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Privacy

Information Technology, Privacy, and the Protection of Personal Data

The Scope of Personal Data and Processing

Information technology enables the generation, storage, and processing of vast quantities of data. Search engines, satellites, sensor networks, scientists, security agencies, marketers, and database managers process terabytes of data every day.

A substantial portion of this data is about persons—covering their characteristics, thoughts, movements, behavior, communications, and preferences—or can be used to generate such data.

Historical and Technical Constraints on Access

All countries and cultures, past and present, have constrained access to specific types of personal data. These constraints include:

- Etiquettes
- Customs
- Artifacts
- Technologies
- Laws
- Combinations thereof

These mechanisms prevent or proscribe the use or dissemination of personal information. Examples serving this purpose include: walls, curtains, doors, veils, sealed envelopes, sunglasses, clothes, locked cabinets, privacy laws, secure databases, cryptographic keys, and passwords.

Defining Raw Data, Information, and Knowledge

There is a widely accepted convention that distinguishes between:

- **Data:** Raw data.
- **Information:** Meaningful data.
- **Knowledge**.

The main concern here is with **data**, which is the raw material that can be interpreted by various methods and tools to serve different purposes. Even when data cannot be assigned meaning (due to quantity or difficulty in interpretation), it still makes sense to protect them because they may become meaningful when new tools and techniques are applied or when combined with other data.

Ethical Issues and the Concept of Privacy

Ethical issues regarding information about persons are typically cast in terms of *privacy*. Privacy is construed as:

- A need
- A right
- A condition
- An aspect of human dignity

Privacy is sometimes considered intrinsically valuable, or its value may derive from other sources, such as being conducive to autonomy or freedom.

While there is consensus among scholars that privacy is important, it is also widely agreed that privacy is **vague, fuzzy, and hard to explicate or pin down**. The quest for the most adequate moral justification for a right to privacy has seen little agreement.

Public Positions on Privacy

In public debates at the beginning of the twenty-first century, there are roughly three positions:

Position 1: Stop Worrying (The Data Abundance View)

This view suggests that worrying about privacy is unnecessary because so much personal information is available. If one bothered to make the effort, one could know almost everything about everyone.

- Data about users are spawned by every credit card payment, Internet search, mobile telephone call, and movement of a tagged object.
- "Our life worlds have turned into ambient intelligent environments" that soak up, process, and disseminate personal data.
- The sheer quantity of information makes the idea of constraining the flow based on moral considerations, laws, and regulations absurd.

Position 2: Undesirable Privacy (The Communitarian View)

This view holds that high levels of individual privacy, even if technically feasible, are undesirable, and Western democracies cannot afford them. Proponents often argue along utilitarian lines.

- Modern societies involve large numbers of free-moving individuals, high degrees of mobility, complexity, and anonymity.
- Anonymity facilitates **free-riding** in the form of criminal behavior, fraud, and tax evasion.
- To mitigate the adverse effects of anonymity and mobility, governments require access to information about individuals.
- It is assumed that communities benefit significantly from knowledge about their members.
- Communitarians emphasize that privacy offers anonymity that facilitates antisocial behavior, contrasting with liberalists who emphasize the individual’s right to privacy.
- Amitai Etzioni, a proponent, argues that "giving up some measure of privacy is exactly what the common good requires".

Position 3: Protection is Morally Required (The Liberal View)

This view argues that there are good moral reasons to protect individuals from Big Brother, data-greedy companies, and snooping fellow citizens.

- Good moral reasons justify a potent regime of individual rights that constrains access to information about individuals.
- Liberalism is "plagued by free-rider problems," whereas Communitarianism is "the dream of a perfect free-riderlessness".
- Liberals “want to leave each other some space”.

The Problem with Conceptualizing Privacy

The controversy concerning privacy has grown ever since the debate was triggered by Warren and Brandeis’ article ‘The Right to Privacy’.

The author proposes proceeding without seeking the "best conceptual analysis" of ‘privacy’ because one can still articulate the concern about un-volunteered access to personal information.

Privacy Research vs. Epistemology

The pursuit of a comprehensive definition of privacy resembles the philosophical quest for the necessary and sufficient conditions of knowledge, which has failed to yield a noncontroversial conclusion.

However, unlike the philosophical study of knowledge (where there are few hotly debated practical moral issues), privacy research faces **urgent and hard privacy problems in practice**.

- We need to justify legal, practical, technical, and political decisions daily.
- Privacy issues are high on political agendas and intensely debated across many fields, including software engineering, healthcare, and criminal justice.
- The situation requires us to "repair our boat at sea" rather than studying it indefinitely out of the water.

Reframing the Moral Problem

The focus on the concept of *privacy* often obfuscates practical solutions and places the discussion in the middle of the intractable liberal vs. communitarian controversy.

The proposed shift is to address the central question head-on: **Why should we protect personal data; what moral reasons do we have to protect personal data?**. This is analogous to asking why we should protect entities like nuclear reactors, medieval manuscripts, babies, and bird sanctuaries, where different rationales justify constraining access and stipulating behavior.

1. Why Personal Data Will Always Be In Demand

Personal data will always be in demand, ensuring that protection questions will persist. The logic driving the accumulation of personal data is understood by distinguishing between actors (government vs. nongovernmental parties) and the primary interest served (data subject vs. others).

Four Types of Reasons for Data Collection

Type 1: Government Serving Citizens Better (Interest of Data Subject)

Government agencies seek data access to provide better services.

- **Action:** Proactive service delivery, such as alerting citizens to benefits they are entitled to.
- **Example:** In Scandinavian countries, citizens appear comfortable with the government finding out details about their individual lives for welfare purposes.

Type 2: Commercial Parties Serving Customers Better (Interest of Data Subject)

Commercial parties gather data to fine-tune propositions to customer preferences and needs.

- Consumer attention is scarce, requiring commercial proposals to raise immediate interest.
- Many customers willingly volunteer information in exchange for bargains.

Type 3: Commercial/Private Prudential Reasons (Interest of Others)

Companies collect data about customers, partners, and employees for strictly prudential reasons, not concerned with the data subjects' interests.

- **Risk Management:** Private transactions present risks of exploitation (e.g., contract breaking, buying without paying). Adequate information (like credit risks or commercial past performance) helps gauge transaction risks.
- **Building Trust:** Re-identification of partners is a necessary condition for building a reliable track record. Computer applications concerning identity and relevant properties are widely used to counter the problem of reliable identification and authentication.
- **Principal–Agent Theory:** Employers (Principals) monitor employees (Agents) to ensure they are performing their duties when out of sight, incurring "agent cost". This explains the "incredible explosion" of workplace monitoring via logging, CCTV cameras, smart badges, and black boxes in cars.

Type 4: Government Managing Public Goods (Interest of Others/Public Good)

Government’s central task includes the production and maintenance of public goods.

- **The Free Rider Problem:** A central management problem is excluding those who benefit from public goods without contributing to their maintenance (free riders).
- **Solution:** Free riders thrive only if they are anonymous. Identifying information is helpful because if they can be identified, the government can affect their pay-off matrix and self-interested calculation.

Distinguishing Grievances About Data Collection

When individuals object to data gathering, there are different objects of concern, illustrated by the analogy of a lonely diner in a restaurant where another man sits too close.

Grievance Type 1: The Right to Be Left Alone

The objection is not about the observer's *own* personal data, but what *he* is learning about the intruder.

- The observer does not want to acquire information (e.g., hearing the order, smelling aftershave, hearing the phone call).
- The choice not to learn anything is preempted by the intruder’s decision.

- A perceptual relation is imposed without consent, making the setting a source of data about the intruder.
- This falls under the right **"to be left alone"**.

Grievance Type 2: Informational Privacy (Acquisition of My Data)

The objection is that the intruder is now in a position to acquire data about *me* (e.g., what I wore, what I ate) and potentially pass it on or record it.

