Observability & Verifiability: Informing the Information Fiduciary

Richard R. W. Brooks

October 9, 2015

1 Introduction

In “The Use of Knowledge in Society,” F. A. Hayek emphasized the decentralized nature of knowledge in every economic order,—useful knowledge, he argued, “never exists in concentrated or integrated form, but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess.” Our modern economic order affirms Hayek’s insight about the decentralization of knowledge. All those bits of knowledge that now fuel our commerce are dispersed throughout the world and the web. Every bit of useful knowledge is possessed by “all the separate individuals” in society, which is to say nothing about ownership; and that knowledge, dispersed among separate individuals, attains social value only when brought in relation between individuals. Addressing the legal and economic implications of this fundamental point, largely absent in contemporary debates about

*Columbia Law School, I would like to thank James Cooper along with the fellows and other participants in the LEC Privacy Fellowship, 2014-15, for their encouragement and insightful feedback. I am also grateful for an unnamed referee, whose generous and able comments have lead to a significant restructuring of my thoughts and the paper.
the role of law in regulating information and privacy, is the aim of this essay.

Among the motley, and often conflicting, approaches advanced by privacy scholars and advocates runs a common thread, a shared base understanding from which each approach departs before eventually achieving its signature tangency. They all take the individual as the appropriate referent for scrutiny, the individual is the basic unit of analysis. Whether the normative framework is grounded in autonomy, in the development of self, personhood or personality, in efficiency, fairness or what-have-you, the individual always surfaces as the elemental subject through which privacy values are to be evaluated. It is a natural enough perspective to take. Each one of us experiences privacy in precisely this way—individually, personally. Regrettably, our common personal disposition has shifted the analytical focus from where it belongs, which is not on the individual but on the transactions facilitated by the sharing and concealing of knowledge and information. There is nothing new here. Almost a century ago John Commons reminded us that “[w]hen we look at the matter objectively and without the subjective bias of our individualistic pleasures and habits, we must perceive that the true unit of economic theory is not an individual but a going concern composed of individuals in their many transactions of principal and agent, superior and inferior, employer and employee, seller and customer, creditor and debtor, bailor and bailee, patron and client, etc.”

Once the nature of the transaction and going concern are identified, the purpose of privacy (or confidentiality, anonymity, candor, disclosure, notice, secrecy, data destruction and being “forgotten” or whatever other interpersonal information regulation is called for) becomes fully apparent. Looking at the problem from the perspective of the individual reveals, at best, only one side of an essentially relational structure. Knowledge and privacy are relational constructs. They are not sensibly evaluated through single individuals on one side of a relation, nor, strictly speaking, are these constructs best understood through dyads engaged in information exchanges, as suggested by Commons’s examples of principal and agent, superior and inferior, and so on. Rather, the regulation of knowledge and privacy is best seen

A role-set should not be confused with the “multiple roles” that a single person might occupy at any time, such as \textit{mother}, \textit{lawyer}, \textit{niece}, \textit{employee}, \textit{veteran}, \textit{daughter}, \textit{citizen} and on. These roles, i.e., a status or social position,\footnote{The usage is frustratingly not uniform here; Merton preferred social statuses but established convention leans toward the use of “roles,” while reserving social status to describe some hierarchy between or within roles.} come with norms that prescribe various, and often conflicting, demands on an individual occupying them. A young \textit{associate} at a law firm, who is a \textit{parent} to a young child, will often face great difficulty balancing competing social expectations of those two roles alone, particularly but not only when the \textit{parent} is a \textit{mother}. Adding more roles only makes the balancing more challenging, but it is important to see this challenge, ultimately, as a personal one. It is a question of how an individual chooses to allocate her time, attention and recourses across the multiple roles she occupies.

Role-sets management involves a different problem, one that is more interpersonal than personal, because role-sets characterize associated roles, simultaneously occupied by different persons. Each role or social status has complementary roles or statuses. For example, \textit{mother} is associated with \textit{son} or \textit{daughter} as well as \textit{father}, while \textit{lawyer} is generally in interactional role-relationships with \textit{client}, \textit{partner}, \textit{secretary}, \textit{clerk}, \textit{judge}, \textit{opposing counsel}, \textit{bailiff}, and so on. Someone who is a lawyer, of course, will interact with other people too, such as a \textit{babysitter}, \textit{parent}, \textit{neighbor}, \textit{doorman} and \textit{surgeon}, but typically, hopefully, not in her role or status as \textit{lawyer}. In her role or status as \textit{lawyer}, the essential interpersonal problem is, as Robert Merton put it, “identifying the social mechanisms which serve toarticulate the expectations of those in the role-set so that the occupant of a status is confronted with less conflict than would obtain if these mechanisms were not at work.” [114]

Conflict within role-sets is inevitable. Add to this a greater fre-
quency and intensity of transactions within many role-sets and the likeli-
hood conflict becomes increasingly certain. A number of social and le-
gal mechanisms exist counteract the structural tendency toward conflict
within the role-set. Some mechanisms are based on relative importance,
power and authority of the roles in the set (e.g., the judge’s supremacy
vis-à-vis the bailiff along these lines discourages potential conflict not
only between judge-bailiff, but also between lawyer-judge and lawyer-
bailiff). Limiting observability of knowledge and information between
and among role-relational pairings within the role-set lends to the effi-
ciency and functionality of these going concerns.

