Traceability: between hype and hope

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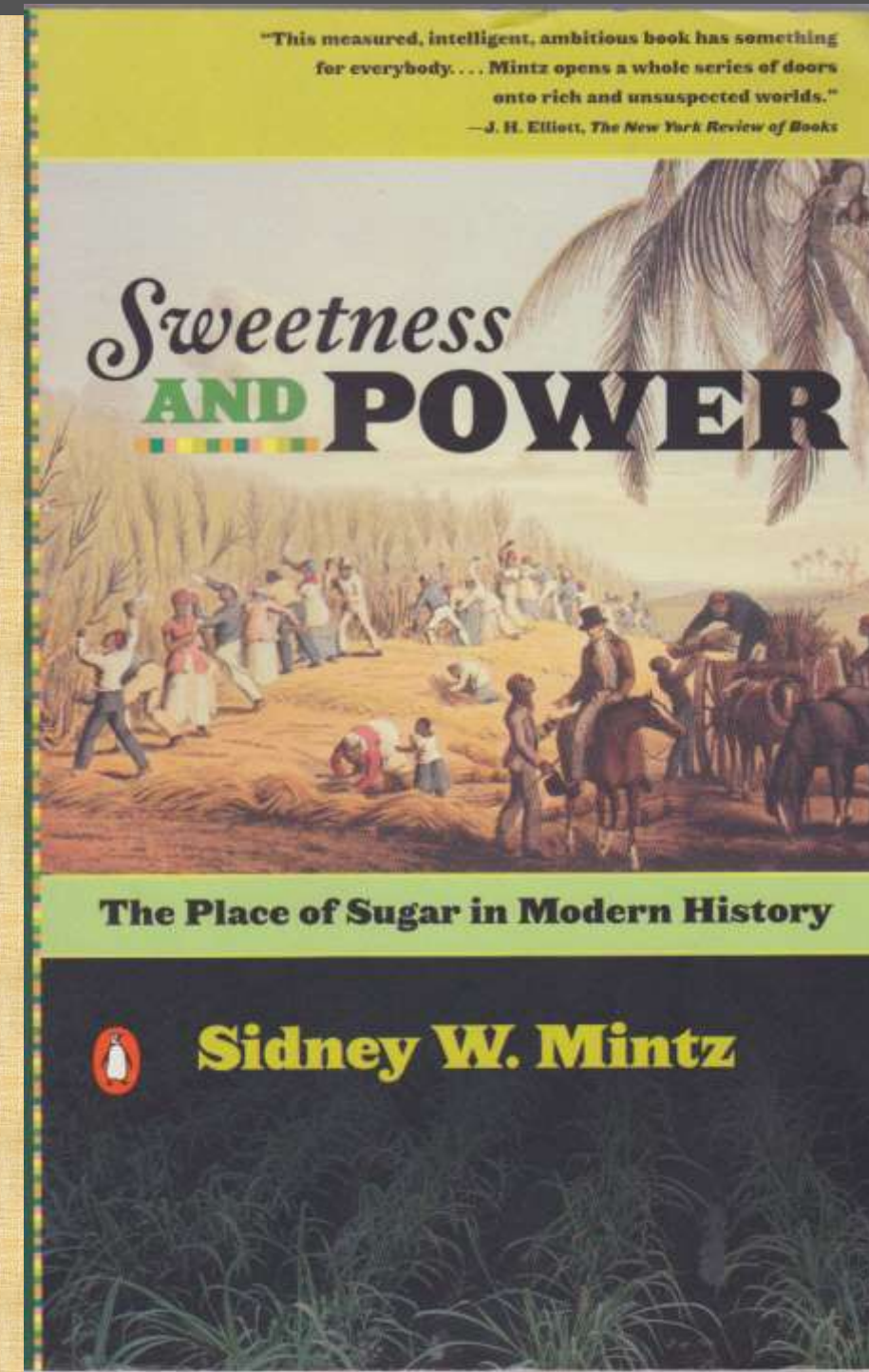
The social life of traceability

Tracing connections

i) trace the various interconnections at different levels of the commodity chain

ii) commodities as 'relational' and 'becoming'

Sidney Mintz: connection between production and consumption through a particular object (sugar)

Social life of commodities: movement and physical transformation in commodity chains or networks, lateral or vertical

"This measured, intelligent, ambitious book has something for everybody.... Mintz opens a whole series of doors onto rich and unsuspected worlds."
—J. H. Elliott, *The New York Review of Books*

Sweetness AND POWER

The Place of Sugar in Modern History

Sidney W. Mintz

The social life of things

Commodities in cultural perspective

Edited by Arjun Appadurai

- what is the value of tracing "things in motion"?

- What emerges from tracing how commodities move through, transform, and connect production and consumption?

Seeing the world from a traceability regime

Visibility and legibility

- "ethical commodities:" material objects infused with value-producing moral attributes that can be assessed by the purchaser and rendered legible as 'ethical.'