- This concern falls under **informational privacy** or **tort privacy**.
- In Sandel's classification, this is the **old privacy**, which covers data protection.

Grievance Type 3: Heightened Self-Awareness

Even if the onlooker would not store or record the information, the individual may still feel uncomfortable.

- The imposed perceptual relationship heightens self-awareness.
- It forces an external—and not freely chosen—perspective upon the individual.
- This also falls under **informational privacy** or **tort privacy**.

Note: Data protection focuses first and foremost on the second and third types of grievances. This is distinct from **decisional or constitutional privacy** (the *new privacy*), which relates to decisions without government interference, such as choices regarding abortion or sexual behavior.

2. Personal Data

To protect X, one must know what X is.

Characteristics of Personal Data

1. **Multiple-realizable:** Personal data can be stored in different places and media.
2. **Generation:** Data can be generated and acquired by various information processors, whether human, artificial (silicon-based), or a combination.
3. **Methods:** Data can be generated using various methods, including monitoring by cameras, binoculars, scanners tracking RFID tags, overhearing discussions, or trawling databases.
4. **Context:** Data lack meaning separate from the context in which they are used.

The Role of Identification and Guises

A claim $C2$ ('Y is in Restaurant A at time $t1$') presents information about Y in isolation, but when combined with $C1$ ('X is in restaurant A at time $t1$'), it provides information about X that was not contained in $C1$.

Individuals are introduced and known under **descriptions** or **modes of presentation** ('guises'). Data may be stored in different mental files (m1 and m2) because there were different representations of the person, preventing the transfer of beliefs unless it is known that m1 = m2.

Unambiguous recognition and **(re)identification** of people are crucial for human life. Modern nation states rely on the ability to identify individuals in a straightforward referential sense (allowing for arrests and imprisonment).

Illustration: The Tax Evader Example

The practical importance of identification is highlighted by tax fraud, where accounts are held under different names, blocking tax access because the names are noninterchangeable.

```
1. The tax authorities know that taxpayer x has more than $1,000,000 in the
bank
2. Taxpayer x also has an additional $500,000 in an account under the false
name ‘y’
3. Since x = y, the tax authorities know that y has more than $1,000,000 in
the bank
```

Statement (3) is false, even though ‘x’ and ‘y’ refer to the same tax evader. They are not interchangeable because each name is associated with a **different sense**—a different way in which the reference is given.

The Legal Definition vs. The Broad Scope

The ethics, law, and technology of data protection require articulating what counts as personal data.

The influential **EU data-protection laws (Directive 95/46/EC)** define personal data as:

```
“personal data” shall mean any information relating to an identified or
identifiable natural person (“data subject”); an identifiable person is one
who can be identified, directly or indirectly, in particular by reference
to an identification number or to one or more factors specific to his
physical, physiological, mental, economic, cultural or social identity.
```

Referential vs. Attributive Use

There is a basic ambiguity concerning identification relevant to ethical discussions, based on Keith Donellan’s distinction:

1. **Referential Use:** Having a particular person in mind (e.g., 'The man sipping his whisky,' pointing to someone). The description is *about* that person, even if the description is factually mistaken (e.g., drinking apple juice instead of whisky).
2. **Attributive Use:** Not having a particular individual in mind, but thinking about the person satisfying the description, "whoever he is" (e.g., ‘The owner of a blue Ford living in postal code area 2345’).

Both uses figure in epistemic and doxastic strategies to collect information and expand knowledge about people. Both represent **identity-relevant information**.

The history of a criminal investigation involves filling a file on a person (e.g., 'the murderer of Kennedy') under an initial, possibly non-descript identification (attributive use) until it leads to a physical encounter.

The Need for a Broader Interpretation

The EU data-protection laws rely on a **referential reading** of 'personal data' and 'identifiability,' which results in an **unduly narrow construal** of moral constraints.

- Attributively used descriptions could go unprotected.
- This is a major weakness because large amounts of data (used in marketing and homeland security) are used attributively and serve as stepping stones to find out about people.
- A file built using many attributively used descriptions could suddenly become uniquely referring upon the addition of one piece of information.

Given the prominence of identity management technology, RFID technology, profiling, and data mining, the object of protection needs to be redefined based on the broader notion of **'identity relevant information'** (encompassing both referential and attributive data), rather than solely referentially used descriptions.

3. Moral Reasons for Protecting Personal Data

The moral justification for constraining actions (generation, acquisition, processing, and dissemination) concerning identity-relevant information rests on four types of moral reasons. These reasons justify legal regimes, such as the EU and OECD principles, which give individuals autonomy and control over their data.

3.1. Information-Based Harm

This reason concerns the prevention of harm inflicted using personal data. Information is highly useful for criminals.

Some harms could not be inflicted, or would be much more difficult, if certain information were unavailable. This category of harm is called **'information-based harm'**.

Examples of Information-Based Harm:

- Cybercriminals and hackers use databases and the Internet to prepare crimes.
- **Identity theft and identity fraud** pose a high risk of financial damages and emotional distress, potentially leading to plundered bank accounts or irreversibly tainted credit reports.
- Stalkers and rapists use online databases to track victims.
- Harm due to **classification** (e.g., being classified as Muslim diminishing job chances).
- **Reputational harm** caused by the systematic corrosion of a career via the piecemeal release of selected information.
- **Accumulative information-based harm** resulting from releasing snippets of identity-relevant information that eventually create a comprehensive picture of a person.

Justification:

- Protecting identifying information diminishes the likelihood of harm, analogous to restricting access to firearms.
- Identity-relevant information in information societies resembles guns and ammunition.
- Constraining access to information that could cause information-based harm is justified by **Mill's Harm Principle**.
- **Historical lesson:** The insufficient protection of personal data in the Netherlands during WWII allowed Nazis to target and deport Jews using population registration.

3.2. Informational Inequality

This reason focuses on ensuring **equality and fairness** in the trading of identity information.

- Consumers are increasingly aware that transactional data (e.g., coffee purchase information) are generated and added to their file.
- Consumers may feel they can *sell* this information in exchange for bargains or convenience.
- Many privacy concerns are resolved through *quid pro quo* practices and private contracts.

The Problem:

- Not all consumers are aware of their economic opportunities regarding their data.
- If aware, consumers may not be in a position to trade their data in a transparent and fair market environment to get a fair price.
- The use of RFID chips, cross-domain profiling, and dynamic pricing may facilitate **price discrimination**.
- Consumers often do not understand the full implications of consenting to the use of their data.

Solution: Constraints on the flow of personal data are needed to guarantee **equality of arms**, **transparency**, and a **fair market** for identity-relevant information as a commodity.

3.3. Informational Injustice

This reason is derived from Michael Walzer's work on distributive justice and separate spheres.

Walzer's Spheres of Justice:

- Goods lack natural meaning; their meaning comes from sociocultural construction.
- Different spheres (e.g., medical, political, commercial) allocate goods (treatment, office, money) based on distinct criteria (need, democratic election, free exchange).
- **Injustice** occurs when one good becomes **dominant**—when possessing it allows command over a wide range of other goods in different spheres (e.g., money buying votes or preferential medical care).
- To prevent dominance and tyranny, the **'art of separation'** must be practiced, establishing **'blocked exchanges'** between spheres. This guarantees **'complex equality'**.

Application to Information:

- The meaning and value of information are **local**. Allocation schemes should accommodate local *meanings* and be associated with specific spheres.

The Violation:

- People accept the use of their medical data for strictly *medical* purposes (curing diseases) but object if those data are used to classify or disadvantage them socioeconomically, deny mortgages, or refuse political office.
- They object to **informational cross-contaminations**, even when beneficial (e.g., a doctor using library borrowing history, or a librarian using medical records).

Definition of Informational Injustice: Disrespect for the boundaries of **'spheres of justice'** or **'spheres of access'**. A privacy violation is often more adequately construed as the morally inappropriate transfer of personal data across these separate spheres.

