

Plagiarism, a scourge

K. R. Rao

Manuscripts, based on copying from other sources, without ‘proper’ crediting/referencing to original sources, are often encountered by editors/publishers of books and journals. This bane, broadly referred to as ‘plagiarizing’, is found to be prevalent to quite an extent. In this article, after detailing what is expected to be observed by students, ethically under an ‘Honour Code’, a brief outline of history of plagiarism is given. Plagiarizing is practiced by a wide spectrum of authors and not merely confined to students. In fact, many a student may need to be instructed as to how to partake in good writing practices to avoid being accused of plagiarizing. This article deals with many of these aspects, after illustrating the nature of plagiarizing that I have come across, during the past three years or so, while handling manuscripts submitted to Current Science. While detection of ‘copy and paste’ is somewhat straightforward, detection of data manipulation, fraudulent misrepresentation, adoption of ideas of others, etc. are quite difficult to spot. The causes for practice of plagiarizing, including self-plagiarization, have roots in peer and institutional pressures to excel at any cost.

Keywords: Avoidance, detection, Honour Code System, plagiarism.

‘Back in the good old days, plagiarism had a price, even to those who didn’t get caught, plagiarising used to be hard work. Hours were spent at the library to find the correct passages to copy or paraphrase (Pean, 2000). Researching what to copy required almost as much effort as doing the job correctly in the first place and if students copied friends’ research papers, they at least had to re-type them. The plagiarist used to learn a lot while trying to get out of doing the work. With today’s technology, enter a keyword and click, click, click, the research paper is in the printer, downloaded, or in the post.’

Christine Smith in *Warwick Source on Plagiarism*

BY what is known as ‘Graduate Honour System’ or ‘Graduate Honour Code’ etc., academic institutions all over the world try to inculcate ethical values among students, so that they are taught how to give credit, to ideas, where they are due. When such an acknowledgment is not forthcoming, one is said to have ‘plagiarized’ the ideas. As per the Virginia Tech Code (VTC)¹ – from which I quote extensively in the following – violations of the Honour Code are categorized as ‘cheating, plagiarism, falsification, and academic sabotage’ (see ref. 1 for details). As per VTC constitution, ‘plagiarism includes the copying of the language, structure, ideas, and/or thoughts of another and passing off the same as one’s own, original work’. Therefore ‘both copying and misrepresenting the

material in question’, constitute plagiarism. It goes on to state, ‘if a student has consulted any outside source, whether published or not, and has incorporated any of its “language, structure, ideas, and/or thoughts” into his or her work without acknowledging that source, he or she may be guilty of misrepresenting the work’s originality. [Furthermore, in citing a reference, the student must change both the sentence structure and the vocabulary (where possible) in expressing the original material in his or her own words.]’. Plagiarism is also defined as fraud (‘intentional deception in order to obtain what does not rightfully belong to one’) and ‘impersonation, since every piece of written work presents an image of its author’. ‘In transmission of a part of a book, article, or other source into different words – paraphrasing, although the language is not the same because the exact words of the source have been changed, the structure, ideas, and thoughts of the original author are copied. Thus anyone, who submits such an article that simply paraphrases a source without identifying it, may also be guilty of plagiarism’. One ‘must be aware that copying of drawings, designs and photographs, maps, graphs, illustrations, tables, primary data, derived equations, computer programs, verbal communications of information and ideas, and other sources may also constitute plagiarism, unless the source is acknowledged and properly documented’.

Among various infringements, the Wesleyan Institute, for example, lists the following:

- ‘The attempt to give or obtain assistance in a formal academic exercise without due acknowledgment;

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- Plagiarism [many a time it is defined as “literary theft”. But this definition is somewhat limited in its connotation as the theft need not be always “literary”];
- The submission of the same work for academic credit more than once, without permission;
- Willful falsification of data, information, or citations in any formal academic exercise’.

Copyright infringement is a cognizable offence, too well known to be listed here. However, there is a ‘fair use doctrine’, which allows quoting brief passages from a copyrighted book without explicit permission to do so.

Many academic institutions insist that students take a pledge that amounts to negating plagiarism. Many articles deal with cases of students who have indulged in this malpractice. Concealment is the crux of the problem.

