The last post presented the concept of a hybrid AI or, perhaps more correctly said, a hybrid intelligent system which mixed and matched various tools, developed in computer science, to mimic the Three Acts of the Mind. The idea is that to best mimic the intelligent behavior of humans one must understand what is being mimicked (the human mind) so that one may most closely align one’s mimicry (machine behavior) to the object being mimicked. Of course, the last sentence is a bit fanciful in its language but its message is quite serious – to best duplicate the behavior of the human mind first figure out what is going on within the human mind. And that is the point of this post.

To be clearer, neither the dark corners of the human mind, explored by Freud, nor the nearly inexplicable connections between minds and society at large, posited by Jung, nor the red hot passions presented in oh so many of the Greek tragedies are being pursued here. Only that smallest sliver of human thought, the rational and ordered part, is being discussed because this is the only part that maybe can be mimicked by a machine. And the description of the rational mind that will be employed is Three Acts of the Mind.

The go-to reference on this is Peter Kreeft’s *Socratic Logic*. The entire text book is built around the Three Acts of the Mind and concentrates on classical, Aristotelian logic rather than the usual symbolic propositional logic (more on this in a future post). Despite the fact that the book boasts nearly 400 pages of content, the basic principles as summarized in a few pages in Section 5. A condense form of that summary will be presented below.

The situation is bleaker when considering online references. There isn’t a large amount of material to be found on the web concerning the Three Acts of the Mind. On possible explanation is that the Three Acts are so obvious as first principles that there really isn’t anything to say on them. But careful reflection should lead one to realize that this argument is vacuous since it is the first principles of any philosophy that always receive the most scrutiny because they can’t be proved; they must either be accepted or rejected at face value. Anyway, for those who can’t obtain Kreeft’s book, Dr. Christopher Anadale from Mount Saint Mary’s provides a nice succinct summary.

<iframe width="560" height="315" src="https://www.youtube.com/embed/tZtww50W9aY" frameborder="0" allow="accelerometer; autoplay; encrypted-media; gyroscope; picture-in-picture" allowfullscreen></iframe>

Both Kreeft and Anadale agree on the basic observations of human thought that underpin the Three Acts, namely that:

1. Human beings think
2. Human thought has structure
3. That structure is objective and knowable

These three assumptions are the hunting license that allows us to go off and categorize the acts of the human mind. Briefly stated the Three Acts are (in order from least to most complex):

***Act of Understanding*** – grasp one object of thought,

***Act of Judgement*** – combine to objects of thought into a proposition with a subject and predicate,

***Act of Reasoning*** – combine two or more propositions into a reasoned argument producing a conclusion.

Several things should be noted for each act. For the First Act of Understanding, it is important that the term or concept be clearly defined. Nothing obscures human communication so much as when two individuals are using the same word to mean different things and nothing is so tricky as a logical argument where the meaning of a term changes somewhere between the beginning and end. For the Second Act of Judgement there is little to be said in general. The key point here is being able to see whether a proposition is true or false and this is a difficult task with no fixed rules for figuring out the truth value of a claim. For the Third Act of Reasoning, deductive arguments can be algorithmically determined to be valid or invalid. Inductive arguments can also be analyzed but only to the probability of certainty since an inductive argument can only rendered conclusions that are true within a confidence interval. It should also be noted that the Act of Reasoning, with its arguments and conclusions, is the activity that actually produces new knowledge, conjectures, hypotheses, and actions.

Now that Three Acts can be a bit obscure when stated in an abstract way, so the following table, adapted from the table on page of Kreeft’s book, should help. Note that some rows have been omitted, simply for brevity, and that a new row, proposing a possible machine equivalent has been added.

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1st Act – Understanding | 2nd Act – Judgement | 3rd Act – Reasoning |
| Logical Expression | Term | Proposition | Argument |
| Linguistic Expression | Word or Phrase | Declarative sentence | Paragraph |
| Example | book or football game | All books have pages with words.  A football game is a sport | All books have pages with words.  *Too Many Cooks* has pages with words.  Therefore, *Too Many Cooks* is a book |
| Structural Parts | None | Subject term and a predicate term | Premises (propositions) and conclusion (also a proposition) |
| Question Answered | What it is | Whether it is | Why it is |
| Aspect of Reality | Essence | Existence | Cause |
| Good When | Clear (unambiguous) | True | Valid |
| Bad When | Unclear (ambiguous) | False | Invalid |
| Possible Machine Equivalent | Recognized percept | Classification | Syllogism and action |

Of course, there is a lot more to be said about the Three Acts but the above sets the generally agreed upon framework from which other analyses spring.