Implementation Methods:

- **Chinese Walls:** Software protections separate public tasks (e.g., social security) outsourced to commercial entities (e.g., banks) from their commercial branches, implementing a Walzerian *blocked exchange*.
- **Purpose Specification and Use Limitation:** Incorporated in legal regimes, this ensures information is used only within the area for which informed consent was given.
- **Contextual Integrity:** Helen Nissenbaum uses this term to refer to these constraints, maintained when **norms of appropriateness** and **norms of flow or distribution** are upheld.

Technical Specification of Boundaries:

- A sphere boundary can be reconstructed using a list of **deontic statements** defining which actions with data are permitted or obligatory.
- In software engineering, this requires a fine-grained **authorization matrix** and **role-based access management scheme**.
- **Example:** Deciding whether a janitor can print electronic patient records, or if a nurse can change lab tests, addresses privacy issues in detail.

3.4. Moral Autonomy and Moral Identification

This reason, **moral autonomy**, refers to the capacity to shape one’s own moral biography and self-presentation.

Self-Presentation and Shame:

- Moral persons are engaged in **self-presentation** and have a "fundamental interest in being recognized as a self-presenting creature".
- Shame associated with privacy failures is often about the **disqualification of the person** for failing to manage their public face, spoiling their cultivated identity. The realm of privacy is a central arena for threats to one’s standing as a social agent.

The Heteronomous Condition:

- Publicly available information facilitates beliefs and judgments about an individual.
- Knowledge or suspicion of these judgments can radically affect the individual's self-view and induce behavioral changes, potentially leading to "the most heteronomous condition imaginable".
- **Stereotyping** preempts the individual's choice to present themselves.

Experiments in Living:

- Modern individuals, confronting diverse audiences and volatile environments, feel that the rigging of their moral identity by public opinion is an obstacle to **‘experiments in living’**.
- Privacy creates a "time out from social morality".
- We choose our identities and make those choices from heterogeneous data.

Justification for Constraints:

- The person is conceived as morally autonomous—the author and experimentator of their own moral career.
- This justifies constraining others' attempts to engineer or shape identity through stereotyping or identity-management tools.

- Data-protection laws provide protection against the **fixation of one's moral identity by others** by requiring informed consent.

Knowledge by Description vs. Acquaintance:

- Factual knowledge of another person is always **knowledge by description**.
- The data subject is the *only* one **acquainted** with their associated thoughts, desires, emotions, and aspirations. Outsiders can only approximate this self-understanding.

Moral Identification (Williams):

- Respecting a person involves **'moral identification'**.
- The **human approach** requires regarding a person as having a professional title (e.g., 'miner') willingly or unwillingly, with pride or shame, rather than solely under that professional title (the technical attitude).
- One should try to see the world (including the label) from the person's point of view.
- *Moral identification* requires knowledge of the data subject's point of view and concern with what it is like to live that life.

The Limitation of Data:

- Simple identifications based on data fail to accept and respect the individual because they cannot match the identity experienced by the data subject.
- The identity is experienced as a **dynamic moral project** capable of improvement, and external management risks a "premature fixation" of this project.
- We demand **epistemic modesty** from others regarding claims to know us, acknowledging that we have inaccessible qualitative aspects of private mental states.
- The data subject views themself not as a fixed reality (*sum* or "I am"), but as something becoming (*sursum* or "higher").
- Respect for privacy thus has an **epistemic dimension**, acknowledging the impossibility of knowing other persons as they know and experience themselves.

Conclusion

Personal data must be broadly construed to include attributively used descriptions.

The four moral reasons provided for data protection are:

1. Avoiding harm.
2. Preventing exploitation in data markets.
3. Preventing inequality and discrimination (Informational Injustice).
4. Protecting Moral Autonomy.

The first three reasons can be shared by both **liberals and communitarians**. The fourth reason, Moral Autonomy, invokes the liberal self that wishes to decide its own identity. Since these reasons often overlap (over-determination), they can be invoked simultaneously in moral discussions.

This analysis facilitates potential agreement by providing three shared, weighty reasons for protection. The focus can shift from debating the definition of 'privacy' to designing implementable **deontic constraints** on personal data flows.

Privacy as Contextual Integrity

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Abstract: Overview of Contextual Integrity

The practices of **public surveillance**—including monitoring individuals in public through various media (e.g., video, data, online)—are among the least understood and most controversial challenges to privacy in the age of information technologies.

The fragmentary nature of privacy policy in the United States reflects oppositional pulls of diverse vested interests and the ambivalence of unsettled intuitions concerning mundane phenomena like shopper cards, closed-circuit television, and biometrics.

Traditional theoretical approaches to privacy yield unsatisfactory conclusions when dealing with public surveillance.

The Article posits a new construct, **"contextual integrity,"** as an alternative benchmark for privacy.

Definition of Contextual Integrity: Contextual integrity ties adequate protection for privacy to **norms of specific contexts**, demanding that information gathering and dissemination must be appropriate to that context and obey the governing norms of distribution within it.

The theory builds on the idea of **"spheres of justice,"** developed by political philosopher Michael Walzer. The Article argues that public surveillance violates a right to privacy because it violates contextual integrity, and thus constitutes **injustice and even tyranny**.

I. Introduction

Privacy is one of the most enduring social issues associated with information technologies.

Technological transformations that have fueled privacy controversies include:

1. Stand-alone computers housing massive databases of government and other large institutions.
2. The current distributed network of computers with linked information systems, such as the World Wide Web.
3. Networked mobile devices.
4. Video and radio-frequency surveillance systems.
5. Computer-enabled biometric identification.

The set of cases labeled "public surveillance" remains vexing because it drives opponents into seemingly irreconcilable stances and because traditional theoretical insights fail to clarify the controversial nature of these issues.

The Article seeks to shed light on public surveillance by:

1. Explaining why it is fundamentally irreconcilable within the **predominant framework** shaping contemporary privacy policy.
2. Positing the new concept of **contextual integrity** to explain the normative roots of uneasiness over public surveillance.

Central Contention: Contextual integrity is the appropriate benchmark of privacy.

Specific Illustrations of Public Surveillance

All three cases discussed are spurred by technological developments and their applications that **radically enhance the ability to collect, analyze, and disseminate information**.

Case 1: Public Records Online

This case involves initiatives by local, state, and federal officials to place **public records** online, making them freely available over the Internet and World Wide Web.

- **Records Included:** Arrest records, driving records, birth, death, and marriage records, public school information, property ownership, zoning and community planning records, and court records.
- **Unquestionable Purpose:** Open government.
- **Controversy/Unease:** Initiatives to move records online in their entirety cause unease among many, including government officials and advocacy organizations (e.g., the National Network to End Domestic Violence and the American Civil Liberties Union).
- **The Paradox:** Worries seem paradoxical because the records are already publicly available; moving them online is merely an administrative move toward greater efficiency.
- **Key Concern Highlighted:** Great increments in the ability to disseminate and provide access prompt disquiet, particularly when **local access gives way to global broadcast**. This worry is a contemporary version of the concern expressed by Warren and Brandeis regarding new photographic and printing technologies.

Case 2: Consumer Profiling and Data Mining

Most people in the United States are aware that virtually all commercial activities are digitally recorded and stored.

- **Digital Trails:** Actions like buying with credit cards, placing online orders, using frequent shopper cards, visiting websites, and subscribing to magazines leave digital trails stored in large databases.
- **Aggregation:** This information is shipped off and aggregated in **data warehouses** where it is organized, stored, and analyzed.
- **The "Gold":** Personal data is described as the "gold" of a new category of companies (like Axciom) that sell this information, organized sometimes by individual profiles.
- **Outcomes:** Spawning product, subscription, credit card, and mortgage offers, annoying phone solicitations, special attention at airport security, and targeted banner/pop-up advertisements.
- **Public Reaction:** Many react with indignation, even when the information is not confidential or sensitive.
- **Key Concern Highlighted:** Advances in **storage, aggregation, analysis, and extraction (mining)** of information, both online and off-line, spur questions.
- **Early Example:** The earliest protest centered on **Lotus Marketplace: Households**, a database distributed on CD-ROMs containing aggregated information about roughly 120 million individuals (including names, addresses, marital status, income, etc.). The collaborating companies, Lotus Development and Equifax Inc., backed off due to negative publicity.

