

. NNN Notarized Scientific Notes of Dan E. Willard on September 10,2020,

xxxxx On September 9, I listened to Artemov's Indiana talk from 4-6pm. It helped me better understand his arXiv paper, and its relationship to my work. His Complete-Induction (CI) is a useful concept *if it is viewed as one leg of the 3-part formalism* for reviving logic within the aftermath of Goedel's 1931 paradox. The other two legs are my self-justifying systems and the Pudlak-Solovay Theorem (that many of my papers have called Result ++).

All three of these components are necessary and needed to interact with each other to formulate a fully comprehensive theory of Logic. My theory cannot stand by itself because it is TOO WEAK in isolation. Artemov's results, although nice, suffers a different type of weakness because they replace one unified theorem with a pluralistic "SCHEMES" method, whose multiplicity is unfortunate. Likewise, the Second Incompleteness Theorem (whose strongest form appears in ++) is unacceptable because it is an excessively negative result (as indicated by the Hilbert Godel complaints given in * and ** together with the Sacks-Goedel quotes).

The word "TRIPOD" is an excellent way of summarizing my 3-part theory. It is well known that a camera cannot stand up in a steady manner on planet Earth because gravity will cause it to collapse in one direction or another. But if it has 3 legs, gravity will cause it to stand steady because before collapsing to the ground the camera must rise up before the force of gravity causes it to become unstable.

Likewise, the 3-legs of the "Tripod" theory will form a stable configuration. It is not a perfect theory: It will force philosophical compromises, BUT IT IS A CONFIGURATION that can be made stable under the influence of gravity. Human Beings have used an analogy of this improvised 3-leg approach since the dawn of human thought (we conjecture). My 3-part "Tripod" formalizes what was done informally, since at least the time when literacy began.

eeeeeeeeeeeeee OLD NOTES On August 20, I reported that after I gave Robert a class about logic (over Internet), I developed a much refined understanding about the Propositional Calculus version of the compactness theorem (appearing in Enderton's textbook). Now after an August 24 class, I developed a second improved proof of preceding, where the "unknown" symbol (for when a Boolean value is unknown) is called "Zip" or "Zippy", and a fourth symbol is a never-employed symbol, called "Oops" Here False, True, Zippy and Oops carry the numeral values of 0, 1, 2, and 3 in a "quadruple" analog of a decimal encoding.

I also want to record that I plan to telephone Peter Bloniarz tomorrow about a glitch in New York State security that he may not know about. It is that workers in the NYS bureaucracy are using their insecure home computers when servicing customers via transferred telephone calls. Since these workers have access to social security numbers, an obvious security breach is possible.

I also developed after talking to Robert an improved proof of Enderton's A-version of the Completeness Theorem. I don't have time to go into more details here about any of these topics because I need to do my taxes today. This records a continuation of my on-going research,