

# The Domains of Identity:

*A framework for discernment of how identity works in contemporary systems in society.*

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published by Anthem Press

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*From the Introduction:*

The Domains of Identity outlines sixteen key domains where individual's personally identifiable information ends up in databases. The book enumerates the sixteen domains of identity, describing each in detail along with the types of data collected in the domain, the source and key actors amongst whom information moves.

I wrote this book for several reasons.

- 1) to enable a more intelligent conversation with the public and journalists to be able to understand the issues of identity management across a range of societal contexts.
- 2) to support professionals in the fields of identity management and privacy have a common language to understand where and how different types of identity interactions are happening and from there being more able to solve the challenges that different domains present
- 3) to support those working in academia and the private sector to have a common language to understand the landscape of issues so that academic research actually serve industry and industry work can be better understandable to those researching the field
- 4) to support government officials and those engaged with public policy issues being able to understand the challenges that exist in different domains and be able to craft better policies to address challenges within those domains.

Everyone in our society participates in identity management on a daily basis. It is so common that we do not really think about it. As a result, the discourse about identity often conflates radically different issues. The illicit market in which personal data is bought and sold is very different from the contemporary data broker industry, but it is not uncommon for people with fears about personal data use to lump these two contexts together - forgetting that one is a legal business market and the other is a result of criminal activity. Likewise the data from a data breach via an HVAC vendor, such as the Target Breach, that ends up in a illicit market is different from data from a compromised enterprise identity management system protected by weak authentication (just a password) resulting in employee's authentication credentials being stolen in a spear phishing attack.

# The Domains of Identity

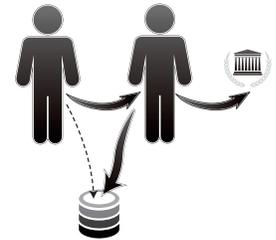
## 1. Me and My Identity

Me and My Identity is the identity of the self and each individual is the starting point for interacting with digital systems. The community of professionals focused on user-centric identity has this focus at the center of their work. It is in this domain that the individual might have control of their own identifiers, their own servers, and collect their own data.



## 2. You and My Identity (Delegated Relationships)

- 1) Person-to-Person delegation. The primary example of this is a parent's relationship with their children or adult children's custody of their elder parents. Another case is an individual delegating a particular portion of their affairs to another, for example delegating interacting with the tax authority to a professional accountant. In a will, one can establish who becomes the executor of one's estate after one dies. There is also the new phenomena of intimate surveillance by household members.
- 2) Person-to-Entity delegation. An individual delegates something to a corporate entity (legal person). For example, an individual wanting to aggregate all their financial information. They pull it together using a service like Mint.com that logs into all their bank accounts, pulls the information, and centralizes it.
- 3) Entity-to-Person delegation. Corporations delegate the responsibility to act on their behalf to particular natural persons.



## 3. Government Registration

Most individuals first identity-related event with an institution occurs when parents register their child's birth (on behalf of the child) in a Government Registration process. Individuals also register with the government at other times in their life. These secondary government registrations include marriage and death, obtaining a license to drive, getting a passport, professional licensing, registering to pay taxes or registering to vote.



## 4. Government Transactions

Once an individual has been formally registered with the government and an identifier has been issued (a number in a government database that points at a particular person), the individual can use this number to do a Transaction with Government. For example, a transaction is the payment of taxes using the identifier issued (in the United States this is an SSN). These two types of interactions (registration and transactions) with government are often thought of as the same but they are quite different. For the most part one needs to be registered with the government before transacting with it.



## 5. Civil Society Registration

Civil Society Registration happens when individuals begin relationships with any number of institutions: professional associations, nonprofit membership groups, religious congregations, sports leagues, etc. We also include educational and healthcare contexts in which people are patients and students. While some of these institutions are "for profit", the nature of the transactional relationships suggest that it makes more sense to include these types of transactions in this domain.



## 6. Civil Society Transactions

Civil Society Transactions are all the interactions with civil society institutions after registration. The classes you attend and the resulting transcripts that document those transactions, the visits to the doctor, hospital and labs, the accumulation of continuing education credits (CEC) as a professional, or the participation in any regular meetings/activities and voting as a member. Individuals present their credentials to the organization and the transact with or receive services from the organization.



## 7. Commercial Registration

Commercial registration happens when one creates an account with a merchant or service provider. There are quite a few regulations that govern this domain particularly in banking, pursuant to know your customer (KYC) regulations and anti-money laundering (AML). The first step for the individual to go through the registration process possibly filling out forms. Once the company has accepted those and created a record in their systems the company issued a credential and/or number to the individual.



