


Automation and the Legal Profession

HAL-PC Legal SIG

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Overview



Overview

- Some Observations

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- Some Observations
- The Automation Process

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- Examples

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- The Automation Process
- Examples
- Prognosis

Observations



Observations

- 1870 United States
 - 70-80% of the workforce was involved in agriculture



Observations

- 2008 United States
 - 2% of the workforce was involved in agriculture



Observations

- This Time Is Different
 - In the Past: It was *brawn* being automated
 - Now: *Brains* are being automated

Observations

- So that percentage has started to drop (again).



Observations



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- Kodak
 - 140,000 employees
 - Worth \$28 Billion

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 - Instagram
 - 13 employees
 - Worth \$1 Billion
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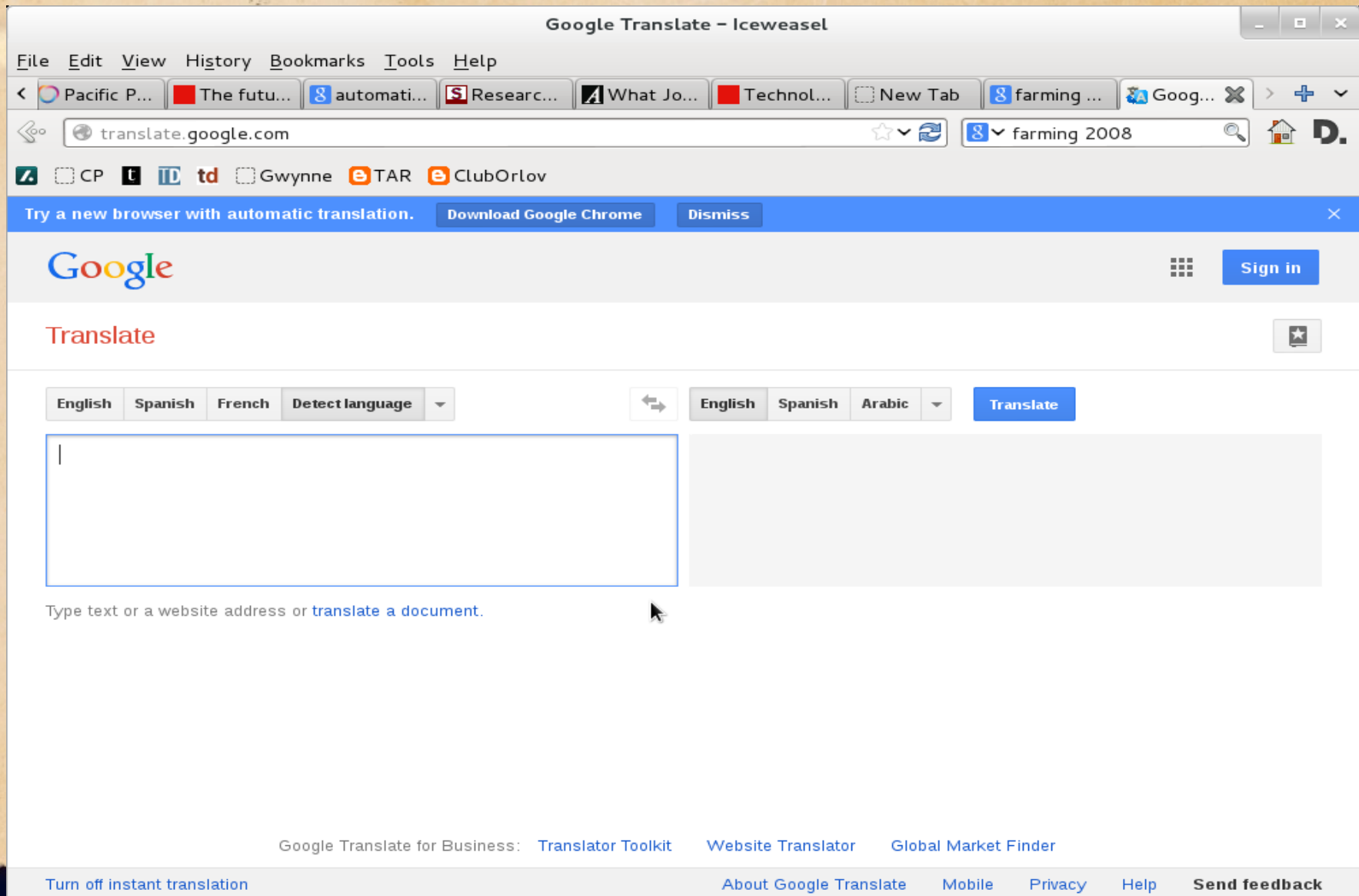
- Instagram