- How to achieve consumer legibility & unbroken chain from producer to consumer where a product can retain its moral attributes (ethicality, sustainability)

- Exclusionary effects built into traceability apparatus and what remains invisible to it

- Risks: overlooking an 'ethics of invisibility' & treat natural resources as stable and homogeneous biophysical entities

Technological fix: Hype and promise

- Proliferation of traceability programs for minerals over the last two decades

- What data? Inclusiveness, data agency, and disentangled traces of information.

- Authoritative assessment of provenance or determination of origin

- Skepticism of upstream traceability

- Relationships between geographically dispersed producers, consumers, middlemen, non-human actors, and local environments reduced to streams of data

Automating traceability

Risks of individually marking, tagging, and recording commodities, paper-based obsolescence or human error.

Emergence of blockchain-enabled traceability:
- tamper-proof, immutable record of transactions, ownershi
and sourcing;
- decreases the need for intermediaries

Unlock the potential of this technology without addressing the underlying inequalities that traceability makes transparent.

Reinforce certain types of data to the exclusion of alternative approaches that foreground sociality, trust, or long-term relationships.

Table 1. Main Blockchain Initiatives in the Mineral Sector

Blockchain	Mineral(s)	Date	Description	Main purpose	Target
Better Cobalt	Cobalt	2018	RCS Global and the Better Sourcing Program initiative to record artisanally mined cobalt.	Due diligence and traceability	Miners (Democratic Republic of Congo)
CEDEX	Diamonds	2018	CEDEX is a blockchain-supported diamond trading platform for diamond holders and investors.	Trading	Traders
Chow Tai Fook and GIA	Diamonds	2018	Jewellery company Chow Tai Fook and the Gemological Institute of America's blockchain initiative to record and make accessible grading information.	Digital grading assurance	Consumers
Clara Diamond Solutions	Diamonds	2018	Clara Diamond Solutions is a blockchain-enabled project to ensure provenance and transparency in diamond sales. Owned by Lucara Diamond Corp. (Canada), owner of Karowe mine in Botswana.	Trading	Mines (Botswana), Consumers
Consensas Platform	Gold	2018	IMPACT, in partnership with Consensas, this blockchain-based solution incentivizes data creation and sharing between upstream actors and downstream companies in the gold supply chain.	Due diligence and traceability	Miners (Democratic Republic of Congo)
Everledger	Diamonds	2016	Blockchain-based registry for provenance, identification, and traceability of diamonds, based on IBM's blockchain platform, expanding toward multiple assets.	Traceability	Mines to consumers
Minespider	Various	2018	Blockchain protocol developed for due diligence in the raw material supply chain. With support from the European Partnership for Responsible Minerals (EPRM).	Due diligence and traceability	Mines to consumers
Mintrax	Cobalt	2018	Cobalt Blockchain Inc. and DLT Labs Inc platform to ensure security, transparency and immutability of the certification record of responsible minerals. Relies on the Hyperledger consortium.	Due diligence and traceability	Miners (Democratic Republic of Congo)
Provenance Proof	Coloured Gemstones	2019	Following the emerald paternity test, Swiss-based Gübelin Gem Lab developed the Provenance Proof initiative in association with Everledger.	Traceability	Mines to consumers
The Responsible Gold Supply Chain	Gold	2018	US-based Emergent Technology Holdings deploys blockchain technology, smart contracts, and digital tokens to track gold custody transfers.	Traceability	Miner, refiners, end market supply
SustainBlock	Tungsten, Tin, Tantalum	2018	Blockchain-based pilot projects led by iPoint with BetterChain and supported by the European Partnership for Responsible Minerals (EPRM).	Due diligence and traceability	ASM Miners (Great Lakes region) to consumers
Tracr	Diamonds	2018	Blockchain platform developed by De Beers together with other diamond industry organizations, including Alrosa, Signet, and Chow Tai Fook (pilot participants).	Traceability	Mines to consumers
TrustChain	Gold, Diamonds	2018	Collaboration between technology provider IBM, certification services UL, diamond supplier Rio Tinto, and precious metals suppliers, refinery, and jewellery manufacturer. Proof of concept stage with US-sourced gold, and Rio Tinto's diamonds from Australia and Canada.	Traceability	Mines (USA, Australia, Canada), consumers
Vaultchain	Gold, Silver	2018	Blockchain technology developed by Tradewind Markets through digital asset management.	Trading	Investors, traders
iTraceiT	Diamonds	2021	Encrypted QR-Code for transparency and traceability, data logged by blockchain technology	iTraceability	Mines to consumers

What future for traceability?

Due diligence (assessment of risks and their mitigation) should complement traceability initiatives

Attention to hidden costs of covering ASM in traceability solutions

Industry should clarify the terms of data ownership and potential benefits for artisanal and small-scale miners

These tools are only as good as the data on it.