http://blog.newenergytimes.com/2011/12/29/lenr-researcher-refuses-to-abandon-fusion-term/#comments

Lewis Larsen (@lewisglarsen) *says:*

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Cold fusioneers are now saying that they always meant to include neutron-based processes as part of their concept of "cold fusion."

Neutron-capture low energy nuclear reactions (LENRs) are NOT any form of "fusion", hot, "cold," warm, or otherwise. "Cold fusion," i.e., D + D –> He-4 + heat or more generally, nuclear fusion of charged particles in the presence of high Coulomb barriers at high reaction rates at low temperatures, is not and never was legitimate science. On that particular point, I agree with legions of mainstream scientific critics since the infamous Pons & Fleischmann news conference at the University of Utah back in 1989.

The distinction between the two concepts, LENRs versus "cold fusion," is fundamental, not merely malleable semantics as cold fusioneers might have people believe. Importantly, the concept of "cold fusion" is provably nonsensical from a physics standpoint, something that was well-established back in 1989 – 1990; "cold fusion" proponents have been unwilling to accept that inconvenient truth for two decades.

The LENR researcher's above remarks to Mr. Krivit are exemplary of a relatively recent, intellectually dishonest semantic ploy by the "cold fusion Cabal" to expand the widely accepted scientific definition of the term "fusion" to conform to their misguided, erroneous worldview about the causative mechanisms underlying LENRs.

In particular, during the past several years Cabal members have deliberately tried to muddy the conceptual waters by repeatedly asserting publicly that neutron capture processes are a type of fusion.

Importantly, it is technically incorrect to refer to neutron captures as a fusion process, as a cursory examination of major physics dictionaries (e.g., Oxford) and standard nuclear physics textbooks readily reveals. Also, there are no Coulomb barriers to neutron captures since neutrons have zero charge, i.e., they are neutral particles. Frankly, anyone who insists that neutron capture is consistent with the widely accepted, mainstream science definition of nuclear fusion processes doesn't really know very much about nuclear physics.

In contrast to "cold fusion", the closely interrelated ideas of weak-interaction neutron production in condensed matter and subsequent neutron captures and nuclear decays are based upon well-established electroweak theory (under the 'umbrella' of the so-called Standard Model of physics) and a well-published body of knowledge about nuclear physics that has been developed since W.W.II. The Widom-Larsen theory of LENRs is solidly based upon these 'bedrock' elements of modern physics; there is no "new physics" in any of our work. At the highest level of abstraction, in a sense all we have done is to integrate modern electroweak theory with collective, many-body condensed matter quantum effects in a novel way.

Not surprisingly, key elements of the Widom-Larsen theory of LENRs have been published in well-respected, peer-reviewed specialist physics journals such as the "*European Physical Journal C – Particles and Fields*" (2006) and "*Pramana – Journal of Physics*" (2010). Moreover, in February 2011 Lattice Energy LLC was awarded a fundamental patent, US #7,893,414 B2, "*Apparatus and Method for Absorption of Incident Gamma Radiation and its*

Conversion to Outgoing Radiation at Less Penetrating, Lower Energies and Frequencies." In the body of that patent, readers will see the clear distinction between LENRs and "cold fusion" that we are asserting herein. Obviously, the U.S. patent office believes that LENRs constitute valid science, or this particular patent would never have survived the customary examination process and subsequently have been awarded and issued to Lattice.

In contrast, "cold fusion" researchers have complained publicly and vociferously that the US Patent and Trademark Office has steadfastly refused to grant them any patents. Such a policy by the US Patent Office should not be a surprise to anyone. Unlike Lattice, their incessant patenting efforts have generally been unsuccessful because an underlying concept of "cold fusion" permeates their patent applications — unlike LENRs, "cold fusion" is scientific nonsense — the USPTO is simply behaving appropriately.

Members of the cold fusion Cabal have relentlessly attacked the non-fusion Widom-Larsen theory of LENRs since our first paper was publicly posted on the Cornell physics preprint *arXiv* in May 2005. Tellingly, their recent, concerted public attempts to create an *ad hoc*, arbitrary redefinition of the term "fusion" may actually reflect a gradual, rather reluctant process of intellectual evolution that was caustically and succinctly summarized by J. B. S. Haldane *ca.* 1963 as follows (quoting directly):

"Theories have four stages of acceptance:

1. This is worthless nonsense.

2. This is an interesting, but perverse, point of view.

3. This is true but quite unimportant.

4. I always said so."

After nearly seven years of open conceptual warfare, perhaps we have finally reached Stage 4. Cold fusioneers are now saying that they always meant to include neutron-based processes as part of their concept of "cold fusion."

In any case, the further passage of time and subsequent events in the mainstream scientific community will ultimately tell the tale of two theories: Widom-Larsen LENRs versus "cold fusion."

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