Accountants, lawyers, doctors, and other professionals know the
importance of limiting observability, even if they cannot articulate ex-
actly why it is important. Children on playgrounds and at lunch tables
know it too. Certain confidences must be kept if you want to keep
playing. “More broadly, the concept of privileged information and con-
fidential communication in the professions—law and medicine, teaching
and the ministry—has the same function of insulating clients from ready
observability of their behaviors and beliefs by others in the role-set.”
[375]. Transactions between any pair in the role-set may be undermined
undermined if there was full observability across the role-set. “If the
physician or priest were free to tell all they learned about the private
lives of their clients, they could not adequately discharge their func-
tion.” No oaths are required nor must one be a de jure fiduciary to see
and be bound by the transactional demands on privacy.

Privacy is, of course, a matter of serious individual concern, but it
is not only about the individual, or even mostly about the individual,
when we are talking about law and social regulation of information.
“Privacy’ is not merely a personal predilection; it is an important
functional requirement for the effective operation of social structure.”
[375] Physicians and priests keep the confidences of their clients not
because of some natural or spiritual allegiance but because of a strictly
functional one. When maintaining that confidence no longer serves the
identified social function (such as when the client confesses to plotting
imminent and serious harm to herself or another) the requirements
of confidence weaken. As suggested by the example of the dangerous
and plotting client, sometimes the role-set functionality requires the
opposite of privacy and confidence.

Functional demands of the role-set may call for increasing observability within and among coalitions, and sometimes there are conflicting demands of observability given the multiplicity of transactions within the role-set. Hillary Rodham Clinton, like all her predecessors, no doubt in some cases found it more effective to carry out her duties Secretary of State with some degree of unobservability. If every communication in an ambassadorial back-and-forth was observable, even after the fact, then diplomatic speech would be even more obtuse than it is currently. Certain important and necessary tasks of the role cannot be effectively undertaken in full public view. In such cases, secluded face-to-face meetings might allow Clinton and her counterparty to carry out a transaction with a candor unacceptable over their larger role-sets. Same may be said about email exchanges over a private server. Yet, there is a trade-off. “Anonymous power anonymously exercised does not make for a stable structure of social relations.” (Merton at 375).

Such competing considerations will often imply an interior solution: neither full observability or complete concealment. Nor are the tradeoffs fixed. One would expect a dynamic adjustment to the optimal mix of observability as actors, interests and context change. In the sections that follow I will attempt to build up a framework for exploring this transactional approach to privacy, beginning with some basic economic and legal prescriptions. Section 2 briefly presents an analytical framing of knowledge and information using the conventional economic distinctions of “observability” and “verifiability” in the context of exchange relations. Sections 3 and 4 push against the conventional economic assumption that takes observable and verifiable knowledge and information as essentially exogenous. The key turn in these sections is to move from treating observable and verifiable information as “givens,” and to recognize them for the choices they are. When “observability” and “verifiability” are recognized as endogenous then our discourse may profitably move, as James Buchanan suggested in another context, from an analysis of “choices given constraints” to one concerning “choices of constraints.” This move is essential for establishing a clear field to lay the foundations of a theory of the information fiduciary, which is the

3cite to controversy. . .
final step, elaborated in Section 5, in deploying a transactional theory (based on a richer notion of what is observability” and “verifiability”) to the regulation of “privacy” concerns. The idea here is to invoke the notion of an information fiduciary as a meaningful response to contractual incompleteness. Specifically, contractual incompleteness over privacy terms allows a role for fiduciary principles to act as gap-fillers, where the content of the information fiduciary’s duties are determined based on what the parties would have agreed to, had they read and meaningfully assented to “privacy” terms in a hypothetical bargain. A brief summary concludes the essay.

2 Economics of Knowledge & Information

All economic approaches involving exchange between parties are grounded in a framework of knowledge and information that draws on the two basic distinctions: (i) whether knowledge and information is observable to others and (ii) whether knowledge and information is verifiable in court or by some arbiter. These distinctions suggest a 2 by 2 matrix (below) that capture the 4 key contexts in which economic agents engage in exchange.