In addition to plagiarism as noted above, other infringements are auto-plagiarism (‘failure of authors to cite themselves, when using excerpts from their old work in a new and original work’) and cryptomnesia (‘an author believes himself to have had an original idea when, in fact, the idea came from the memory of an experience, which he has forgotten’).

Punishment for plagiarizing depends on the ‘cost’ or ‘hurt’ that is caused to the consumer or victim. Trademark violation or passing-off fraudulent art pieces as originals attracts the severest punishments for obvious reasons. On the other hand plagiarizing, implicit or explicit, in writing or editing a textbook is well tolerated, because the reader is aware that the material ‘packaged’ is not really the original thoughts of the author; secondly, a textbook interspersed with too many quotations and cross references is bound to distract the reader/student. In the case of scientific research publications, a golden mean is the best approach to writing. While data manipulation is considered a ‘fraud’, false representation is condemnable.

History of plagiarism

The Honour Code/System has been in vogue for over two centuries in some form or the other in USA and has evolved over the intervening years. Plagiarism is said to have existed over a couple of millennia. An article entitled ‘A history of plagiarism (not my own work)’² by Stephen Moss in *The Guardian* (Wednesday 23 November 2005), refers to accusations that Shakespeare, Samuel Coleridge, Oscar Wilde and others, indulged in plagiarizing. These are all related to writing. (Plagiarizing in art, especially in painting is outside the scope of this article.)

In recent times, there have been accusations relating to plagiarism, even in reputed high quarters. We are not judging the merits of such accusations. One relates to an accusation on former US president Jimmy Carter with respect to a book, *Palestine: Peace not Apartheid*. It is said to contain two maps, which ‘were unusually similar to

maps published in Dennis Ross’ book, *The Missing Peace*’. Helen Keller, Martin Luther King Jr, Stephen Ambrose, and George Harrison were accused of plagiarism at various times. A Belgian songwriter, Salvatore Acquivava, won a plagiarism case against Madonna over her 1998 hit song ‘Frozen’. But she insisted, ‘it’s an acceptable part of the creative process’. Madonna is not the only artist to be accused of plagiarism, often occurring without the artist knowing it. One has to only read *The Little Book of Plagiarism* by Posner³, a judge in the US, and a senior lecturer in the University of Chicago. It cites several professionals, including judges, littérateurs, dramatists, politicians, painters, journalists, economists and science writers who, at some time or other, have been accused of plagiarizing.

Another well-known story of last year relates to Kaavya Viswanathan. When she was found to have plagiarized heavily from McCafferty, while writing her now infamous book *How Opal Mehta Got Kissed, Got Wild, and Got a Life*, and had a deal with Little, Brown for \$500,000, that fell through, she confessed, albeit grudgingly, stating that ‘I wasn’t aware of how much I may have internalized Ms McCafferty’s words. I can honestly say that any phrasing similarities between her works and mine were completely unintentional and unconscious’. But nobody would buy her alibi. ‘Nothing less than an act of literary identity theft’, says McCafferty’s publisher, Crown Publishing Group.

Nearer home, charges of plagiarism on the R. A. Mashelkar Committee dealing with a report on patent laws in India, in 2006, resulted in the report being withdrawn. Although I do not wish to be unduly harsh, the other case related to a story published in the *Deccan Herald* on 11 August 2006, ‘Borrowed glory of the moon wanes’. According to this news item, ‘Eleven-year-old Nihal Kumar of Mangalore – who had won an all-expense-paid trip to Australia as first prize in the Creating Life Story Telling Contest – seems to have found himself on the wrong side of inspiration. If plagiarism sounds hard on the sixth standard student, Nihal’s story, *My Papa and I Reached the Moon...* shares striking parallels with the *The Moon, a Balloon and a Spoon*, a story from Anne Mckie’s 50 Bedtime Stories series’.

What are the various types of plagiarism that I have come across?

During the past two–three years, I must have detected more than some 80 cases of plagiarism in various articles submitted for publication in *Current Science*. When I use the term ‘plagiarism’, I use it in a rather broad and loose sense, not distinguishing among copying, misrepresentation, etc. or their finer distinctions. I find that this practice is not merely confined to students, but is prevalent amongst many researchers and science writers in this country.

