

Re: JSH: The "Published" paper he dosen't what you to know about.

Re: JSH: The "Published" paper he dosen't what you to know about.

Source: <http://sci.tech-archive.net/Archive/sci.math/2006-09/msg05060.html>

- *From:* "Tim Peters" <tim.one@xxxxxxxxxxxxx>
 - *Date:* Mon, 25 Sep 2006 00:26:35 -0400
-

[Tim Peters]

...
Arturo gave an excellent account of historical details, but at the risk of simplifying ;-), the bottom line here is that James seems to have learned "factorization by inspection" in high school, never went beyond that, and is endlessly frustrated by that not all rings "act like" \mathbb{Z} wrt factorization.

I'm not sure what he wants from his "object ring", and he doesn't have the technical vocabulary to explain it,

[marcus_b]

It goes back to one of his FLT 'proofs'. He started with a 'tautology' and derived a polynomial which was essentially the same as the now-hoary old $P(m)$. The factors were of the form $(a_i(m)x + uf)$. He needed desperately to show that two of the factors were divisible by f . Of course $P(m)$ itself was divisible by f^2 but not by any further bits of f , so the other factors needed to be coprime to f — in the ring of algebraic integers. So eventually — it took literally years of arguing — it got through to him that this was not going to happen in the ring of algebraic integers. So he needed a slightly bigger ring — not so big that it contained any rationals other than 1 or -1 , but bigger than the ring of algebraic integers — if it contained $1/f$, everything fell apart — so he invented "the" object ring.

Incidentally, I think the key thing here is **not** the fact that if two numbers are coprime in a ring R , then they remain coprime in any larger ring S . It is the converse — if two numbers are not coprime in R , they may be coprime in S .

That's fine, except you're trying to make sense, while I'm trying to

Re: JSH: The "Published" paper he dosen't what you to know about.

Re: JSH: The "Published" paper he dosen't what you to know about.

understand what James thinks <0.3 wink>. This is the post in which he first concluded ideal theory is wrong:

From: jstevh@xxxxxxx
Subject: Re: JSH: Critique means slow, and thorough
Date: 30 Mar 2005 16:48:06 -0800
Newsgroups: sci.math
Message-ID: 1112230086.528150.184860@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

I'm not going to repeat it here, because you need to read the thread of which it's a part. A few messages back, he challenged William Hughes:

[JSH]
...
but can you now prove that for every case

a/b

where a is an algebraic integer and b is an algebraic integer, and a is coprime to b that you can find a construction

$$ax + by = 1$$

where x and y are algebraic integers?

If so I'd think that'd be a powerful argument against my claims.

William replied with the obvious short proof based on that the algebraic integers are a Bezout domain. James doubted it, so William reproduced a detailed citation of Dedekind's "The Theory of Algebraic Integers" earlier posted by Arturo Magidin, and repeated to James several times already. He either never read it before, or never understood it before. It included a very clear quote from Dedekind, ending with:

[Richard Dedekind --- who used to post here a lot more ;-)]
...
"two nonzero [algebraic] integers a and b have a greatest common divisor, which can be put in the form $aa'+bb'$, where a' and b' are [algebraic] integers.
...
we shall later (section 30) be able to derive it very simply from the theory of ideals."

In any case, that's the exact point at which James decided ideal theory is wrong:

[JSH]
Thanks for the citation.

Well for the question about when the problem entered into the field of mathematics, that's when, and I guess I didn't figure

Re: JSH: The "Published" paper he dosen't what you to know about.

Re: JSH: The "Published" paper he doesn't want you to know about.

on Dedekind having made the mistake, but I guess I should have.

That does make it a little more problematic in continuing to critique in this direction as now it will be necessary to include Dedekind's work and the theory of ideals.

So the critique will continue there from this side.

In context, William was actually proving that AI coprimeness extends to containing rings, in response to an even farther-back bogus claim of James's:

[JSH]

- > Then coprimeness in the ring of algebraic integers does not
- > mean coprimeness in the more inclusive ring [which, in context,
- > meant the algebraic numbers].

The thread can be hard to follow, but its essence is clear enough: regardless of what makes /sense/ here, as clearly as James can say anything he said it was possible to get away from AI coprimeness by moving to a larger ring, and he even correctly recognized that Dedekind's quote said he was wrong about that.

That is why he had to contemplate larger rings – but not so large (like, e.g., a field) that the coprimeness he wanted became a triviality. You say in a reply to Proginoskes that "James refuses to accept that he can't magically make coprime algebraic integers non-coprime by moving to a larger ring" – but that's not what he wants to do –

As above, he certainly said that's what he wants to do, and he certainly refused to believe that he can't ;-) More, that's the only explanation I've ever seen from him for /why/ ideal theory "is wrong". For more than a year now he just mechanically repeats that it's wrong, without giving any reason whatsoever.

he wants to go the other way and make non-coprime integers coprime by moving to a larger ring – and he can. Hence "the" object ring.