<table>
<thead>
<tr>
<th>Verifiability</th>
<th>Observable</th>
<th>Unobservable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verifiable</td>
<td>neo-classical contracting</td>
<td>constitutional &amp; mechanism design</td>
</tr>
<tr>
<td>Unverifiable</td>
<td>relational contracting</td>
<td>second-best contracting</td>
</tr>
</tbody>
</table>
of the exchange is both fully observable to the parties and verifiable in court. For example, the parties which to trade a given tangible object (e.g., Blackacre) for tangible consideration (e.g., cash) and the exchange or its failure can be proven in court.\footnote{At the time of tender all of the qualities of the objects traded may not be observable, but this framework assumes that those qualities will eventually be revealed and are subject to verification. Hence, ordinary contracting with expressed or implied warranties is adequate for the task.} The lower left cell in the matrix (second-best contracting) depict an information structure where the sought-after subject matter is unobservable to both parties, but something sufficiently correlated with the desired object of trade is verifiable in court. The prototypical case of second-best contracting is one wherein a principal seeks some unobservable effort level from an agent, and so offers him a wage contract based on verifiable outcomes that are correlated with effort.\footnote{Inefficiencies caused by the necessary resort to the proxy for effort is what earns the principal-agent models the label “second-best” contracting.} The upper right cell in the matrix (relational contracting) depict an information structure where the sought-after subject matter of the exchange is fully observable to the parties but unverifiable in court. Courts are unable to directly enforce the desired trade here, but they may still play a role in securing an incentive regime for the parties to trade efficiently. Finally, the lower right cell in the matrix (mechanism design) depicts an information structure where the sought-after subject matter of the exchange is neither observable nor verifiable.

From this skeletal economic framing of knowledge and information, we can now see how a more informed legal perspective may add content to the structure and possibly expand the scope to enforceable exchanges. A more extended version of this draft elaborates on the domains of exchange offered above (i.e., neo-classical, second-best and relational contracting along with mechanism design) before turning to the law. Readers familiar with the literature on the economics of contracts and exchange may find the elaboration somewhat remedial, while others will no doubt see it as arcane. Both characterizations are true and for that reason the the extended treatment is omitted here [I would be happy to email the longer draft on request].
Endogeneity of Verifiability

Legal verifiability of knowledge or information is not a given feature of an exchange environment, but rather something that is determined by parties, including the court. In other words, verifiability, as a matter of law, is endogenous. Economic models tend to regard verifiability as an external, largely exogenous, constraint operating on parties and courts. Economic actors in these models exert influence over what is verifiably only through technological adaptations to the contract or the observational environment. For instance, parties may ex ante identify and include in their contracts a greater number of terms based on occurrences that can be demonstrated to courts ex post. Alternatively, the parties may invest in metering or monitoring devices (such as installing cameras or “punch clocks” or enlisting third-party observers). While these are certainly common approaches taken by parties to establish or verify their claims in court, the technological responses fail to reveal the distinctive role of law in determining “what” and “how” knowledge and information is verified. A brief review of knowledge in law will illustrate the point.

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Law uses four primary means to establish knowledge or information. These constructs overlap and often blend into each other. They are presented here as a helpful heuristic, rather than strict formal categories. First, a party may be shown to have “actual knowledge” of x if she either knows x or knows y and also that y implies x. Actual knowledge is a legal construct, which is typically established directly, such as by an admission, or indirectly, by circumstantial evidence presented before an appropriate arbiter, such as a judge, jury or arbitrator. Second, a party may be legally charged with knowledge of x if she “should know” x. Knowledge here is imposed by a duty to know x. Third, law will often assume knowledge of x by a party who “should have known” x or who “had reason to know” x. While there may be no prior duty to know x (as with a “should know” standard), knowledge of subsidiary facts and circumstances combined with ordinary intelligence or some level of sophistication or expertise can create legal knowledge of x within a party. Fourth, often a party knows x “by law” through the operation of fictions, presumptions, estoppel, effective notice and other forms of constructive knowledge. These four routes to establish (or deny) knowledge and information in law are all used to support contract enforcement. Let’s consider them in turn.

Actual knowledge is rather less like the philosopher’s “justified true belief” than knowledge that can be verified. In this regard “actual knowledge” in law and “verifiability” in conventional economic models are overlapping constructs. It is fair to say that the economic notion of verifiability relies wholly on knowledge that is observable or verifiable to the arbiter. This is true not only of actual contracts or agreements, but also hypothetical contracts as they are imagined by judges. Judges must be able to observe or verify the realized state of things in order to hypothesize about what the parties would have wanted for themselves. Judges must also be able to observe or verify the terms of interim (actual) bargains if those agreements are to be enforced. Actual knowledge is required for all economic contractarian models because without it, economists will say, a court would not know the terms of the agreements it is asked to enforce.

Knowledge established by legal duties adds something distinctive to the basic contractarian approach. Even if a court is unable to verify
the actual knowledge of a party, a legal obligation to know something is often enough for the court to treat a party as if she knew that thing. Knowledge created by a “duty to know” is common to agreements involving fiduciaries. Directors have a duty to keep abreast of the business environment of the corporate boards on which they sit. Guardians have a duty to remain informed about the welfare of their wards. Agents are not only obliged to know certain facts in order to satisfy their duty of care, they also have a duty to share those facts with principals, just as principals have duties to share certain information with agents. Agents also have a “duty to inquire” (for example, inquiries directed to sub-agents are normally required) and they are often treated as knowing that which would have followed from satisfying their inquiry duties. Additional “duties to know” may derive from a fiduciary’s expertise and special training, but it seldom ends there. A duty to know may also come out of the particular circumstances faced by fiduciaries and their beneficiaries.