(a) In one case, the author copied from a recent published research article, almost verbatim, with a specific minor change, namely, changing 'we' to 'they'. [That is, changing from first person usage which the original author had used to third person.] Although the source had been referenced, the copied text was neither in quotes nor explicitly stated as from the source material. When it was pointed out that the material was copied from the research article, the author stated that the material could not have been written in any better manner than what the original author has and that he had consent from the author to publish the article in the form in which he had submitted the article as his own!

Then there was a case where a NASA article was plagiarized after deleting some words here and there, but retaining much of the technical description intact.

(b) A professor from the Indian Institute of Science, Bangalore pointed out that an article published in *Current Science* entitled 'Ten commandments for Ph D aspirants', contained points that had been spelt out in an article in *Nature* and it amounts to plagiarizing. On writing to the author, he replied that he had not copied from *Nature*, but acknowledged that he was 'inspired' by that article. I have come across a few other cases when the authors took shelter under having been 'inspired' by other publications.

(c) As a helpful editor, I tried to help an author to improve the text of an article dealing with the use of lasers in the mining industry. After considerable revisions, I insisted that the author must add a para or two dealing with developments of lasers in India and instrumentation development in his own laboratory. To my surprise, when the author could not write even a para or two properly, the article was subjected to closer scrutiny. Many parts turned out to be copies from external sources. When the publication was rejected on these grounds, the author did not respond.

(d) Plagiarism is rampant in the 'General Articles' and 'Review Articles' categories with regard to *Current Science*. In the latter case, generally, authors who have not made any substantial contribution to the topic under review, indulge in plagiarizing.

Short articles on popular topics, say, climate change, nanotechnology, bionics, etc. are favourite grounds for plagiarizing from newspapers and the Internet.

In an article entitled 'Climate change could create 200 m refugees', Jonathan Leake, Environment Editor, *The Sunday Times* (1 April 2007) had written, 'A report from the Intergovernmental Panel on Climate Change (IPCC), to be published on Friday, will warn that the temperature rises of 2–3°C predicted by 2050 spell global disaster for both humanity and the environment. It will say that up to 40% of animal and plant species face extinction as rising temperatures destroy the ecosystems that support them. And it will point out that the 29 billion tons of carbon dioxide poured into the atmosphere each year...'. An author, who submitted an article on climate change after the IPCC publication, did not even think it fit to change the

future tense in Leake's article to past tense before submission of his article, while plagiarizing Leake's article!

An article entitled 'Bioeffects of low frequency electromagnetic fields – a review' was found to be an extensive copy from other sources. To the surprise of this reviewer, it was found that the 'Conclusion' part of the review was a verbatim copy of the 'Abstract' of the article '60 Hz EMF health effects – a scientific uncertainty' by S. P. A. Bren in *Engineering in Medicine and Biology Magazine*, IEEE, July/August 1995, 14(4).

(e) Plan/project proposals (e.g., SERC reports of the DST, Barcoding protocols, UNIDO initiative on technology foresight, etc.), in-house journals of companies or annual reports and science articles in reputed newspapers, are other fertile grounds from where new articles are plagiarized. Short articles of popular nature, as already stated, are also based on such sources.

(f) Nothing is spared if one is keen on publishing, anyhow. In an article entitled, 'Biological Diversity Act...', The Biological Diversity Act 2002, passed by the parliament, was copied lock, stock, and barrel, supplementing, in addition, from other sources.

The Wikipedia provided a good source on chikungunya in another case.

(g) In an article entitled 'Thermal asymmetric interlaced PCR...', many passages were taken from abstracts of other articles. I am not sure if the articles were gone through by the author. Although a referee had unwittingly noted that 'the article is very concise and highly readable and deserves publication as a Research News', the article was rejected because of extensive plagiarization.

I have many more examples. Suffice it to say that in more than 90% of the cases, the authors do not even acknowledge receipt of the rejection letter pointing out the reasons for rejection, let alone protest.

How is plagiarism detected?