- 13 employees
- Worth \$1 Billion
- \$76.9 Mil./employee
- Completely de-values the 1.5 Million users who contribute the content that makes up Instagram's value.


Observations




Observations



The screenshot shows a web browser window titled "Google Translate - Iceweasel". The browser's address bar displays "translate.google.com" and the search bar contains "farming 2008". The browser interface includes a menu bar (File, Edit, View, History, Bookmarks, Tools, Help), a tab bar with several open tabs, and a toolbar with navigation and utility icons. A blue banner at the top of the page reads "Try a new browser with automatic translation. Download Google Chrome Dismiss". The Google logo and a "Sign in" button are visible in the upper right. The main heading "Translate" is followed by a star icon. The translation interface features two language dropdown menus: the first is set to "English" and "Detect language", and the second is set to "English", "Spanish", and "Arabic". A "Translate" button is positioned to the right of the second dropdown. Below the dropdowns are two large text input areas. The left area contains a vertical cursor, and the right area is empty. A mouse cursor is hovering over the bottom right corner of the left text area. Below the input areas, the text "Type text or a website address or [translate a document.](#)" is displayed. At the bottom of the page, there are links for "Google Translate for Business: Translator Toolkit", "Website Translator", and "Global Market Finder". The footer contains the text "Turn off instant translation" and a row of links: "About Google Translate", "Mobile", "Privacy", "Help", and "Send feedback".




“An amazing number of people offer an amazing amount of value over networks. But the lion's share of weath now flows to those who aggregate and route those offerings, rather than those who provide the *raw materials*.”






**The Internet has destroyed many more
jobs than it has created.**






Unlike past generations, productivity gains do not benefit workers. They benefit only those who control the capital or the networks.