Right, and that makes /sense/ to me too. He complains endlessly that, in the AIs, none of the terms in his 3-term factorizations are coprime to 'f', so it makes sense that he'd want a larger ring in which one of them is coprime to 'f' — but not so large that all of them are coprime. After all, that one term is coprime and two aren't is his "factoring by eyeball" /conclusion/, so you might rationally expect him to move in that direction ;-) But, as above, that's not what he was talking about at time he decided ideal theory is wrong.

Re: JSH: The "Published" paper he doesn't want you to know about.

Re: JSH: The "Published" paper he dosen't what you to know about.

The state he is in now is VERY strange. He acknowledges that in the ring of algebraic integers, none of the roots of his polynomial are coprime to f . There are 'object' rings in which one of the roots is coprime to f . For some reason he thinks this means that the theory of ideals is wrong, although he has shown no contradiction of the theory of ideals at all.

Perhaps the above clarifies it — LOL.

It is a consequence of the theory of ideals that none of the roots are coprime to f in the algebraic integers.

Right, but that's not what the killer quote from Dedekind was about at the time he decided Dedekind was wrong.

He accepts this as a fact –

I'm not sure about that. He does accept as a fact that Galois Theory (or an "over interpretation" of GT, whatever that means) implies none of the roots are coprime to f in the AI. I don't expect he has any idea what ideal theory says about anything, apart from the one quote of Dedekind's he read in that old thread.

if you accuse him of NOT accepting it, he will shriek that you are lying about what he says –

He reliably shrieks if you accuse him of saying Galois Theory is wrong. But as he as no idea what GT "as often taught" says either, who knows what he means.

but at the same time, and as far as I can tell, for this same exact reason, he thinks the theory of ideals is wrong!

Do note that his papers don't even mention ideal theory. I suspect that means part of him knows his claims about that are pure bluff — aka "Extreme Mathematics".

Re: JSH: The "Published" paper he dosen't what you to know about.

Re: JSH: The "Published" paper he dosen't what you to know about.

It seems to give him a sense of importance to say he has shown it is wrong – it destroys over a century of accepted mathematics, etc. – so it is permanently in his archive of delusional accomplishments.

Yup!

[Interestingly, even though Galois theory implies the same conclusion here as ideal theory, he will not say that Galois theory is wrong – only that it is "misinterpreted" or "taught incorrectly" or "misused". I think he identifies with Galois – the isolated and highly original mathematician whose genius was not appreciated in his own short lifetime – a dashing tragic romantic figure. Perhaps he views Dedekind as an academic establishment plodder who overlooked his own errors, and mathematicians after him just accepted it without question and just keep gushing over how beautiful the theory of ideals is. All JSH needs to do to perfect his Galois self-image is take up dueling.]

Indeed, I've sometimes wondered whether "the math wars" are his way of transplanting duels to cyberspace. It would be in character to take the easy, risk-free way out ;-)

To complicate things: his "proof" that one of the roots is coprime to f does not invoke any assumptions about the ring in which said coprimeness occurs. Therefore if his proof were valid, it would be valid in the ring of algebraic integers and it would contradict the fact mentioned in the preceding paragraph which he accepts.

His inability to see this extremely elementary point has baffled me for years. At least once he waffled about it, saying that his "proof" actually required "field operations" — although he didn't specify which ones or where.

[A good mathematician checks that his claimed proofs do not prove too much!] But Harris cannot admit this bit of logic into his consciousness. Maybe he has glanced it out the corner of his eye, like an evil wraith come to rob him of his treasure and kill his brainchild, and he cannot bear to look at it straight on.

Well, he has a different conclusion: since what he claims is false in the AIs, the AIs are "flawed". Recently he says they "have a coverage problem"

Re: JSH: The "Published" paper he dosen't what you to know about.

Re: JSH: The "Published" paper he dosen't what you to know about.

more often, but the only "flaw" or "problem" he's ever demonstrated is that their existence as a ring proves his argument is wrong.

....

It's not at all clear that "the" object ring gives him what he needs –

WRT which, it's hilarious that his current FLT "proof" starts by saying it's working in "an object ring" — and then never mentions the ring again!

it of course lacks some of the nice properties of the ring of algebraic numbers, and the next step in the FLT proof even if he gets what he wants from "the" object ring is totally murky as far as I can tell.

But the strategy is clear, right? The object ring magically sprouts /whatever/ properties are needed in order for James to "rigorously" ignore sane objections to the bulk of his FLT "proof". It's an infinitely adaptable counterexample–wisher–awayer.

... [speculation about why JSH is, umm, JSH] ...

I expect you know I agree, but I'm keeping strictly to math here ;–)

.