I am, by nature, suspicious of articles submitted by authors with little or no experience in fields that are current or fashionable, and subject such articles to the search engine Google by random selection of phrases that are too technical or foreign to the expected language structure of the author. While I do not claim that this technique is fool-proof, I have found that it succeeds more often in detecting plagiarism, than not. Hence I have used this approach more as a preventive step to hold-back publication of an article rather than as a post-mortem step, to recall a published article or penalize the author. However, at present, it might not be 100% successful.

There may be several other methods. Two accepted methods are⁴:

(a) 'The writing style used in submitted work often provides signs where plagiarism has taken place (e.g. dramatic changes in language used from paragraph to paragraph)'.

(b) 'Electronic detection tools are now available that identify text matches with other sources'. For example, TurnitinUK. This detection tool 'is a web-based system that provides comprehensive checking of submitted work for matching text on web pages, electronic journals and previously submitted student work... a tool that facilitates the identification of potential plagiarism cases and supports the related decision making process'. There are other tools, namely iThenticate, The Glatt Plagiarism Screening Program, Wcopyfind, EdiTie.com, etc. Announcements of other software appear from time to time.

It should be noted that 'plagiarism-detection software can pinpoint only word-for-word plagiarism, and only some instances of it'. Nevertheless, it is major percentage of the offence. However, we are not equipped to detect frauds involving extensive paraphrasing or adopting ideas of others. So also, as plagiarists become more and more sophisticated, one would need more intelligent software.

Who are the authors of plagiarized articles?

The authors are not merely students. In fact, in two cases, students who were notified of plagiarizing apologized and stated that they were not aware that they should not do a cut and paste job of many sources in preparing their articles. They would like to be guided as to how to go about writing articles without being accused of plagiarizing. Otherwise, I find that the spectrum of authors covers a wide range: teachers, professors, Heads of Departments, researchers, library and information officials and so on.

What are the ways by which one can avoid being accused of plagiarizing?

Many websites developed by academic institutions have given guidelines to students to avoid plagiarizing. I quote from 'Writing tutorial services' of the Indiana University⁴, '1. Put in quotations everything that comes directly from the text, especially when taking notes.
'2. Paraphrase, but be sure you are not just rearranging or replacing a few words.
'3. Check your paraphrase against the original text to be sure you have not accidentally used the same phrases or words, and that the information is accurate.'

The University of Wollongong outlines⁵ ways to acknowledge sources properly.

'Acknowledging sources of quotations: If you copy part of a sentence, whole sentence(s) or paragraph(s) from an article, a book, lecture notes, an essay, report or any other source, it should be put in quotation marks and the article, book or other source should be referenced using an appropriate method.

'Acknowledging sources of ideas: Even if you are not using the exact words of somebody else, it is wrong to use their ideas unless you give appropriate credit.

'Paraphrasing means taking the ideas of somebody else and expressing them with different words. Since you are using your own words, you do not need to use quotation marks. However, you must make enough changes so that what you have written is distinctly different, and you must acknowledge your source.

'It is often better to avoid paraphrasing altogether and write things in your own words. One good way to do this is to first read the book or article and make brief notes. Then close the book or turn over the article and write what you want to say without looking at the source. In other words, don't refer to the source material while you are writing, unless you are transcribing a direct quote. Then, afterwards, put in the citations, in the appropriate form and at the appropriate places.'

The Indiana University website (<http://www.indiana.edu/~jstd/>) notes: 'When you properly acknowledge the contributions to knowledge made by other people, you are showing respect for their work, and you are giving credit where credit is due. You are not misleading the reader to believe that your work is solely your own.' I believe that this is the ethics behind why one admonishes plagiarizing in thought, words or action.

Conclusion

In summary, 'If you use another person's work and do not attribute that work to the author, including copying text verbatim, paraphrasing a phrase or summarizing an idea, you are essentially committing plagiarism. Plagiarism usually occurs when a writer fails to:

- cite quotes or ideas written by another author;
- enclose direct text in quotes, or
- put summaries and/or paraphrases in his or her own words.'

Since plagiarism is considered a serious offence, it could lead to, as the case may be, 'expelling a student from a university, terminating a professor's teaching contract, or suing an artist for monetary compensation'.