Circumstances also give rise to circumstantial knowledge, which is distinct from knowledge that one “actually possesses” in law or is obliged to have (e.g., knowledge based on a strict duty to know or inquire). Persons of ordinary intelligence are held to know that which they “should have known” given the circumstances. As ordinary legal actors fiduciaries are subject to this common standard of knowledge. Moreover, a party’s (such as a merchant’s) heightened experience and expertise will often expand the scope of his or her presumed knowledge under the “should have known” standard. Additionally, knowledge based on an investor’s or fiduciary’s skill, sophistication or experience is usually incorporated in setting the standard for other duties, such as the duties of care and loyalty. A merchant, investor, or fiduciary will also be held to know that which she “had reason to know” based on what a reasonable person in her situation would have known. As usual, the reasonable person standard may be implemented in a more or less subjective manner by focusing on, or abstracting away from, what similarly situated persons would be imagined to know given the particular context.

As the standard becomes more objective it approaches the fourth means of establishing knowledge in law. The fourth category, involving
fictions, presumptions, estoppel and so on, is a capacious one with many applications in the law of contracts. Legal construction here operates significantly to manage reliance on what the parties to the interaction believe about the knowledge of each other. Constructive knowledge in this vein tends to discourage exploitive coalitions and unjust, even if unintended, arbitrage among parties. For example, the agency law rule presuming that the principal knows what the agent knows—e.g., “[n]otice of a fact that an agent knows or has reason to know is imputed to the principal,” and “notification given to or by an agent is effective as notice to or by the principal”—protects third parties from negligent or scheming principals.\footnote{Willful ignorance for unfair advantage is also circumvented by rules calling on agents to disclose relevant facts. Fiduciary law also dissuades exploitive coalitions between agents and third parties by imposing duties of confidence over information concerning principals.}

Sometime courts will refuse to “recognize” information or knowledge that could be proven as a means of enforcing an agreement or promise. By denying a party from introducing evidence to establish an actual belief of fact, courts effectively enforce transactions through a variety of estoppel doctrines (including, but not limited to promissory estoppel). On the other hand, a court may find cognizable (and therefore enforce) an agreement based on information that is both unobservable and otherwise unverifiable. Economists typically assume that “effort” is unobservable and therefore unverifiable (and non-contractable), but everyday courts enforce “best efforts” clauses that serve as a basis of contract agreements. When we think about the full range of tools employed by courts to construct knowledge and information for the purposes of enforcing (or denying enforcement of) agreements, broader domain of contractibility is possible than that seen from a strictly economic perspective. Law can and often does create the knowledge it needs. Verifiability is endogenous in law.
4 Endogeneity of Observability

Just as verifiability is endogenous, so too is observability. Economists first started to write about observable information in the context of incomplete contracts in the 1980s.\(^{10}\) The approach taken here assumes that knowledge or information is shared among parties (“observable information”) or not at all (“private information”). Little attention is paid to the mechanism through which law and social practice have evolved or may be structured to facilitate or limit greater observability. An earlier sociological literature, however—beginning with the German theorist, Georg Simmel, and later develop by Robert Merton—takes “observability” not as given, but as a feature of the environment subject to change through law and social rules.\(^{11}\) Take, for example, protected privileged information and confidential communication between some fiduciaries and their beneficiary. There are many social and legal rules that constrain or facilitate the possibility of what’s observable.\(^{12}\) Moreover, as illustrated in the remainder of this section, it is important to emphasize that observability manifests itself in distinct ways, which will have suggestive implicates for the notion of the information fiduciary.


\(^{12}\) See e.g., Eyal Benvenisti & Amichai Cohen, War is Governance: Explaining the Logic of the Laws of War From a Principal-Agent Perspective, 112 Mich. L. Rev. 1363 (2014) (arguing that state may enlist the laws of international armed conflict as a means of making the conduct of the state's own military apparatus more observable (and thereby controllable) by enlisting known standards of appropriate conduct and inviting the international community to monitor and report to state, or others, about the conduct of its military officials.)
Take some party, $i$, who may observe both the identity of a person, $j$, and some action or aspect, $x$, associated with that person. Assume the identity, $j$, and action or aspect, $x$, of this person is unobservable to the rest of the world.\(^{13}\) This general state of unobservability regarding the rest of the world, still allows for various forms of observability between the party, $i$, and the person of interest, $j$. For instance, when the party, $i$ and only that party, observes the identity and action or aspect of the person, we may characterize the resulting information structure as “confidentiality.”\(^{14}\) Between the person and the observe, $i$, there are three other forms observability may take. First, “anonymity” results when $i$ observes an action or aspect of another person, but not the identity of that that person. Second, when $i$ observes the person’s identity but not some relevant aspect (or actions) of that person, we might call that information structure one of “privacy” with respect to the aspect (or action) at issue. Finally, when $i$, along with the rest of the world, can observe neither the identity nor relevant action or aspect of the person, we will say she, $j$, has achieved a state of “obscurity.”