Case 3: Radio Frequency Identification (RFID) Tags

This case focuses on enhanced modes of gathering information.

- **Description:** Tiny chips implanted in or attached to virtually anything (washing machines, sweaters, milk cartons, livestock, and potentially people).
- **Function:** Able to **broadcast information to radio signal scanners up to ten feet away**.
- **Promise:** Lauded for streamlining stocking, warehousing, delivery, and preventing theft/losses.
- **Privacy Concern:** Worry over a multitude of commodities disseminating information about consumers without their permission or awareness.
- **The Paradox/Question:** Why worry, since information will be gathered mainly from open or public places where the powerful radio frequency emitters would most likely be located?.
- **Other Enhanced Gathering Examples:** Automated road toll systems (EZ Pass), video surveillance, face recognition systems, web browser cookies, biometrics, and thermal imaging.

The Need for a Justificatory Framework

While public surveillance disputes can be read as political conflicts driven by opposing interests, the Article focuses on the **foundation for policy and law** rooted in moral, political, and social values.

The purpose is to articulate a **justificatory framework** that will:

1. Address specific cases (Cases 1, 2, and 3).
2. Allow these cases to serve as precedents for future disputes, thereby providing rationality to their resolution that transcends the power plays of protagonists.

Defining Terminology

- **Article's Aim:** A theoretical account of the right to privacy as it applies to **information about individual, identifiable persons** (not groups or institutions).
- **"Personal Information":** Reserved for the general sense of information about persons.

- **"Sensitive" or "Confidential":** Will indicate special categories of information for which "personal information" is sometimes used.

II. Three Principles

A search for a justificatory framework requires principles that yield reasons for general policy and case resolution. Surveying contemporary U.S. privacy policy, law, and practice reveals that **three principles dominate public deliberation**.

These three principles concern:

1. **Limiting surveillance of citizens** and use of information about them by agents of government.
2. **Restricting access to sensitive, personal, or private information.**
3. **Curtailing intrusions into places deemed private or personal.**

The Article's first part posits and discusses this three-principle framework. The final subpart of Part II explains why public surveillance is problematic for this framework, as it seems to fall **entirely outside its range of application**.

A. Principle 1: Protecting Privacy of Individuals Against Intrusive Government Agents

This principle comes into play regarding **intrusions by agents of government** accused of overzealous collection and use of personal information.

- **Foundation:** It is a special case of the general principle of protecting individuals against unacceptable **government domination**. Privacy is protected by referring to general, accepted political principles that set limits on government intrusiveness into the lives and liberty of individuals.
- **U.S. Context:** The **Constitution and Bill of Rights** provide the most significant source of principles limiting federal government powers.
- **Constitutional Amendments cited as defending privacy:** First, Third, Fourth (search and seizure), Fifth (self-incrimination), Ninth, and Fourteenth Amendments.
- **Statutory Basis:** Legal restraints also exist in state and federal statutes, peaking in the mid- to late 1960s with the increase in electronic databases.
- **Key Legislation:** The **Privacy Act of 1974** placed significant limits on federal government agencies' uses of personal information databases.
- **Underlying Momentum:** A principled commitment to **limited government powers** in the name of individual autonomy and liberty. Protecting privacy against government intrusion is viewed as an insurance policy against the emergence of totalitarianism.
- **Legacy:** The seminal 1973 report by the U.S. Department of Health, Education, and Welfare emphasized **balancing power**. Its lasting legacy, the Code of Fair Information Practices, highlights the need to protect privacy as a mechanism for **leveling the playing field** where participants have unequal starting positions.

B. Principle 2: Restricting Access to Intimate, Sensitive, or Confidential Information

This principle focuses not on the agent of intrusion, but on the **nature of information collected**. Privacy is protected when information meets societal standards of intimacy, sensitivity, or confidentiality.

- **Core Idea:** People are entitled to their secrets. The degree of sensitivity is often held as the key factor in determining a privacy violation.
- **Statutory Examples (Restrictions on explicitly identified categories of sensitive information):**
  - **Family Educational Rights and Privacy Act of 1974 (FERPA):** Protects student information.
  - **Right to Financial Privacy Act of 1978:** Accords special status to financial holdings.
  - **Video Privacy Protection Act of 1988:** Protects video rental records.
  - **Health Insurance Portability and Accountability Act of 1996 (HIPAA):** Required privacy rules for health and medical information.
- **Common Law Tort:** Recognizes privacy invasion in cases of public disclosure of embarrassing private facts or intrusion into private affairs.
- **Warren and Brandeis** were concerned with protecting information about "the private life, habits, acts, and relations of an individual".

C. Principle 3: Curtailing Intrusions into Spaces or Spheres Deemed Private or Personal

This principle relies on the ages-old idea of the **sanctity of certain spaces** or places, such as "a man's home is his castle".

- **Presumption:** It endorses a presumption in favor of people shielding themselves from the gaze of others when they are inside their private places.
- **Constitutional Expression:** The U.S. Constitution's Bill of Rights expresses this commitment in the **Third** (quartering soldiers) and **Fourth** (search and seizure) Amendments.
- **Warren and Brandeis endorsement:** They endorsed the principled sanctity of a private domain—the home—against prying government agents or any others.

Independence from Principle 2: Principles 2 and 3 are independent.

- *Example:* Spying on a person's bedroom (peeping Tom) violates Principle 3, even if only mundane information is gathered (Principle 2 is not violated).
- **Garbage Cases (Location vs. Content):** Courts consistently find people cannot claim a privacy right in their garbage unless it is placed within recognized private spaces (the "curtilage"). In *California v. Greenwood* (1988), the Supreme Court ruled there was **no reasonable expectation of privacy** in discarded items because they were left in an area suited for public inspection. This illustrates Principle 3 relevance (location) but not Principle 2 relevance (content is not inherently sensitive).
- **Variability of "Private Sphere":** Interpretations of what counts as private space vary across times, societies, and cultures.
  - *Wiretaps:* In *Olmstead v. United States* (1928), wiretapping was not a breach. In *Katz v. United States* (1967), the Court overturned this, concluding phone tapping *was* an unacceptable intrusion.
  - *Thermal Imaging:* In *Kyllo v. United States* (2001), the police use of a thermal imaging device on a suspect's home was ruled a violation of the private sphere because Justice Scalia concluded: **"[i]n the home... all details are intimate details, because the entire area is held safe from prying government eyes"**.

D. Applying the Three Principles—Some Gray Areas

The three-principle framework is a benchmark for disputes, but application is not always obvious. Difficulties lie in drawing lines, especially with new information technology applications.

- **Principle 1 Disputes (Government Latitude):** Government initiatives like the **USA PATRIOT Act** and the deployment of **Carnivore** (DCS 1000) show clashes over redrawing access boundaries into citizens' private lives. The dispute is whether proposed governmental surveillance (online and off-line) violates Principle 1.
- **Principle 2 Disputes (Sensitive Information Line-Drawing):** It is controversial whether to designate **credit headers** (names, addresses, SSNs, phone numbers) as "personal". Industry (Individual Reference Services Group) argues they are not; the Federal Trade Commission argues they are. Public records online (Case 1) raise questions about reclassifying some information as personal, deserving greater protection.
- **Principle 3 Disputes (Private Space Line-Drawing):** What counts as a private space varies. The wiretap cases (*Olmstead* to *Katz*) illustrate temporal variability.

E. The Three Principles and Public Surveillance

The challenge posed by public surveillance is unique because it falls **completely outside the scope of the normative model** defined by the three principles. Public surveillance typically involves a new technology that expands the capacity to observe people.