Is plagiarism a 'universal phenomenon'? Is it to be pushed under the rug or condoned or accepted like rampant corruption all around us as just a social evil? After going through Posner's book³, I have a feeling that professionals other than scientists are more tolerant of plagiarism. For example, copying a story plot or a character from a novel is quite common, so much so that 'the readers of the new work are invited to think that those features are the invention or discovery of the plagiarist'. Posner alludes to the common practice of judges 'writing'

their judgments based on notings/opinions of his assistants or lawyers' clerks and passing them as their own, as 'originality is not highly prized in law'. Posner puts it across well when he says, 'judicial acknowledgement of ghost authorship is vanishingly rare'.

Plagiarism is not condemned uniformly in all places and at all times, but condoned to some extent as it is a function of space, time and intention. Posner notes, 'In European countries, it remains common and unexceptionable for professors to publish under their own name books and articles written by their assistants, and since that is well known in academic circles there is no fraud. It is not the practice in the United States...'. I have already noted that when textbooks are written, since the intention is to teach a subject, referencing to all well known but not really original ideas at many stages is not expected. Posner notes, 'Textbook authors are guilty of plagiarism not when they copy ideas without acknowledgements, but only when they copy verbal passages without acknowledgements'. So also, 'publishing a law clerk's draft under the judge's name is not plagiarism'. Ghost-writing is well known in many circles of celebrities; I believe not many convocation addresses, speeches of politicians and other celebrities are authored by them, rather, they must be 'authorized' or ghost-written.

Posner also refers to 'curious example of authorship of laboratory head who is listed as a coauthor of all scholarly papers written by his staff ... much as a lord had unchallenged property rights in the product of serfs and peasants occupying dependent lands'! The time dependence of definition of plagiarism can be gauged by noting that neither David nor Mathew were writers of King David's Psalms or Mathew's Gospel. Posner notes, 'In ancient times it was a common convention to assign authorship not to the actual writer of a work but to someone whose identification with it lent it authority... a celebrity endorsement'. It is like Rembrandt authorizing many a paintings by others, under his signature. In Shakespearean times, plagiarism was often condoned as 'creative imitation', a way of improving upon earlier versions or ideas or characters than preserving the Roman concept of 'originality'. Thomas Eliot has noted, as quoted by Posner, 'Immature poets imitate, mature poets steal, bad poets deface what they take and good poets make it into something better, or at least something different'. So the plagiarist was less condemned in the past, compared to the standards set in modern times. What could have been condoned earlier as 'creative imitation' is not condonable today and it is indeed referred, unequivocally, as plagiarism, as has happened in the case of Kaavya Viswanathan; this is still acceptable perhaps in the judicial field. There is an increasing demand for originality. It is interesting to note an interesting observation that Posner has made: 'The desire to be original and the desire to be successful are not wholly compatible', although some publishers may encourage 'creative imitation'.

Scientists, in my opinion, cannot afford this luxury; for by training and by expectations, they are expected to faithfully express what they observe, results of what they analyse or what they believe to be their own findings or concepts. In the words of Jackson⁶, 'these men and women are seen as the paragons of virtue in the intellectual community. They are a priesthood, arrayed in white apparel, tinkering with test tubes and peering through microscopes in a sophisticated "holy of holies"'. I am speaking, of course, of the twentieth century scientist. He is not to be questioned as he pontificates upon matters that have baffled the intellects of the ages'. So when *Science* acknowledged and retracted recently publications made earlier by a South Korean researcher, Hwang Woo-suk on breakthrough in stem cell research, it became a major headline by itself. Nearer home, Balwant Singh Rajput, then Vice-chancellor of Kumaon University, had to resign after being found guilty of copying from a paper published by a Stanford University scientist, six years earlier in *Physical Review*. The Society for Scientific Values (SSV) brings out a newsletter 'Ethics in scientific research, development and administration', that carries from time to time articles related to alleged perpetrations of scientific fraud in its various ramifications. There have been letters and responses related to issues raised by SSV, recently in the pages of this journal concerning alleged misconduct by Kundu *et al.* In May 2005, Balaram⁷ had eloquently written an editorial, touching on many aspects of plagiarism and frustrations of an editor in curbing this menace. Things have not changed much; perhaps they have worsened with time.