**47% of all jobs are automatable
within the next 10-20 years.**






**Unemployment will only get
worse for the foreseeable
future.**

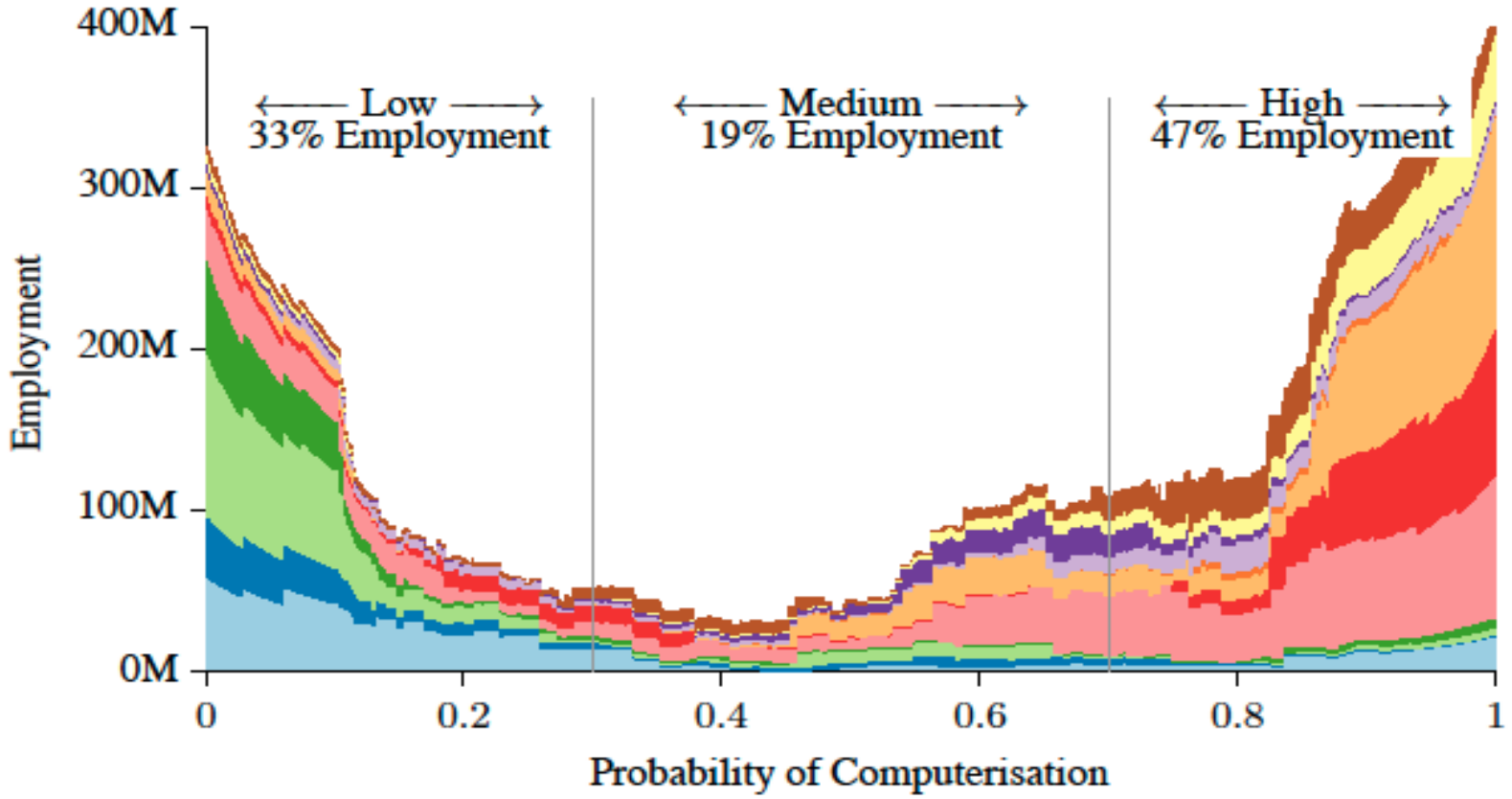




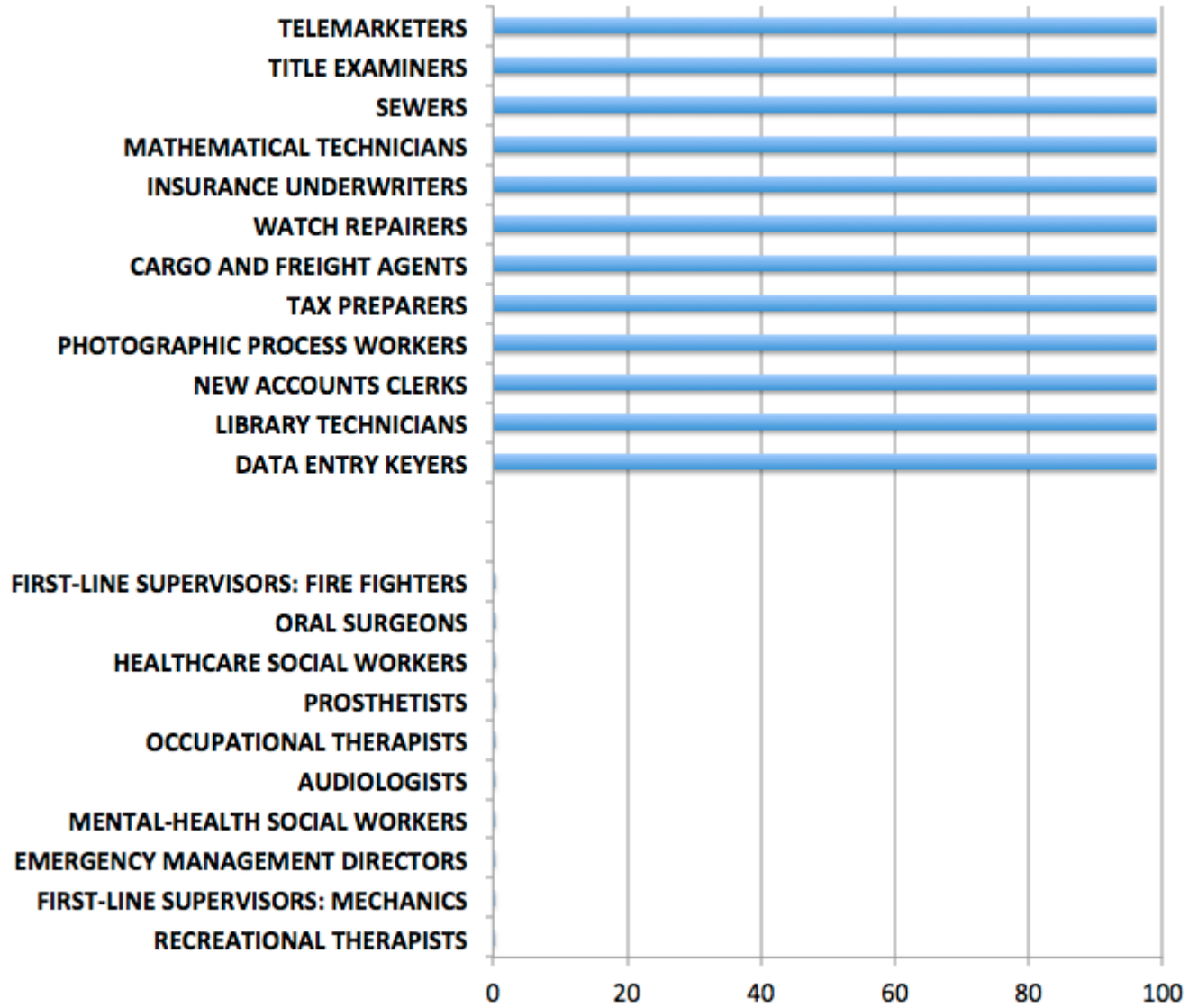
**By 2030, 50% unemployment
will seem low.**



- Management, Business, and Financial
- Computer, Engineering, and Science
- Education, Legal, Community Service, Arts, and Media
- Healthcare Practitioners and Technical
- Service
- Sales and Related
- Office and Administrative Support
- Farming, Fishing, and Forestry
- Construction and Extraction
- Installation, Maintenance, and Repair
- Production
- Transportation and Material Moving



% Chance of Automation





The System is Unsustainable



But in the meantime...



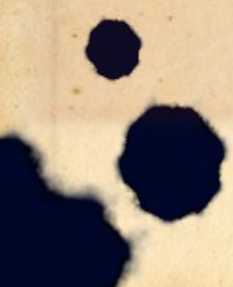
This will be more prevalent...



And so will this...



Here's How it Will Play Out




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- There will be (more) pressure to:


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- There will be (more) pressure to:
 - Cut Costs
 - Fewer clients with money
- 


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 - Fewer clients with money
 - Automate
 - To compete with attorneys who grasp automation
- 

Here's How it Will Play Out



- There will be (more) pressure to:
 - Cut Costs
 - Fewer clients with money
 - Automate
 - To compete with attorneys who grasp automation
 - Which will drive you to the Cloud
 - And into the waiting arms of the network controllers
- 

