

Baltimore in the Future Tense
Appendix A: Human / Machine Symbiosis
By Tom Riley

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Author

General Description:

This is the text for one of a series short videos on designing new solutions to the problems of the 21st Century by applying new science. This series is called “Baltimore in the Future Tense”. It is in the form of TED style presentations with a few graphics supported by talk. The presentations appear in six short video chapters and appendixes.

This text and videos are available on “The Big Moon Dig” Web site:

The Big Moon Dig / What & Why / Divide Baltimore
<http://bigmoondig.com/Essays/BMDWhyWhat.html#DivBalt>

Starting point essay: “Baltimore”
<http://bigmoondig.com/Essays/Baltimore.pdf>

This series was written especially for a University of Baltimore course:

“Divided Baltimore”
<http://blogs.ubalt.edu/dividedbaltimore/>

The text is in Adobe pdf. Graphics were assembled using PowerPoint and SketchUp 2015. The voice and voice times were generated with Natural Reader. The videos were made with Movie Maker. The graphic credits appear at the end of each text, as does a list of references.

This is the first chapter of a series building up to specific solutions.

Appendix A, Human / Machine Symbiosis

Symbiosis
Current Vision
New Rules
Process



Slide 01: Text intro
Graphics: Text
Time: 00:54

Baltimore in the Future Tense
Appendix A, Human / Machine Symbiosis

Tom Riley
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The Big Moon Dig
<http://bigmoondig.com/Essays/BMDWhyWhat.html>
October 1, 2015

Comment:

Hello, I'm Tom Riley of "The Big Moon Dig".

Let's talk for a just few minutes about using new science to address our big problems in the 21st Century. The new stuff is absolutely breathtaking, but communicating complex and novel ideas is a real challenge. We now have the raw information we need to solve our problems, but we need to turn it into practical solutions.

One area we must consider is the relationship between human beings and our machines. Technology is moving so fast that we must include the possibility of major technological advances in the Field of Our Future.

We cannot reliably foresee specific advances but we must make new guidelines to direct our progress. One of the most important new guidelines is simply defining the relationship between ourselves and our machines as a symbiosis.

_____ -

Slide 02: Symbiosis

Image: Lichen, field crops

Time: 00:50



Comment:

The definition of a symbiosis is not as precise as we like, but it does describe two species where each needs the other to prosper. Often they cannot even reproduce outside of their relationship, but one does not exist at the other's expense.

Symbiosis is very common in life. Lichen, made of an algae and a fungus, live on new rock and slowly digest it into new soil.

Nearly all our food crops have symbiotic funguses living on their roots. The fungus makes minerals available and the food plant provides sugars. The plants would not produce the nutrients we need to live without the fungus at their roots.

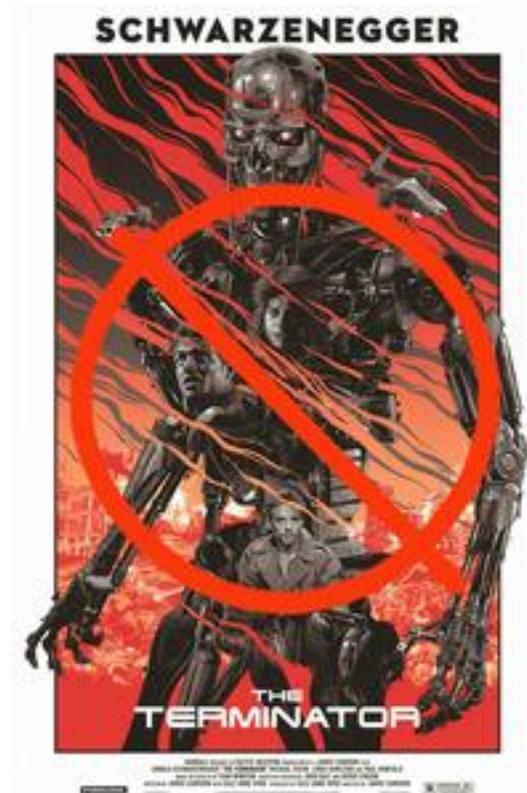
The Earth is alive with symbionts, we are already highly dependent on them. We will soon need to think of ourselves as being a key member of yet another symbiosis.