\[\begin{array}{|c|c|c|}
\hline
\text{identity of} & \text{confidentiality} & \text{anonymity} \\
\text{the person} & \text{observable} & \text{unobservable} \\
\text{observable} & \text{privacy} & \text{obscurity} \\
\text{unobservable} & \text{anonymizable} & \text{unobservability} \\
\hline
\end{array}\]

Few people are motivated by a desire for obscurity. Most people want a kind of observability regarding the other party (and rest of the world) that is best described in terms of anonymity, confidentiality or

\(^{13}\)While the assumption concerning what is observable to the rest of the world may be relaxed without loss of generality to the arguments of this section, I am less confident in my ability to preserve the clarity and immediacy of the claims without it.

\(^{14}\)The state of confidentiality assumes the relevant knowledge is not only possessed by each party, $i$ and $j$, but that it is also known to be such by both parties. The point is clarified further below.
privacy. Moreover, they are not likely to want the same kind of unobservability across all $x \in X$. Sometimes and in some contexts they will want “privacy.” Other contexts will call for “confidentiality,” and others still for “anonymity.” Given these preferences, law and legal rules may facilitate different choices among these various forms of “observability,” as well as different forms of ”verifiability.” Yet even these additional forms of observability do not exhaust the set of possibilities.

Imagine now that it is the other party, $i$, who always knows (i.e., observes) both the identity and actions or aspects, $\{j, x\}$, of the person, $j$, who herself may or may not be able to make the same observations. The matrix below shows the possibilities. When $j$ observes and can connect her identity to observed actions or aspects of her person, her state may be characterized as self-awareness. If we are generally comfortable with the idea of $j$’s self-awareness, our disposition toward this state of affairs often turns on the question of ‘how did $i$ come to know $\{j, x\}$’ and ‘does $j$ know that $i$ knows $\{j, x\}$?’ A state of “confidentiality,” as described in the previous matrix, may exist if the knowledge is shared between them, but this needn’t be the case.

<table>
<thead>
<tr>
<th>Identity of the Person</th>
<th>Observable</th>
<th>Unobservable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observable Action or Aspect of the Person</td>
<td>Self-awareness</td>
<td>Fugue-like</td>
</tr>
<tr>
<td>Unobservable Action or Aspect of the Person</td>
<td>Ignorance</td>
<td>Clueless</td>
</tr>
</tbody>
</table>

It is tempting to assume that most people know most things.\footnote{That is, confidentiality may result when $i$ and $j$ both know $\{j, x\}$, and $j$ knows that $i$ knows $\{j, x\}$ and vice versa (rendering mutual knowledge) or even higher levels of shared knowledge approaching common knowledge. Additionally, some share understanding between $i$ and $j$ that this information ought to be kept in some kind of trust should be expected to create a state of confidentiality.}

\footnote{Individual, $j$, may be self-aware without know that $i$ has the same awareness concerning $j$.}
about themselves, but this knowledge should not be taken for granted. Coaches, doctors, psychologists and teachers among other careful observers, not to mention computer tracking programs, often pick-up on features of individual behavior and preference that are unknown to the individual. When \( j \) observes her identity but not some relevant associated actions or aspects (or if she is unable to connect these actions or aspects to her identity), then she is in a state of “ignorance.” Alternatively, she may be in a fugue-like state where she is aware of certain aspects or actions associated with her person presently, but is unaware of her own identity. A fugue state is typically characterized by temporary loss of awareness of one’s identity, but such an extreme clinical condition is not required for the argument. The key here is that \( j \) is unable to connect her identity with some action or aspect of her person which is presently observable to her. Lastly, when \( j \) observes neither her own identity or relevant associated actions or aspects, we shall call her “clueless,” for lack of a better term.

With this characterization of the ways in which one party may come to know or observe some information about a person—information which is not generally known or knowable to the rest of the world—we may perhaps speak with more precision about the information fiduciary. Yet while the boxes above may allow us to speak with greater precision, they provide no answers concerning what turns a party into an information fiduciary. That is to say, simply knowing something about someone (even assuming no one else knows) is never sufficient to cause a party to become an information fiduciary. No box strictly implies any fiduciary obligations. Should any such obligations follow it will not be because of what a party knows, but rather due to the relational context through which she came to know, observe or be so informed. In other words, knowledge in the context of a relationship is the key to unlocking the information fiduciary blackbox.

5 The Information Fiduciary

Knowledge within the fiduciary context is highly relational. A relational view of knowledge reveals that it is not simply the know-how
that the fiduciary brings to the relationship that matters, but also that knowledge which is acquired in the context of the relationship. Tacit knowledge produced under “local conditions” and in the “special circumstances” of the relationship accrues to “the man on the spot,” as Hayek put it. When “the man on the spot” is a fiduciary, the acquired knowledge is subject to heightened duties, including those of care, candor, confidence, and disclosure. This logic is essential for grasping fiduciary law. But even this extension does not go far enough to reveal the relatedness of knowledge in the fiduciary context. It is not merely a question of what facts, $x$, the fiduciary knows; the relational view of knowledge also concerns itself with what others know or can know about what the fiduciary knows and vice versa.