Why is plagiarism prevalent to such a large extent? In my opinion, simplistically, the cause or training to plagiarize is a part of today's education, starting very early in a student's life at the kindergarten going all the way up to graduation. What begins as a 'cut and paste' job using a variety of chart resources on animals, birds, flowers, etc. for simple display items, it gets encouraged in writing 'projects' on advanced topics at the high school student's level, culminating in 'research project proposals', glossy presentations in 'seminars', 'oral presentation of papers' using PowerPoint software along with Internet sources. To a large extent, reading, assimilating, essay writing, preparing view-graphs by sketching, etc. belonged to a bygone era.

The perceived punishments when plagiarism is discovered are 'disgrace, humiliation, ostracism and penalties'. Posner states, 'the stigma of plagiarism seems never to fade completely, not because it is an especially heinous offense not because it is embarrassingly second rate; its practitioners are pathetic, almost ridiculous'. Thus the extent of plagiarism has to be indexed on some scale and it must be subjected to 'an appropriately graded scale of punishment', taking into account the harm or injury that plagiarism inflicts on the victim(s) and also the incentive to repeat the offence if the plagiarist is allowed to go scot-free. It is interesting to note that 'weak students and

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also very ambitious ones have a strong incentive to plagiarize if they have a good chance to get away with it and the punishment if they are caught is not too severe'. In science, there is a general desire to add to the list of publications followed by citation of such works. There has been a tendency to add a list of publications in Ph D theses, to support one's candidature to the degree. Hence, there is social pressure to publish at any cost. One must see that, in this process, scientists do not get away easily, as originality is a prized commodity in this profession.

Note added in proof:

- An article that appeared in the *Guardian* on Tuesday 19 February 2008 (p. 17 of the International section), Hillary Clinton's campaign accused Barack Obama of plagiarising lines in his speech and copying Hillary Clinton's economic plan. The Clinton campaign noted that Obama lifted a key passage of his speech from the Democratic Governor of Massachusetts, Deval Patrick. Retorting to this accusation, Obama said in his speech 'Don't tell me words don't matter, I have a dream' – just words? 'We hold these truths to be self-evident, that all men are created equal' – just words? 'We have nothing to fear but fear itself' – just words? Just speeches?'

- *The Hindu* on Saturday, 23 February 2008 carried a news item 'Scientific fraud by professor', which referred

to a professor found guilty of plagiarising and/or falsifying more than 70 research papers (see <http://www.hindu.com/2008/02/23/stories/2008022360291700.htm>).

- A reviewer of *Current Science* has noted just last week, 'I was aghast to see that the author of a book *Solving Vibration Analysis using MATLAB* has simply lifted material from my own book on MATLAB, pages after pages, with little or cosmetic changes in the text. It just so happened that this book came to me for the review. I wonder if someone else would have reviewed it, would he or she get any inkling of it or not?'

Are we not in most interesting times?

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 2. Stephen Moss, *The Gaurdian*, 23 November 2005.
 3. Posner, R. A., *The Little Book of Plagiarism*, Pantheon Books, New York, 2007.
 4. <http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml#terms>
 5. <http://www.uow.edu.au/handbook/courserules/plagiarism.html>
 6. Wayne, J., *Frauds in Science*, M.A. Apologetics Press, USA, 2007.
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Received 2 January 2008; accepted 5 February 2008

MEETINGS/SYMPOSIA/SEMINARS

National Workshop on Water Resources: Exploration Strategies and Management Issues (Water – 2008)

Date: 24–25 March 2008
Place: Salem

Themes include: Water resources and management strategies; Water resources exploration wells and assessment of aquifers; Water quality – monitoring and management; Ground water exploration techniques; Remote sensing and GIS application in water resource management; Methods and technologies in support of operation of water resource systems; Lessons from past management practices, their origin and impact; Hydrogeological mapping; Prevention and mitigations of damages resulting from floods and droughts.

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ISEG Seminar on Challenges in Engineering Geology

Date: 3–5 December 2008
Place: Hyderabad

Themes include: 1. Engineering geological mapping; 2. River valley storage and diversion structures; 3. Underground and deep excavations; 4. Construction material; 5. Communication projects; 6. Geohazards; 7. Exploration, instrumentation and lab techniques; 8. Post-construction issues; 9. Allied issues.

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