_____ -

Slide 03: Current Vision

Image: No Schwarzenegger

Time: 00:47



Comment:

Our present vision of the human/machine relationship is an unmitigated disaster. Machines run amuck across our movie and TV screens. We start out as the masters, but soon become the slaves, or, worse yet, are eliminated.

In real life, we are at a critical crossroads. Drones can now kill; cars can now drive themselves. Soon both will be able to act autonomously.

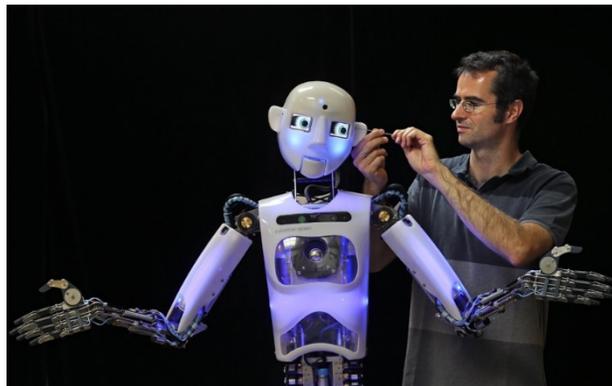
The old rules, like Author C. Clarke's "Three Rules of Robotics", have been simply ignored or rejected as unprogrammable. How do you program a machine to let itself be destroyed before it will kill?

We must find a new vision for the Field of Our Future. We must invent a symbiosis to replace slave/master.

Slide 04: The Human/Machine Symbiosis

Image: Real Robots

Time: 00:51



Comment:

Humans and machines are already mutually dependent. They now work in our factories and may soon work in our homes. It is true that they cannot now reproduce without us, but we also cannot live our modern lifestyles without them. And yes, we do use them extensively in our maternity hospitals.

Our modern societies are now largely based on a master/slave relationship between humans and machines. As the power and capabilities of machines grow this relationship could become

unsafe. Throughout history slaves have often revolted. We need to develop a much healthier human/machine relationship, a symbiosis.

We need to recognize that we need our machines and that they need us. And, it is we who must always be diligent that they will always need us.

Slide 05: Talk the Human/Machine Symbiosis into Existence

Image: Text

Time: 00:41

- Define the Human/Machine Symbiosis
 - New Rules
- Envision this relationship
- Develop new rules
 - Make the programmable

- Thanks,
 - Tom Riley
 - The Big Moon Dig

Comment:

Where do our problems fit into all this?

In our new future we are counting on major technology advances. These can be both good, the Internet, and bad, the A-Bomb. To be good, we must make it good.

We are quickly approaching the point where simple control is not enough, and control is very likely to fail anyway. We need to go beyond the Master/Slave relationship with our machines and move to the much more powerful one of Symbiosis.

This symbiosis will be a critical part of the Field of Our Future. It will be a key element of our story from here on out.

Thank you for your attention,

Tom Riley
"The Big Moon Dig"

Total Time: 04:05

Target: 05:00 to 08:00

Allowing 00:00.5 times four for slide changes = 00:02.

Graphics Credits:

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1. **Introduction** -- Text by Tom Riley
2. **Lichen** – Lichen on rock, Courseulles-sur-Mer, France, Wikimedia Commons;
Village with crops in Bangladesh, Belayet2014, Wikimedia Commons
3. **No** – "Terminator" Poster, Orion Pictures
4. **Robots** – "Skilled Work, Without Worker" New York Times, August 18, 2013;
"Inside a Robot Factory", The Telegraph, UK
5. **Conclusion** – Text by Tom Riley

Sound credit:

1. **Rocket blast** – Titan Rocket sound clip is by NASA

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