Looking at information in a relational way is familiar to economic contract theorists, who tend to be quite explicit in describing the information structure, i.e., assumptions, of their analyses. An economics framework carefully reveals what related parties know (or do not know) concerning the knowledge of others.\(^{17}\) In Sections 3 and 4, I argued that this framework could be significantly enriched by acknowledging the role of law in creating or curbing relational knowledge. But even this richer framework tells us nothing about ownership, possession or other entitlements and obligations concerning the relational knowledge itself.\(^ {18}\) These are legal determinations over the object (the relational knowledge) already in existence or so deemed, as a matter of law. Yet, as an economic matter, these legal issues must be addressed because they will influence the efficiency of investment and allocation regarding

\(^{17}\)Four basic modes are typically employed, which are illustrated well with the triad of principal ($P$), agent ($A$), and third party ($T$). First, knowledge of $x$ is said to be “common knowledge” among the parties if $P$, $A$, and $T$ all know $x$, and each knows that the other two also know $x$, and they all know that they all know that they all know $x$, and so on ad infinitum. Second, $x$ is “verifiable” if it can be established before some relevant arbiter. Third, $x$ is “observable-but-unverifiable” if it is witnessed or known among some parties (for example, if $x$ is common knowledge between $P$ and $A$) but it cannot be established outside of that association. Fourth, $x$ is “private” information if it is known to either $P$, $A$, or $T$ (exclusively) and is neither observable nor verifiable to anyone else.

\(^{18}\)While patents, trademarks, copyrights, and general law of intellectual property can structure the ownership and distribution of patentable objects and the like, the management of relational knowledge (which is expanding faster than patentable objects and the like) must turn elsewhere. I propose fiduciary law.
knowledge. Hence, it is essential to expand the framework to include the legal entitlements of relational knowledge, particularly with regard to “privacy” concerns. Note that I place “privacy” in quotation marks here to suggest the broader conventional usage, as opposed to the narrow technical definition suggested above. In the remained of the essay, I will rely on the conventional usage and drop the quotations.

5.1 Privacy and Incomplete Contracting

In a world of complete contracts privacy law would be superfluous in regulating transactions between consenting parties. Rational parties would specify the entitlements and duties associated with all possible contingencies related to the tracking, observation, preservation, protection, storage, sharing (for a profit or otherwise) and the destruction of knowledge and information concerning either contracting party—both the knowledge and information each brought to the relationship as well as everything that developed within the context of their relationship. Court and other legal actors would have s simple and limited role in this fully-specified regulatory structure. Legal officials would implement a single response, specific performance, whenever asked to intervene by the parties.

We are far from this imagined ideal, this world of completely specified contracts. Real-world contracts are never complete in the proper sense and courts and regulators are constantly called upon to use various rules and remedies to address disputes arising from the impossibility of complete contracts.

Characterizing, at the time of contracting, the entitlements and duties associated with knowledge, which the parties themselves may not know they possess or will possess, is an insurmountable problem. Fiduciary law offers a solution. Though unable to specify \textit{ex ante} what the parties know and how to apply that knowledge in future, parties can summon the fiduciary duties (like loyalty, care, candor and confidence) to accomplish the same objective \textit{ex post}. These duties of care, candor and confidence in fiduciary law, like good faith performance and enforcement in contract law, provide behavioral guidance when agree-
ments are silent.

An agreement is silent sometimes when there are no terms specified or implied for certain contingencies. At other times we might say that an agreement is silent with regard to some contingencies notwithstanding the presence of specified terms. For example, when voluminous online privacy terms are offered without meaningful assent from the offeree (because, as the empirical and everyday evidence reveals, nobody reads those terms) it is better to view those terms as not part of a consensual exchange. Note that the problem facing contemporary counterparties is it is not simply their bounded rationality and high transactions costs they face in writing complete contracts (so-called “ink costs”), but also the prohibitive nature of reading well specified contractual terms: “think costs”.

Fiduciary law and other legal principles developed for the regulation of knowledge and information may be effectively used to supplement the necessary gaps in the actual, assented to, agreements between parties.¹⁹ Legal and economic questions about what anyone knows or can be assumed to know about the knowledge of others must regularly be addressed where fiduciaries are concerned. Duties and presumptions related to knowledge are often established to address challenges arising from tripartite interactions common to the fiduciary context. Moreover, it is not just what is known, in fact or as a matter of law, by or within the fiduciary dyad that is at issue.²⁰

¹⁹Easterbrook & Fischel made this suggestion years ago in arguing that all of fiduciary law is merely contract default terms. Though they go too far in making that claim, which is not sustainable, their basic insight is of great value in a more limited domain: We have suggested in earlier writings that the duty of loyalty is a response to the impossibility of writing contracts completely specifying the parties’ obligations. Frank H. Easterbrook & Daniel R. Fischel, Contract and Fiduciary Duty, 36 J.L. & ECON. 425, 426 (1993). “When one party hires the others knowledge and expertise, there is not much they can write down, observe Easterbrook and Fischel; thus “[i]nstead of specific undertakings, the agent assumes a duty of loyalty in pursuit of the objective and a duty of care in performance.”

