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From: Lloyd Etheredge <lloyd.etheredge@policyscience.net>

Subject: 232. Red Team: Watson, "Jeopardy" and China.

Dear Dr. Fischhoff, Dr. Atkinson, and Colleagues:

You might be aware of the IBM Watson computer that currently is playing at a very high level against the best human players of "Jeopardy." [I attach an AP wire story. The project also has been reported on PBS News and PBS Nova.] <1>

I write to suggest that a joint Red Team/National Academy of Sciences project challenge the conventional parameters of data storage and retrieval/display within the US government. It should push the envelope with a Watson-China (open architecture) project that will include all public domain data from/about China that are relevant to the (ranked priority) questions that academic behavioral science and/or USGOV users want to ask.

The Watson-China program [Mencius] also will expand upon the first generation Watson prototype by a new universe of visual display and analysis capabilities.

Institutional Architectures and (Draft) Prioritized Questions

One task of the joint Red Team project will be to identify how such an inter-university and multi-disciplinary collaboration project can be organized, funded, and move quickly. Who will do a good job? You also can spur the project by designating a (draft) prioritized list of questions.

Why China?

I suggest China to the National Academy of Sciences because it is a R&D project with practical benefits. There is so much underway in China [with 1.4 billion people] that the daily input (including the range of languages and dialects in China) exceeds the capability of the Embassy's staff to process, remember, and access quickly. Yes - somewhere - different US specialists know about China's Grand Strategy for economic competition (Including its global long-term contracting for raw materials and its construction of port facilities in the Indian Ocean, and the career paths being designated for the 100,000 Chinese students who study each year in America (e.g., science, engineering, international business). And - somewhere - there are files about public protests, and their subjects and trends across the past five years, and the themes of President Obama's speeches that are picked-up and favorably discussed in different media and locations in China. Mencius will not necessarily replace paper files or improve upon what the best government experts can do or change the analysis of major economic, social, and political trends that Westerners perceive. But it *will* make many sub-tasks more efficient and everybody's time more productive. And it can be accessible - everything can be accessible - quickly, on everybody's desktop.

I suggest that the Watson-China project - Mencius - be wholly in the public domain and developed by a network of leading research universities and scholars.

Mencius will be a wonderful prototype for a new generation of capabilities across

countries and/or subjects (e.g., the global environment and global environmental policy) and it can include translation of texts (e.g., into English) and a new generation of content analysis tools to monitor changes in culture, civic discourse, and types of events (etc.)

[The name Mencius (perhaps there is a better name?) may be appropriate because, as a public domain project, it should be an exciting opportunity for Chinese graduate students in America, and students and researchers in China, also to contribute ideas and build public domain software that "understands" different domains in China and cultural references. Mencius was an esteemed scholar and philosopher, who also denounced memorization and told his students that they must think for themselves and actively interrogate texts. His famous methods of scholarship included admonitions that students should debate and evaluate the probability that a text was true by comparing it with their own experience and other texts - a good cultural resonance, since Mencius will be using sophisticated probability algorithms (perhaps, similar to Google's search engines) to understand and answer questions.

- Also, there are deep questions about the nature of being Chinese that Mencius and its software designers may help to clarify. In the early days of computer-oriented thinking Nathan Leites, a social scientist at RAND, wrote The Operational Code of the Politburo to begin a formal, AI, research program into the differing logics of different cultures. Mencius will need behavioral scientists - and it also will need the humanists who can help Mencius to understand the world (and their world) as Chinese understand it I think that a sincere interest and commitment to "understand" China more deeply will enroll many appreciative contributors in China - and stimulate new parallel and comparative cross-cultural projects to understand [non-Western] India, Japan, or Egypt (etc.)

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<1> This new level of AI program is built to "understand" natural language inquiries - including cultural references and metaphor. Watson also reflects some of the integrated

complexity ideas from neuroscience - e.g., that the human brain may be composed of forty different brains, areas and sections with different structures and specialized functions. Watson also responds to verbal questions and commands from users.

Computer crushes the competition on `Jeopardy!'

By FRAZIER MOORE, AP Television Writer Frazier Moore, Ap Television Writer 1 hr 13 mins ago [2/16/2011]

NEW YORK – The computer brained its human competition in Game 1 of the Man vs. Machine competition on "Jeopardy!"

On the 30-question game board, veteran "Jeopardy!" champs Ken Jennings and Brad Rutter managed only five correct responses between them during the Double Jeopardy round that aired Tuesday. They ended the first game of the two-game face-off with paltry earnings of $4,800 and $10,400 respectively.

Watson, their IBM supercomputer nemesis, emerged from the Final Jeopardy round with $35,734.

Tuesday's competition began with Jennings (who has the longest "Jeopardy!" winning streak at 74 games) making the first choice. But Watson jumped in with the correct response: What is leprosy?

He followed that with bang-on responses Franz Liszt, dengue fever, violin, Rachmaninoff and albinism, then landed on a Daily Double in the "Cambridge" category.

"I'll wager $6,435," Watson (named for IBM founder Thomas J. Watson) said in his pleasant electronic voice.

"I won't ask," said host Alex Trebek, wondering with everybody else where that figure came from.

But Watson knew what he was doing. Sir Christopher Wren was the correct response, and Watson's total vaulted to $21,035 as the humans stood by helplessly.

Watson blew his next response. But so did both his opponents. He guessed Picasso. Jennings guessed Cubism. Rutter guessed Impressionism. (Correct question: What is modern art?)

Back to Watson, who soon hit the game's second Daily Double. But even when he was only 32 percent sure (you could see his precise level of certainty displayed on the screen), Watson correctly guessed Baghdad as the city from whose national museum the ancient Lion of Nimrud ivory relief went missing (along with "a lot of other stuff") in 2003.

Watson added $1,246 to his stash.

He even correctly identified the Church Lady character from "Saturday Night Live."

One answer stumped everyone: "A Titian portrait of this Spanish king was stolen at gunpoint from an Argentine museum in 1987." (Correct response: Philip.) Jennings shook his head. Rutter wrenched his face. Watson, as usual, seemed unfazed.

Even when he bungled Final Jeopardy, Watson (with his 10 offstage racks of computer servers) remained poised.

The answer: "Its largest airport is named for a World War II hero; its second largest, for a World War II battle."

Both Jennings and Rutter knew the right response was Chicago.

Watson guessed doubtfully, "What is Toronto?????" It didn't matter. He had shrewdly wagered only $947.

The trio will return on Wednesday, when their second game is aired. The overall winner will collect $1 million.

The bouts were taped at the IBM research center in Yorktown Heights, N.Y., last month.

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[The Policy Sciences Center, Inc. is a public foundation that develops and integrates knowledge and practice to advance human dignity. Its headquarters are 127 Wall St., Room 322 PO Box 208215 in New Haven, CT 06520-8215. It may be contacted at the office of its Chair, Michael Reisman (michael.reisman@yale.edu), 203-432-1993. Further information about the Policy Sciences Center and its projects, Society, and journal is available at www.policysciences.org.]