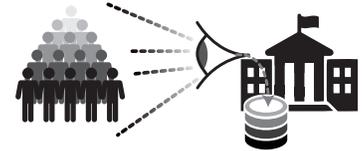
## 8. Commercial Transactions

Commercial Transactions happen when a customer transacts for goods and services with a merchant or service provider. Individuals present their credentials to the company and are able to buy goods or services and have those transactions linked to their customer record.



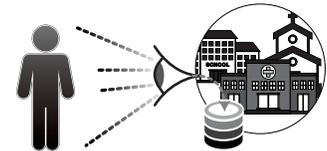
## 9. Government Surveillance

Lawful Government Surveillance can include surveillance of the whole society by a census, labor department surveys of employment trends, surveillance as part of lawful internet tracking, or law-enforcement surveillance via warrant access. Examples of unlawful surveillance include warrantless mass surveillance of communications revealed by Edward Snowden.



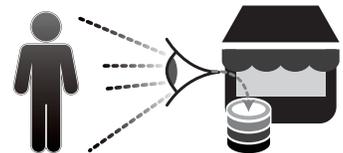
## 10. Civil Society Surveillance

Civil Society Surveillance is not yet widespread. However, there is more and more tracking of health care and educational activities. Professional associations may also be surveilling their members. Civil society groups may organize to perform collective citizen surveillance of corporations or governments.



## 11. Commercial Surveillance

Commercial Surveillance is vast as the push is to get more information about consumers and use it to shape their purchasing activity. It happens in person in stores with CCTV and sensor networks. It also happens with digital tools and services via cookies, and beacons from advertising networks in web content.



## 12. Employment Registration

Employment Registration is the process that a new hire goes through to begin work with an employer. It starts with the application process where PII is shared from a prospective employee with an employer, there is an evaluation process where more PII might be shared and finally after a job offer is made to an employee they are enrolled in to the enterprise identity and access management system and then issued credentials.



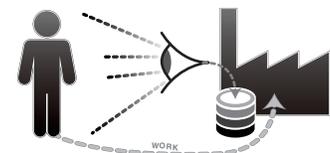
## 13. Employment Transactions

Employment Transactions are all the logins and authorizations that happen when an employee does their job while physically present on site. For example, entering a building for work. It also may happen when they login to digital systems. Individuals present the credentials issued to them by the enterprise to do their work within the context of their employment and in turn are paid.



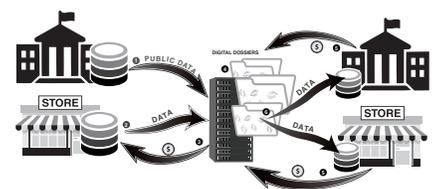
## 14. Employment Surveillance

Employment Surveillance is something that happens in the workplace and isn't new. Taylorism was created in the early part of the 20<sup>th</sup> century to track and shape how workers work in order to reduce employer costs and increase employee productivity. With the rise of computerized technology, its form is changing. When individuals work they are surveilled by their employers.



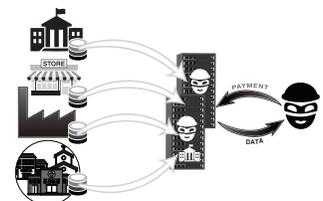
## 15. Data Broker Industry

The Data Broker Industry collects and links together data about millions of people in massive databases. There is no direct relationship between the companies that do this and the individuals they gather or buy information about. While there is no direct relationship in the collection of the data, brokers who are subject to the Fair Credit Reporting Act are required to provide consumers access to the information they have about them and the ability to correct it. This industry gets the data they use to compile these databases from the government, civil society, commercial, and employment contexts. They package the data about people into digital dossiers and sell it raw or in the form of scores, on which they rate the subjects in their database on dimensions important to their clients.