²⁰The fiduciary relationship is dyadic, not merely bilateral. Law recognizes not only the rational individuals who comprise fiduciary relationships, but also the relational dyads themselves. Fiduciary law goes beyond rational individuals. Recall that some beneficiaries are not rational (i.e., Fiduciaries are often appointed to beneficiaries who lack legal capacity to act on their own behalf. While that need not
Knowledge and information (including beliefs) shared by fiduciaries and third parties often generate authority (i.e., apparent authority as well as authority by estoppel or other means) leading to liability for relatively uninformed principals and beneficiaries. Fiduciary and confidence relations are prone to all sorts of multiparty mischief to which the law must respond. Over centuries, the common law has evolved basic principles to manage this mischief. Only the technology of information management is new. The basic problems of privacy are as old as our first encounters. Let’s consider the evolved legal principles addressing these problems.

5.2 Law’s Regulation of Knowledge

Fiduciaries (such as agents, trustees, physicians, accountants, etc.) often acquire special knowledge about their beneficiaries. Sometimes fiduciaries possess even more knowledge, in certain respects, than beneficiaries possess about themselves. In addition to knowing their beneficiaries personal and otherwise private information, fiduciaries normally have or should have superior knowledge concerning the external circumstances to which this information may be put to use in the context of their relationship as well as beyond. Common law and statutory provisions provide a number of specific legal rules that promote

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\[\text{imply they are irrational (e.g., they may be rational minors) in many cases it does). Others are not individuals (beneficiaries are of all sorts; i.e., trust can be established for the benefit of a cat or a dog or an unborn child). Yet the fiduciary relationships of which they are a part remain legally cognizable and distinct from both their constitutive fiduciaries and beneficiaries. Hence, while fiduciary relationships often reflect bilateral agreements between rational individuals, those agreements only partially reflect the whole arrangement. More is exposed when third parties are present. Rules regarding the internal order of the relationship may, or may not, be fairly characterized as resulting from bilateral contracting between two rational parties (the internal order appears to be the exclusive domain of the “fiduciary as contract” argument) but when third parties are involved the dyads separate appearance becomes more visible. Nowhere is this more evident than in matters concerning knowledge among the parties.}

\[\text{In many cases, of course, the fiduciary is not more informed or knowledgeable than the beneficiary, but simply has more time or attention to spare at some given costs, or can undertake the requisite tasks with less time or concentrated attention than the beneficiary due to advantages of scope, scale or some other factor.}

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and regulate the acquisition, possession, sharing, and exploitation of such information within the fiduciary context. But not all parties who possess personal, and otherwise private, information concerning others are fiduciaries. Additionally, sometimes a fiduciary in one context acquires knowledge concerning a beneficiary in another context, where the usual duties of candor, confidentiality, disclosure, and so on are not established or less well defined. Although possessors of information in the latter context are not technically or traditionally fiduciaries, the legal and economic approach based on fiduciary/agency principles can provide useful insight into questions of ownership, residual claimancy and efficiency.

As a point of departure note that there are extant legal rules regulating the possession, sharing, and disclosure of knowledge concerning others in non-fiduciary contexts. Beyond the obvious criminal prohibitions on blackmail and other illegal uses of information, ample bases for regulating the use of knowledge concerning others may be found in ordinary common law doctrine and statutes. For example, a party may have a common law obligation to share information in order to correct a mistaken belief held by a counterparty. Confidence relationships, short of strict fiduciary relations, will also trigger some knowledge-based duties. These rules show that there is no question of whether law has a role to play managing the dispersed bits of knowledge that parties have concerning others. Of course there is a role for law. The interesting question here is whether the fiduciary approach should be exported or expanded to broader domains, and whether doing so would reveal anything distinctive about the emergent status of the “information fiduciary.”

5.3 Relational Prerequisite of the Information Fiduciary

What is an information fiduciary? An early and interesting suggestion was offered by Kenneth Laudon in 1996, when he proposed the establishment of information markets among other market-based mechanisms for managing privacy concerns in the then-upcoming millennium.
Laudon argued that “[b]ecause most people would not have the time or interest to participate directly in information markets, a role would emerge for information fiduciaries, or agents acting on their behalf who assume certain legal responsibilities.” He envisioned that beneficiaries would hand over their information to agents for management. “Like banks, they [the information fiduciaries] would accept deposits of information from depositors and seek to maximize the return on sales of that information.” Laudon’s vision presumes a kind of possession or control of information by those who would “deposit” it with their agents, which does not quite capture contemporary privacy concerns involving scores of actors, private and public, managing and manipulating the personal information of others without assuming any obvious legal responsibilities.