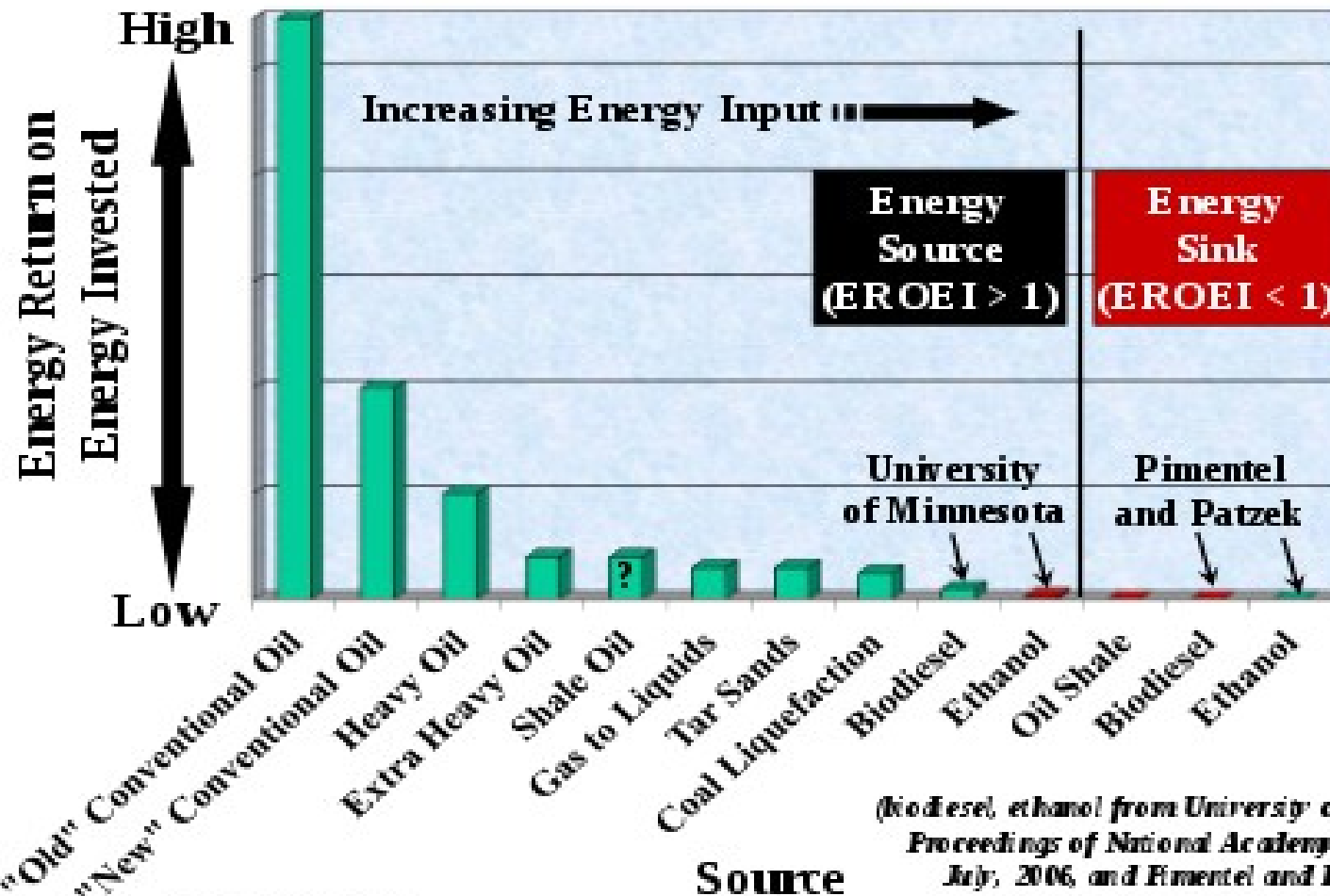


Why is this Happening?



EROEI

Energy Profit Ratio for Liquid Hydrocarbons



© Hughes GSR Inc, 2012

(Biodiesel, ethanol from University of Minnesota
 Proceedings of National Academy of Sciences
 July, 2006, and Pimentel and Patzek 2005,
 Nat Resources Research (Vol. 14:1 65-76))