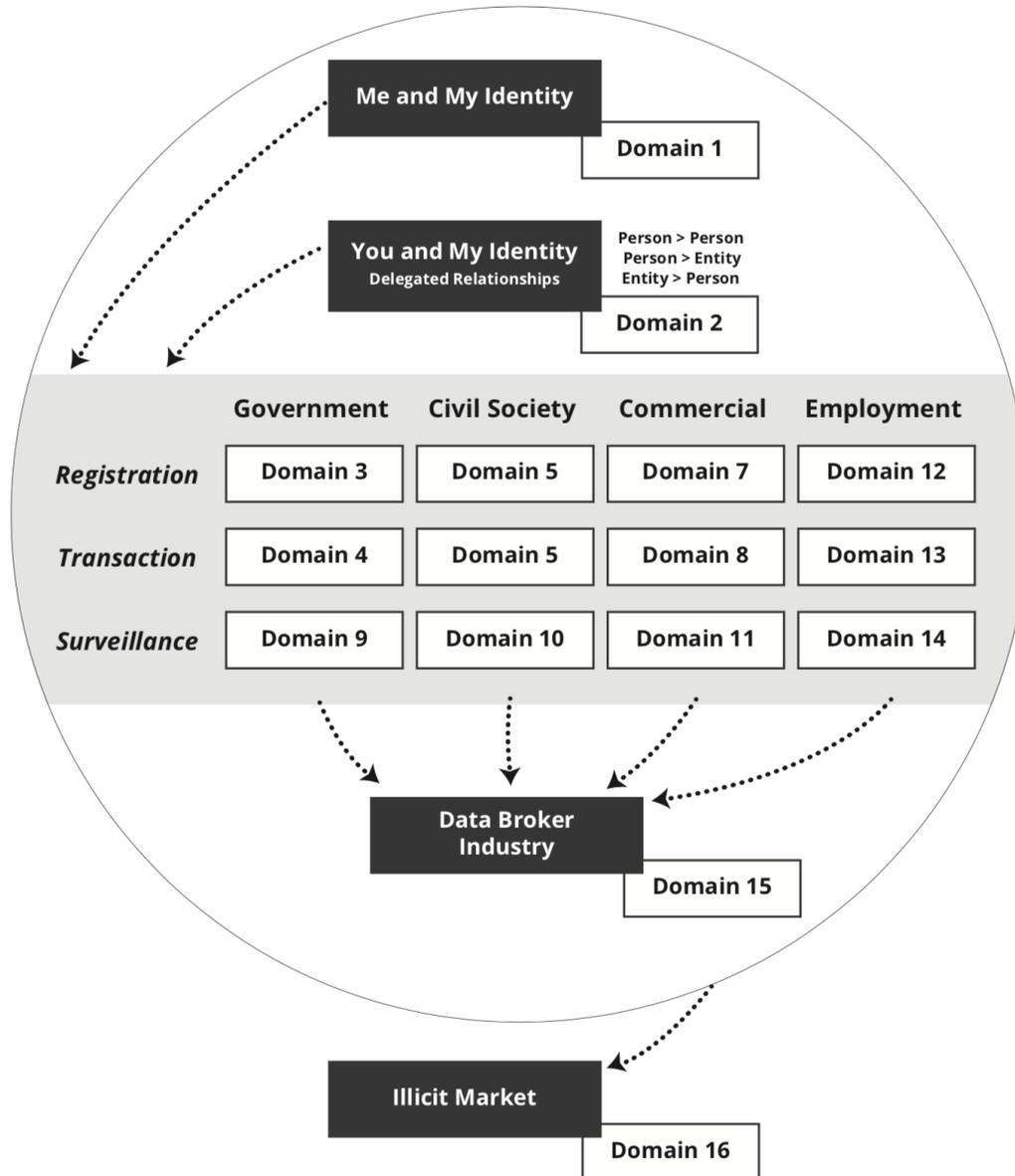


## 16. Illicit Market

The Illicit Market is where the information about individuals ends up after it is stolen or hacked by criminals from any of the above domains, including data brokers and even the individuals themselves. There are two primary types of illicit market activity: criminal networks and state-sponsored data theft and collection. Criminal networks are more likely managing the stolen data in spreadsheets rather than "organizational databases." Data from state-sponsored theft are ending up in large databases and being correlated with other data sets from other sources, including publicly available data. There is another illicit market context: individuals make a personal choice to transact in illicit or black markets, like buying drugs with bitcoin, but that is not included in the set of issues we are focused on.



# The Domains of Identity *Landscape*



## *About the author*

Kaliya Young, Identity Woman, has committed her life to the development of an open standards based layer of the internet that empowers people.

She holds a Master of Science in Identity Management and Security from UT Austin and serves as adjunct faculty at Merritt College in Computer Information Systems.

She consults with and advises governments, NGOs, companies and startups on emerging open standards for decentralized digital identity.

***If you are an identity startup or you need executive-level consultation on identity you can schedule a 30 minute intro call with her [kaliya@identitywoman.net](mailto:kaliya@identitywoman.net)***