Why Public Surveillance is Excluded by the Three Principles:

1. It does not involve government agents seeking to expand access to citizens.
2. It does not involve the collection or disclosure of **sensitive, confidential, or personal information** (by definition, public records are public). Online profiling, while troubling, often excludes sensitive information (like credit card details).
3. It does not involve **intrusion into spaces or spheres** normally judged private or personal (RFID tracking occurs in public places).

Conclusion: According to the framework, public surveillance is determined **not to be a privacy problem**. This conclusion is at odds with popular intuition, prompting questioning of the three-principle framework.

The Weak Footing of Privacy Aversion: A conservative response treats aversion to public surveillance as a matter of **preference or taste**, not a core privacy value. This places resistance on a weak footing against countervailing claims backed by recognized rights (like free speech, action, and pursuit of wealth).

- **Reasonable Expectation of Privacy (REP):** This legal benchmark, formulated by Justice John Harlan in *Katz*, is a source of "crushing rebuttal" to preference-based complaints.
- **REP Rebuttal Applied to Public Surveillance:** When people move about and do things in public arenas, they have **implicitly yielded any expectation of privacy**. It is not reasonable to expect others not to notice or record actions in public.
- **Result:** Under the three-principle framework, there is **no prima facie concern** over placing public records online or permitting non-sensitive data aggregation, as long as a compelling reason (efficiency, profit, safety) can be offered.

III. Contextual Integrity

Contextual integrity diverges from the three-principle model, which relies on universal accounts and dichotomies (private/public, sensitive/non-sensitive).

A Central Tenet: There are **no arenas of life not governed by norms of information flow**; no spheres for which "anything goes".

- **Contexts:** Events, transactions, and activities happen in a context shaped by place, politics, convention, and cultural expectation.
- **Complexity of Life:** People move through a plurality of distinct realms (home, work, medical care, bank, etc.), and each sphere is defined by a distinct set of norms governing roles, expectations, actions, and practices.
- **Foundational Concept:** Contexts or spheres provide a platform for a normative account of privacy.

Informational Norms

Among the norms present in most contexts are ones that govern information.

The Article posits two types of informational norms:

1. **Norms of Appropriateness**
2. **Norms of Flow (or Distribution)**

Contextual integrity is maintained when both types of norms are upheld, and it is **violated** when either norm is transgressed.

A. Appropriateness

Norms of appropriateness dictate **what information about persons is fitting or appropriate to reveal** in a particular context. They circumscribe the nature of information that is allowable, expected, or demanded.

Context	Appropriate Disclosure Examples	Not Appropriate Disclosure Examples
Medical	Patient shares physical condition details with physician.	Patient shares performance at work with physician.
Friendship	Pouring over romantic entanglements.	Sharing financial standing.
Bank/Creditors	Revealing financial information.	Sharing religious affiliation.
Work	Discussing work-related goals and quality of performance.	N/A (generally, not expected to share religious affiliation with employers).
Public Place	The idea that "anything goes" is fiction. Individuals can respond "none of your business" to a stranger asking their name.	N/A

- **Variability:** Norms of appropriateness vary greatly across contexts in terms of how restrictive and explicit they are (e.g., friendship norms are open-ended; courtroom norms regulate almost every piece of information).
- **Philosophical Insight (Rachels):** Adequate privacy protection accords people the power to share information **discriminately**, allowing them to determine the nature of their relationships (e.g., doctor to patient, minister to congregant).

- **Violation by Relocation (Schoeman):** Appropriating information from one context and inserting it in another (e.g., public gay activism transferred to a private university setting) can constitute a violation of appropriateness.

B. Distribution (Flow)

Norms of flow (or distribution) govern the **movement or transfer of information** from one party to another.

- **Influence:** This idea was profoundly influenced by **Michael Walzer's pluralist theory of justice** and the concept of **complex equality**.
- **Walzer's Theory:** Society is made up of numerous distributive spheres (like employment, education, honor, etc.), each with its own unique set of norms of justice governing the distribution of social goods. **Complex equality** is achieved when goods are distributed according to different standards in different, relatively autonomous spheres.
- **Contextual Integrity and Flow:** Contextual integrity requires that the distribution, or flow, respects contextual norms of information flow.

Context	Flow Norms (Distribution Criteria)	Confidentiality/Direction
Friendship	Shared at the discretion of the subject; **bidirectional flow**.	**Confidentiality is generally the default**; arbitrary spreading is a serious breach.
Healthcare	Closer to being mandated by the physician (condition for treatment).	Flow is **not normally bidirectional**. Confidentiality is complex, dictated by law (e.g., HIPAA) regarding diagnosis, public health risk, and commercial interest.
Commercial	Customers are required to provide sufficient information (payment, address) to satisfy companies.	van den Hoven calls for "openness, transparency, participation, and notification" to secure fair contracts due to parties' unequal knowledge.

C. Change, Contextual Integrity, and Justice

Contextual integrity asserts a privacy violation when norms of appropriateness or flow are breached.

Points of Contrast with Other Theories:

1. **Context Tagging:** Personal information is always **tagged with that context** and is never "up for grabs" (unlike what other accounts might suggest for public information).
2. **Relativity:** The scope of informational norms is **always internal to a given context** (relative, non-universal).

Two Potential Worries about Contextual Integrity:

1. **Conservatism:** By using existing norms as benchmarks, it appears to endorse entrenched flows that might be deleterious and resist change, even when technology offers substantial benefits (e.g., networked search for surgeon malpractice records).
2. **Loss of Prescriptive Value:** Being tied to practice and convention, it risks losing moral authority, especially in an era of rapid technological change. Practices shift and influence conventional

expectations (e.g., air surveillance becoming common practice, ruling out a reasonable expectation of privacy, *Florida v. Riley*).

The Presumption of Status Quo: Contextual integrity sets up a **presumption in favor of the status quo**. Common practices are understood to reflect norms, and breaches are initially held to be privacy violations.

- **Walzer's Injustice/Tyranny Analogy:** Walzer asserts that distributing social goods of one sphere using criteria of another constitutes **injustice**. When goods of one sphere intrude into or dominate many others, allowing those with dominant goods to exert power, it is **tyranny**.
- **Rationale for Status Quo:** The entrenched normative framework represents a **settled rationale** that should be protected unless **powerful reasons support change**.

Evaluating Contested Cases and Change: A presumption in favor of the status quo does not rule out successful challenges. Entrenched norms are compared with novel practices and judged based on how well they promote:

1. Values and goods **internal to a given context**.
2. **Fundamental social, political, and moral values**.

Fundamental Values Served by Restrictive Norms

1. **Prevention of Informational Harms:** Unrestricted access can be severely harmful (e.g., murderer locating Rebecca Schaeffer's address via DMV records in 1989). Harms include identity theft, and placing goods like employment or insurance at risk if sensitive information (medical, criminal records, affiliations) is readily available.
2. **Informational Inequality:** Fairness is foundational. In the American context, institutions like government and financial entities wield significant power; free reign in collecting information further tips the power balance. The **Code of Fair Information Practices** defined restrictions in the name of fairness to level the playing field. Inequalities also arise in commercial transactions where individuals lack knowledge of the information's value or power to retract the arrangement.
3. **Autonomy and Freedom:** These require wise restrictions on access to personal information. Freedom from scrutiny and zones of **"relative insularity"** are necessary conditions for formulating goals, values, and self-conceptions, allowing people to experiment and decide without fear of retribution.
4. **Preservation of Important Human Relationships:** Information is key to relationships. Controlling access to personal information is a necessary condition for **friendship, intimacy, and trust** (Charles Fried). Distinctive patterns of information sharing partially define relationships (individual to spouse, boss, priest, etc.).
5. **Democracy and Other Social Values:** Privacy serves not just individual interests but **common, public, and collective purposes**. It is necessary for democracy (bolstering autonomous citizens, protecting spheres of decision-making like the voting booth). It enables the construction of "social personae" (Goffman), facilitating smoother transactional space. Protection of medical information improves public health. Profiling and data mining increase **social injustice and discrimination** against disadvantaged ethnic groups.