Rather than looking to the market as a useful mechanism to inculcate proactive information fiduciaries, Neil Richards, has focused on the failures of market transactions in arguing for an information fiduciary form a more defensive stance. “[W]e do not rely merely on market forces and goodwill to mandate confidentiality from our lawyers or librarians,” argues Richards, so why should we trust the market to discipline Amazon and other aggregators of personal and otherwise private information? Richards would apply the duties of lawyers, accountants, and other traditional agents who handle our personal information to new and novel handlers of such data, like search engines and ISPs.

A more complete conception of the information fiduciary would incorporate both the affirmative and defensive positions suggested by Laudon and Richards. Moreover, this conception would move beyond the idea that the parties come to the relationship fully possessed of knowledge and information that must be “deposited with” or “pro-

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23 Laudon at n. 46
25 Just as we have recognized in the past that certain professionals were fiduciaries of our information, so too in the Age of Information should we expand our definition to include bookstores, search engines, ISPs and providers of physical and streamed video.” Neil M Richards, “The Perils of Social Reading,” 101 Georgetown L.J. 689 at 724 (2013).
tected by” the information fiduciary. Knowledge and information are often produced by or in virtue of a relationship. It is the nature of the relationship that is the key factor in determining the duties, if any, that are owed with respect to the knowledge and information between the parties.

Simply possessing some otherwise private knowledge concerning another party is never sufficient to determine the obligations that one has with respect to that information. We must always look to the underlying relationship to discern those duties. Public law will sometimes fill-in the content of these duties, but only after the nature of the underlying relationship is clear. For example, criminal law typically prohibits blackmail based on threats to “go public” with embarrassing or shameful information. However, when the blackmailer is a victim of sexual assault, threatening an offender with public disclosure unless he pays a specified sum, the law will sometimes enforce such otherwise prohibited transactions (with theories of restitution or corrective justice in the backdrop) due to the nature of the relationship between the parties. Public or statutory law, including but not only constitutional law, criminal law as well as securities law, will often provide content for the duties of the “information fiduciary” once the nature of the relevant relationship is established.

Private law, including contract, property and tort among other bodies of law, may also establish the unspecified duties of individuals who possess otherwise private knowledge concerning others. Yet, again, it is not the mere possession of that knowledge, but the nature of the underlying relationship that will be determinative. Take, for instance, the recent scandal concerning the ubiquitous Bloomberg terminal cluttering desks of financial brokers worldwide. When workers at companies like Goldman Sachs and JP Morgan logged in and out of their terminals that information was observed and recorded by Bloomberg LP. Reporters in the news media division of Bloomberg LP then exploited this information to track the comings and goings of financial executives and inform their reporting to the great advantage of the news division.26 One could argue that the reporters became

26It was argued that Bloomberg reporters scooped the competition on a number of important stories as a consequence of this advantage. See Tracy Alloway, Andrew
information fiduciaries when they acquired knowledge about the financial executives on whom they were reporting based on a relationship of trust and confidence that the executives had with Bloomberg LP. The reporters were not fiduciaries to the financial executives per se, they simply acquired certain duties with respect to the knowledge they gained as a consequence of the relationship between the executives and Bloomberg LP.\(^{27}\)

### 6 Conclusion

An incomplete contracting perspective can usefully inform our thinking about the regulation of privacy concerns. Key to this perspective is an appreciation of the nature of the relationship between the parties, which needn’t be contractual. Knowledge and information are often produced by or in virtue of a relationship, which could be regulated by various areas of law. Hence, even though we depart from an incomplete contracts perspective, the idea of an “information fiduciary” is not constrained or informed solely by contract law, or even fiduciary law for that matter, although fiduciary principles would clearly play a disproportionate role.\(^ {28}\) An information fiduciary is simply someone who is deemed to hold or possess knowledge or information as a fiduciary, even absent any contractual duty or other strictly legal relation.

Easy to state; hard to implement. The difficult task is determining what makes someone an information fiduciary as opposed to a mere

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\(^{27}\) An analogous situation exists in the context of insider trading, specifically concerning the constructive insider. For example, when a company hires a law firm to represent it, the lawyers at the law firms (even those ones who are not assigned to the matter concerning the hiring company) become constructive insiders of the company and are subject to the same trading rules as the company’s fiduciaries. See dicta in *United States v O’Hagan*, 521 US 642, 1997.

\(^{28}\) Fiduciaries, across many contexts, have not only duties of confidentiality and disclosure, but also duties to inquire, to inform, to speak with candor and other knowledge-based obligations and presumptions. The entire framework of knowledge in the fiduciary context would potentially apply to the information fiduciary.
possessor of information in one’s own right. Knowing some otherwise private or personal information about another individual could not be sufficient to convert someone into a fiduciary. Only when someone possesses information pertinent to another while in a relation of trust or confidence with that other, could duties with respect to that knowledge arise, causing the information possessor to be treated as a fiduciary. In other words, the information must be connected to a relationship in an appropriate way. But this conclusion is just another way of posing the essential question; it is the starting point of the analysis.