EROEI

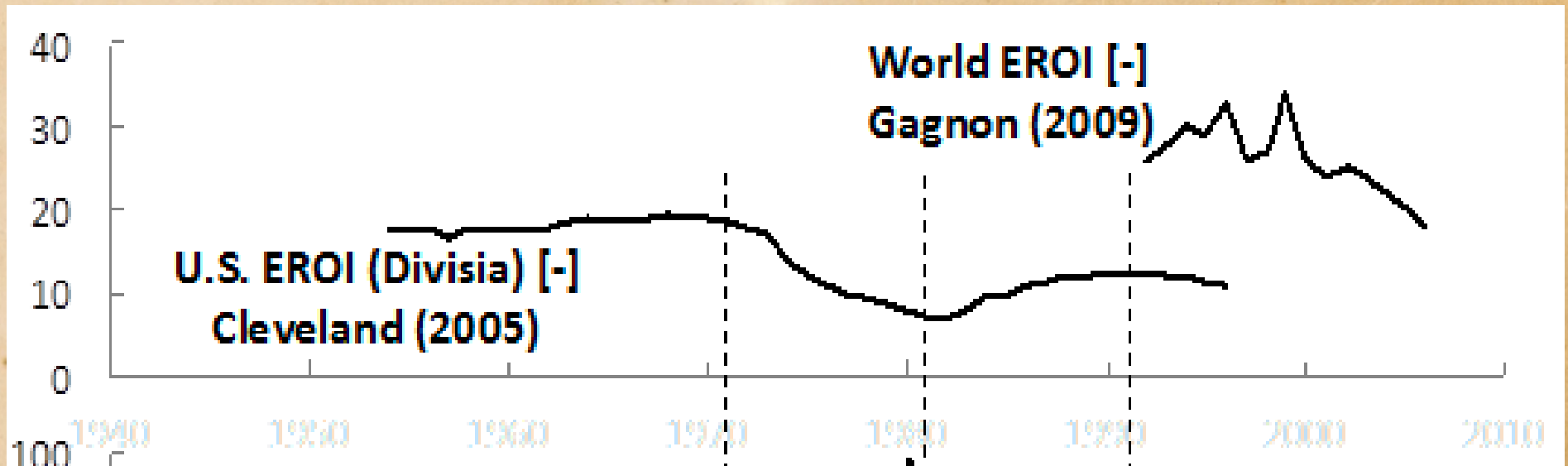
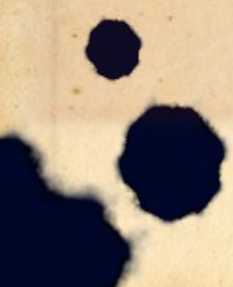


Figure 1 presents data on EROI, oil price, production cost and mark-up in an easily comparable way. Divisia-corrected EROI for the U.S. remained approximately constant from the mid- 1950s to early 1970s, declined rapidly in the 1970s and increased again in the mid-1990s. The available data indicates that EROI for the world (Gagnon et al., 2009) and the U.S. (Cleveland, 2005) are falling at the present time. The present rate of technology improvement appears to be insufficient to put oil production EROI on a positive slope with respect to time. Time series data for oil prices are available from many sources. We used inflation-adjusted data for the average U.S. oil price (\$/barrel) for the period 1946–2010 as based on historical free market (stripper) prices of Illinois Crude. Producer prices for U.S. domestic oil are available from the U.S. Energy Information Agency (EIA, 2010) and show a peak in the early 1980s and a continuous rise from the early 2000s onwards.

Source: <http://www.theoil drum.com/node/9249>

Confluence of Factors




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- Credit-Based JIT Economic System

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 - Brittle Distribution Network: Points of Failure

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 - Cannot Service Debt Under These Conditions

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 - Growth Requires Additional Energy
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 - Restructuring and Austerity Required
 - Cannot Service Debt Under These Conditions
- Another financial crisis is unavoidable

Potential Interruptors



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- Resource Depletion

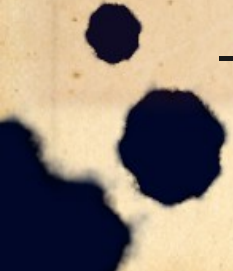
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 - Catabolic Collapse
 - Financial
 - Commercial
 - Governmental
 - Cultural
 - Tribal
- 

Potential Interruptors

- Climate Change (important but unlikely)
- Resource Depletion (likely trigger b/c debt)
- Catabolic Collapse
 - Financial (Black Tuesday)
 - Commercial (The Great Depression)
 - Governmental (Collapse of the Soviet Empire)
 - Cultural (Fall of the Roman Empire)
 - Tribal (Easter Island)



Interruptors Are All Unpleasant



Questions?

Additional References

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