Countervailing Values (Supporting Free or Unconstrained Flows)

1. Freedom of speech.
2. Pursuit of wealth.

3. Efficiency.
4. Security.

D. Applying Contextual Integrity to the Three Cases

Contextual integrity recognizes a richer set of relevant parameters than the three-principle framework. Establishing a breach requires examining **governing norms of appropriateness and flow**.

Case 1: Public Records Online

- **The Breach:** The shift in placement from locally kept records (local access) to Web-accessible records (global broadcast) constitutes a **breach of entrenched norms of flow**.
- **Example (Sex Offender Records):** While actively informing neighbors about a released sex offender may be a justified alteration of distributional norms (measure of protection), placing these records online nationally seems specious for a distant citizen (e.g., Fairbanks, AK).
- **Aggregation:** Placing these records online greatly facilitates their **aggregation and analysis by third parties**.
- **Lack of Justification:** This radical alteration of availability and flow does little to address the original basis for creating public records: **public accountability of governmental agencies**.

Case 2: Consumer Profiling and Data Mining

The crucial issue is whether the action breaches contextual integrity, regardless of setting.

- **No Breach Example:** Historically, a merchant knowing what a customer purchased to provide stock accordingly was integral to the transaction. An online bookseller like Amazon.com using customer data electronically for marketing is **not a significant departure** from entrenched norms.
- **Breach Example (Appropriateness):** A grocer who bombards shoppers with questions about unrelated lifestyle choices (vacations, movies, books, schooling) **breaches norms of appropriateness**.
- **Breach Example (Flow):** A grocer providing grocery purchase information to brokers like Seisint and Axciom breaches both norms of appropriateness and **norms of flow**.

Case 3: RFID Tags

RFID tags significantly alter the **nature and distribution patterns of information**.

- **Shift in Discretion (Flow Norm Breach):** Prior to RFID, customers assumed control over information beyond the point of sale. RFID tags extend relationships and make previously unavailable information accessible to manufacturers and others.
- **Removal of Control:** If RFID tags are not designed for easy detection and disabling, **discretion is removed from the customer** and placed into the hands of information gatherers. This departure from entrenched norms triggers a necessary assessment in terms of values.

E. Contextual Integrity and Other Privacy-Centric Approaches

Developing an argument based on contextual integrity involves painstaking analysis of details. The model's strength is its ability to resolve public surveillance puzzles that defy the three-principle framework.

Contextual Integrity vs. Universal Prescriptions: While other theories frame privacy as universal prescriptions (e.g., the right to control information about oneself), contextual integrity couches its prescriptions **always within the bounds of a given context**. The universal right to control information, though capacious, is considered too blunt or possibly dogmatic from the perspective of contextual integrity.

Crucial Parameters for Contextual Integrity Analysis:

1. The context (e.g., grocery store vs. job interview).
2. Who is gathering, analyzing, and disseminating the information, and to whom.
3. The nature of the information.
4. Relationships among the various parties, and larger institutional/social circumstances.
5. The roles and capacity of third-party users to affect data subjects' lives, and their intentions.
6. Whether the practice harms subjects, interferes with self-determination, or amplifies undesirable inequalities.

- *Example (Acceptable Aggregation):* Unlike commercial mining, aggregation conducted by teachers in primary and secondary education (collecting grades to form student dossiers) is generally seen as desirable or acceptable. A school might be judged remiss if it failed to "mine" its data for categories of change reflecting on student performance.

IV. Conclusion

The Article develops a model of informational privacy based on **contextual integrity**, defined as compatibility with presiding norms of information appropriateness and distribution.

Privacy Violation Determinants: Whether a privacy violation occurs is a function of several variables:

- The nature of the situation, or context.
- The nature of the information in relation to that context.
- The roles of agents receiving information and their relationships to information subjects.
- The terms on which the information is shared by the subject.
- The terms of further dissemination.

Prescriptive Role: The model is prescriptive, intended to serve as a justificatory framework for restricting the collection, use, and dissemination of information about people.

Advantages of Contextual Integrity:

- Other normative theories frame privacy in general terms, treating context-relative qualifications as exceptions.
- Contextual integrity builds these **context-relative qualifications** directly into the informational norms, meaning privacy prescriptions vary across culture, historical period, and locale. This variation is considered a virtue because norms of privacy vary in reality.
- Protecting privacy requires investigation into relevant contextual details, demanding a grasp of concepts, social institutions, and factual knowledge of how technical innovations affect informational norms.

Responding to Violations (Walzer's Recommendations): In response to violations associated with widespread public surveillance, Michael Walzer recommends blocking certain types of **exchanges to**

preserve complex equality. This prevents the distribution principles of one sphere from intruding into others, stopping those wealthy in one sphere from spreading tyranny.

- **Legal Safeguards (Examples):** Prohibiting monetary exchanges for votes, babies, or organs; invalidating kinship as a basis for political office.

Policy and Non-Legal Means: Policy and law are not the only means of preserving contextual integrity; **norms of decency, etiquette, sociability, convention, and morality** also address appropriateness and distribution.

Call for Political Response (Codification): Contextual integrity should be codified into law, policy, and regulation when violations are:

1. Widespread and systematic (as in public surveillance).
2. Backed by strong incentives of self-interest.
3. Involve parties of radically unequal power and wealth.

Democracy and Internet

Democracy and the Internet

1. Introduction: The Benefits and Risks of the Internet for Democracy

The Internet is often considered a wonderful development for democracy.

1.1 Benefits of the Internet

The Internet provides several significant advantages:

- People can learn far more than they could before, and much faster.
- If interested in public policy issues (e.g., air quality, wages over time, motor vehicle safety, climate change), necessary information can be found in a matter of seconds.
- It allows those suspicious of the mass media to discuss issues with like-minded people, transcending geographical limitations.
- Information can be disseminated widely via email, blogs, or Web sites, acting as a great boon for democracy.

1.2 A Note of Caution: Filtering and Personalization

Despite the celebration of these benefits, a cautionary note must be raised, emphasizing the striking power provided by emerging technologies: **the growing power of consumers to 'filter' what they see**.

As a result of the Internet and other technological developments, many people are increasingly engaged in the process of **'personalization'**.

- Personalization limits exposure to topics and points of view of the user's own choosing.
- Users filter in and filter out with unprecedented powers of precision.
- Relevant Web sites and blogs are constantly being created.

1.3 Examples of Filtering Technologies

The sources provide representative examples of technologies facilitating personalization:

1. **Broadcast.com**: This platform compiled hundreds of thousands of programs so consumers can find the one that suits their fancy.
    - *Example:* A person interested in the latest fashions from France can view them twenty-four hours a day.
    - *Example:* A person from Baltimore living in Dallas can listen to WBAL, their hometown station.
2. **Sonicnet.com**: This service allows users to create their own musical universe, referred to as ‘Me Music’.
    - Me Music is described as:
        - "A place where you can listen to the music you love on the radio station YOU create…".
        - "A place where you can watch videos of your favorite artists and new artists…".
3. **Zatso.com**: This platform allows users to produce ‘a personal newscast’.
    - Its intention is to create a place "where you decide what’s news".
    - Users tell the platform "what TV news stories you’re interested in".
    - Zatso.com then designs a specific newscast based on this information.
    - From the "This is the News I Want" menu, users can choose stories with particular words/phrases or select topics (e.g., sports, weather, crime, health, government/politics, and much more).
4. **Info Xtra**: This service offers "news and entertainment that’s important to you," allowing the user to find it "without hunting through newspapers, radio and websites".
    - Personalized news, local weather, and even a daily horoscope are delivered once the user specifies what they want and when they want it.
5. **TiVo**: This television recording system is designed to give "the ultimate control over your TV viewing".
    - TiVo puts the user "at the center of your own TV network, so you’ll always have access to whatever you want, whenever you want".
    - It automatically finds and digitally records favorite programs every time they air.
    - It helps the user create "your personal TV line-up".
    - TiVo also learns the user’s tastes and can suggest other shows to record and watch based on preferences.
6. **Intertainer, Inc.**: This company provides "home entertainment services on demand," including television, music, movies, and shopping.
    - Intertainer is intended for people who want ‘total control’ and ‘personalized experiences’.
    - It is "a new way to get whatever movies, music and television you want anytime you want on your PC or TV".
7. **Excite (Search Engine)**: The CEO, George Bell, noted the effort to "lift chunks of content off other areas of our service and paste them onto your personal page so you can constantly refresh and update that ‘newspaper of me’".

