOO plays an important role in the inter-annual variation of the SW monsoon and it involves a see-saw like situation between a state with enhanced rainfall over western equatorial Indian Ocean and suppressed rainfall over eastern equatorial Indian Ocean (favourable phase) and another state with opposite signs of east-west rainfall anomalies. The ultimate precipitation of the monsoon appears to depend to a large extent on whether the phases of El Niño and EQUINOO are favourable or not. In the six El Niño years, EQUINOO was unfavourable and thus leading to droughts. On the contrary, favourable phase of EQUINOO in 1963, 1997 and 2006 negated the effect of El Niño and resulted in higher rainfall. But this relation appears to have strengthened