Why isn’t scientific code always open?

Is it normal that a peer reviewer would ask for an executable file in order to check my results?

I have just received a decision letter for my submitted manuscript to an Elsevier journal. It was a revise and resubmit. However one of the reviewer asked for an executable file in order to check my results. (I felt distrust from his comment.)

This is regarding a computer science paper on testing the efficiency of an algorithm on a set of instances from the literature. I compared the results of the algorithm with those of other authors.
Why isn’t scientific code always open?

Popular software used in research is incorrectly reporting solution is optimal: what to do?

I have an example demonstrating the solution produced by a popularly used software package is not the optimal solution, despite the software claiming that it is. Several recent papers published from my lab have used this software in their evaluations, and I know it is extensively used in the research community to solve optimization problems.

So I am unsure how to report this bug; it is a proprietary, closed-source software. As a first step, I could contact the software developer about the bug, although they don’t seem to have a straightforward method to report bugs.

But a larger issue is that papers published with results based upon a buggy software could be compromised. What if the eventual fix causes the software to take much longer to execute, so that running on large instances is now infeasible?

I have told my advisor about the issue, but he does not seem very interested, possibly because of the potential ramifications.

I am currently working on a project where I could have used this software; I now don’t trust it and have switched to a much less powerful open-source alternative. So I guess my question is: how should I handle this situation?
Background and Inspiration

- Science requires peer review
- Science is often computing
- Software contains errors

@codeisscience
Bad code == bad science
Session at Mozilla Festival where we crowdsourced *why* people thought code was closed and *what* we could do.
We need to change the **culture** around scientific computing

Let’s write a **manifesto** that researchers, funders, journals, etc. can sign up to support.
Software Sustainability Institute’s Collaborations Workshop 2018

@codeiissscience
A first draft is born...

Inspired by...
- Agile Manifesto
- Data Ops Manifesto

- Open over closed
- Code for the future
- Incorrect code results in incorrect science
- Availability over perfection
- Code deserves credit

Full text: codeisscience.com/manifesto
Sign it now!

codeisscience.com/manifesto

@codeisscience
We need your help!

- You can look at the [issues](#) on github and see if there’s anything else you can pick up.
- Code is Science [ambassadors](#) - This means you tell everyone about us and get a bunch of leaflets stickers to share
- Spread the word. I can’t go to all the conferences!

@codeisscience
Manifesto:

- Selina Aragon
- Alex Konovalov

GitHub contributors:

JJ ha0ye alokpant ikayz rddravic
shmishtopher gedankenstuecke xStaticVoid
igomez10 haiXchuus npscience tpoisot
svwielga4 encodershub selina-aragon
yeemunnn alex-konovalov drvinceknight
alexmorley ilozuluchris egonw Fil

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Thank you!

Kirstie Whitaker
@kirstie_j

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