- About **43 percent** of Excite's entire user database had personalized their experience.

1.4 Filtering as a Mixed Blessing

These developments make life much more convenient and, in some ways, better, as people seek to reduce exposure to uninvited noise. However, from the standpoint of democracy, filtering is a mixed blessing. Understanding this mix is necessary to gain a better sense of what constitutes a well-functioning system of free expression.

2. Requirements for a Well-Functioning System of Free Expression

The sources argue that a well-functioning system of free expression in a heterogeneous society requires something other than free, or publicly unrestricted, individual choices. It imposes two distinctive requirements:

1. **Exposure to Unanticipated Encounters**: People should be exposed to materials that they would not have chosen in advance.
    - Unanticipated encounters involve topics and points of view that people have not sought out and perhaps find quite irritating.
    - These encounters are central to democracy and even to freedom itself.
2. **Range of Common Experiences**: Many or most citizens should share a range of common experiences.
    - Without shared experiences, a heterogeneous society will find it much harder to address social problems.
    - People may even find it difficult to understand one another.

3. The Thought Experiment: Complete Individuation

To explore this issue, a thought experiment involves an apparently utopian dream of **complete individuation**, where consumers can entirely personalize (or 'customize') their own communications universe.

3.1 The Customized Communications Universe

Imagine a communications system where each person has unlimited power of individual design:

- If people want to watch news all the time, they are free to do so.
- If they dislike news and want to watch basketball in the morning and situation comedies at night, that would also be fine.
- If people care only about America and want to entirely avoid international issues, that would be simple.
- If people care only about New York, Chicago, or California, that would be simple too.
- If people want to restrict themselves to certain points of view—conservatives, moderates, liberals, socialists, vegetarians, or Nazis—it would be feasible with a simple 'point and click'.
- If people want to isolate themselves and speak only with like-minded others, that is also feasible.

3.2 The "Daily Me"

Some newspapers now allow readers to create filtered versions, containing exactly what they want and nothing more. Sites like `individual.com` and `crayon.net` offer help designing an entirely individual paper.

MIT professor Nicholas Negroponte refers to this emergence as **'the Daily Me'**.

- The "Daily Me" is a communications package that is personally designed, with components fully chosen in advance.

While the Internet greatly increases people's ability to expand their horizons, millions are using it to produce narrowness, not breadth.

3.3 Decrease in General Interest Intermediaries

Though individual choice over content existed before (e.g., choosing different newspapers or magazines based on taste), the emerging situation features a difference of degree, if not of kind.

What is different is:

1. A dramatic increase in individual control over content.
2. A corresponding decrease in the power of **general interest intermediaries**, including newspapers, magazines, and broadcasters.

General interest intermediaries, despite their problems, limitations, and biases, have historically performed important democratic functions.

3.4 Chance Encounters and the Public Street Analogy

People who rely on general interest intermediaries experience a range of chance encounters:

- Shared experience with diverse others.
- Exposure to material they did not specifically choose.

Examples of Chance Encounters:

- Reading a city newspaper might expose you to stories about Berlin, crime in Los Angeles, or innovative business practices in Tokyo, even if you wouldn't have placed them in your 'Daily Me'.
- Watching a television channel, you might see the beginning of an unchosen show after your favorite program ends.
- Reading *Time* magazine, you might come across a discussion of endangered species in Madagascar, which might interest you or affect your behavior, though you didn't seek it out.

A system where individuals lack control over the specific content they see is comparable to **a public street**. On a public street, you might encounter not only friends but also "a heterogeneous variety of people engaged in a wide array of activities (including perhaps political protests and begging)".

A risk with a system of perfect individual control is that it can reduce the importance of the **'public sphere'** and of common spaces.

- A key feature of such spaces is ensuring exposure to materials on important issues, regardless of specific choice.

- When people see materials they have not chosen, their interests and even views might change.
- At the very least, they learn more about what their fellow citizens are thinking.

4. Public (and Private) Forums

4.1 The Free Speech Principle

The popular understanding of the free speech principle is that it forbids government from 'censoring' speech it disapproves of.

- In standard cases, the government attempts to impose civil or criminal penalties on political dissent, or speech considered dangerous, libelous, or sexually explicit.
- The question is whether the government has a legitimate and sufficiently weighty basis for restricting the speech.

4.2 The Public Forum Doctrine

A central part of free speech law takes a different form and has important implications for thinking about the Internet. In the United States, the Supreme Court has held that **streets and parks must be kept open to the public for expressive activity** (*Hague v. CIO*, 307 US 496 (1939)).

- Governments are obliged to allow speech to occur freely on public streets and in public parks.
- This obligation exists even if many citizens prefer peace and quiet, or find it irritating to encounter protesters and dissidents they wish to avoid.
- The government is allowed to impose restrictions on the **'time, place, and manner'** of speech in public places.
    - *Example:* No one has a right to use fireworks and loudspeakers on public streets at midnight to complain about the size of the defense budget.
- However, time, place, and manner restrictions must be both reasonable and limited.
- Government is essentially obliged to allow speakers, regardless of their views, to use public property to convey messages of their choosing.

4.3 Functions of the Public Forum Doctrine

The public forum doctrine promotes three important functions:

1. **Access to a Wide Array of People**: Speakers can access many people who might otherwise fail to hear the message.
    - Those who use the streets and parks may learn about the substance of the argument, and the nature and intensity of views held by their fellow citizens.
    - Views might be changed, or people might become curious enough to investigate the question.
2. **Access to Specific People and Institutions with a Complaint**: Speakers can ensure their views are heard by specific institutions.
    - *Example:* If someone believes the state legislature behaved irresponsibly regarding crime or health care for children, the public forum ensures they can protest directly in front of the legislature.

3. **Increased Exposure to Diverse People and Views**: When people go to work or visit a park, they are likely to have a range of unexpected encounters (however fleeting).
    - People cannot easily wall themselves off from contentions or conditions they would not have sought out or would have chosen to avoid.
    - This doctrine tends to ensure widely shared experiences (streets and parks are public property) and exposure to diverse circumstances.
    - In a pluralistic democracy, the experience of society's diversity is an important shared experience.
    - These exposures help promote understanding and, in that sense, freedom.

4.4 General Interest Intermediaries as Public Forums

Streets and parks are inherently *local*, limiting how much can be done there. However, many of their social functions are performed by other institutions.

Society's general interest intermediaries—**newspapers, magazines, television broadcasters**—can be understood as public forums of an especially important sort.

- Above all, they expose people to new, unanticipated topics and points of view.

When reading a newspaper or magazine, one's eyes come across articles not selected in advance, and most people will read some of them.

- A reader might not know they were interested in minimum wage legislation, Somalia, or developments in Jerusalem, but a story might catch their attention.
- This applies to points of view as well: a person who abhors a certain view might still read the editorial pages and benefit from the experience.

General interest intermediaries provide a high degree of salience for a wide range of people (e.g., the front page headline or the cover story of *Newsweek*).

Television broadcasters perform similar functions, particularly through **the evening news**.

- Tuning into the evening news exposes viewers to topics they would not have chosen in advance.
- Due to its speed and immediacy, television performs these public forum-type functions even more than print media intermediaries.
- The lead story on networks defines central issues and creates a shared focus of attention for millions.
- The subsequent menu of topics creates "something like a speakers' corner beyond anything imagined in Hyde Park".

General interest intermediaries have large advantages over streets and parks because they are typically less local and much more national, even international, exposing people to questions and problems in other nations.

5. Specialization and Fragmentation

In a system with public forums and general interest intermediaries, people frequently encounter unchosen materials, providing a common framework for social experience for diverse citizens. A fragmented communications market changes this significantly.

5.1 Choosing Like-Minded Content

Many people tend to choose like-minded sites and discussion groups.

- Those committed to views on topics like gun control, abortion, or affirmative action, primarily speak with each other.
- It is exceedingly rare for a site with an identifiable point of view to link to sites with opposing views, but very common for such a site to link to like-minded sites.

The dramatic increase in options and greater customization power increases the range of actual choices.

- These choices are likely to mean that people will try to find material that makes them comfortable, or that is created by and for people like themselves—the essence of the 'Daily Me'.

While the increase in options increases variety, aggregate information, and entertainment value, there are serious risks:

- If diverse groups see/hear different points of view or focus on different topics, mutual understanding might be difficult.
- It might become hard for people to come together to solve societal problems.
- If millions listen primarily to political conservatives through conservative outlets, and millions of others listen only to people and stations with an altogether different view, problems will arise.

5.2 Group Polarization

The problem of fragmentation can be sharpened by understanding the phenomenon of **group polarization**.

Definition of Group Polarization:

> after deliberating with one another, people are likely to move toward a more extreme point in the direction to which they were previously inclined, as indicated by the median of their predeliberation judgments.

Implication for the Internet: Groups of like-minded people will end up thinking the same thing they thought before, but in a more extreme form.

Group polarization has been found in more than a dozen nations.

Examples of the Basic Phenomenon:

1. After discussion, citizens of France become more critical of the United States and its intentions regarding economic aid.
2. After discussion, whites predisposed to show racial prejudice offer more negative responses when asked whether racism by whites is responsible for conditions faced by African-Americans in American cities.
3. After discussion, whites predisposed *not* to show racial prejudice offer more positive responses to the same question.
4. A group of moderately profeminist women will become more strongly profeminist after discussion.

Consequences based on Predeliberation Judgment Paradigm:

- Those inclined to think President Clinton was a crook will become quite convinced of this point.
- Those inclined to favor more aggressive affirmative action programs will become quite extreme on the issue after talking among one another.
- Those who believe tax rates are too high will, after talking together, come to think that large, immediate tax reductions are an extremely good idea.

5.3 Balkanization and Extremism

Group polarization is highly relevant to the current communications market where groups with distinctive identities engage in within-group discussion.

If the public is **balkanized**, and different groups design their own communications packages, the consequence will be *further balkanization*:

- Group members move one another toward more extreme points aligned with their initial tendencies.
- Different deliberating groups (each consisting of like-minded people) will be driven increasingly far apart.
- Extremist groups will often become more extreme.

5.4 Explanations for Group Polarization

Two main, extensively investigated explanations have massive support:

A. Persuasive Arguments (Limited Argument Pools)

This explanation emphasizes the role of persuasive arguments and what is, and is not, heard within a group of like-minded people.

- An individual's position is partly a function of which arguments seem convincing.
- If a position moves due to group discussion, it will likely move toward the most persuasive position defended within the group.
- **The key point:** A group already inclined in a certain direction will offer a disproportionately large number of arguments supporting that direction, and a disproportionately small number of arguments going the other way.
- The result is that the group, as a collective, moves further in the direction of its initial inclinations.
- *Note:* Individuals with the most extreme views sometimes move toward moderation, but the group as a whole moves statistically to a more extreme position consistent with its predeliberation leanings.

B. Social Comparison

This mechanism begins with the claim that people want to be perceived favorably by other group members and to perceive themselves favorably.

- Once people hear what others believe, they adjust their positions toward the dominant position.
- People may adjust their views (e.g., regarding enthusiasm for affirmative action or national defense) when they see what other group members think.

5.5 Heightened Polarization and Extremism on the Internet

Group polarization is a human regularity, but social context can decrease, increase, or eliminate it.

Heightened Polarization: Group polarization significantly increases if people think of themselves as part of a group having a shared identity and solidarity.

- *Example:* If members of an Internet discussion group identify as opponents of high taxes or advocates of animal rights, their discussions are likely to move them toward quite extreme discussions.
- If people think of themselves this way, group polarization is both more likely and more extreme.

If group members think of one another as similar along a salient dimension (politics, geography, race, sex) or are united by some external factor, group polarization will be heightened.

The Internet is currently serving as a **breeding ground for extremism** because like-minded people deliberate without hearing contrary views. Hate groups are the most obvious example.

Case Example: The Unorganized Militia

- The Unorganized Militia is the armed wing of the Patriot movement, which believes the federal government is becoming increasingly dictatorial with its regulatory power over taxes, guns, and land use (Zook 1996).
- A crucial factor behind its growth is the use of computer networks, allowing members to contact each other quickly, trade information, discuss conspiracy theories, and organize events.
- The militia maintains a large number of Web sites, often linking to related sites.
- Web sites are used to recruit new members and allow like-minded people to reinforce or strengthen existing convictions.
- The Internet plays a crucial role in permitting people who would otherwise feel isolated to band together and spread rumors, many of them paranoid and hateful.

Example Quotes from Extremist Groups:

```
A group naming itself the White Racial Loyalists calls on all ‘White Racial
Loyalists to go to chat rooms and debate and recruit with NEW people, post
our URL everywhere, as soon as possible’.
```

```
Another site announces that ‘Our multi-ethnic United States is run by Jews,
a 2% minority, who were run out of every country in Europe. *. . .* Jews
control the U.S. media, they hold top positions in the Clinton
administration *. . .* and now these Jews are in control – they used lies
spread by the media they run and committed genocide in our name’.
```

5.6 Extremism and Value

The mere fact of polarization does not mean the movement is in the *wrong* direction.

- Group polarization likely fueled movements of great value, such as civil rights, antislavery, and gender equality.

- These movements were considered extreme in their time, and within-group discussion bred greater extremism; but extremism is not necessarily a word of opprobrium.
- If greater communication choices produce greater extremism, society may sometimes be better off.

However, when group discussion leads people to more strongly held versions of unreasonable views, and limited argument pools and social influences are responsible, there is legitimate reason for concern.

- Discussions among hate groups may fuel increasing hatred and a socially corrosive form of extremism.
- This concern raises questions about whether 'more speech' is necessarily an adequate remedy, especially if people can wall themselves off from competing views.

The fundamental issue is whether a **public sphere** with a wide range of voices is superior to a system where isolated consumer choices produce a highly fragmented speech market.

Conclusion on Polarization/Fragmentation: It is extremely important to ensure people are exposed to views other than those they currently agree with, protecting against the harmful effects of group polarization on individual thinking and social cohesion.

5.7 Deliberating Enclaves

The need for exposure to diverse views is not inconsistent with approving of **deliberating enclaves** (online or elsewhere) designed to ensure that positions that would otherwise be silenced have a chance to develop.

- *Example:* The views of people with disabilities.
- The benefit of such enclaves is that positions may emerge that deserve a large role in the heterogeneous public.
- For these improvements to occur, members must not insulate themselves from competing positions, or at least any such insulation must not be prolonged.

5.8 Consumer Sovereignty

The ideal of **consumer sovereignty**—where people can choose to purchase or obtain whatever they want—underlies much of the enthusiasm for the Internet.

- For many purposes, consumer sovereignty is a worthy ideal.
- However, the adverse effects of group polarization show that, with respect to communications, consumer sovereignty is likely to produce serious problems for individuals and society at large due to "a kind of iron logic of social interactions".

6. Social Cascades

The phenomenon of group polarization is closely related to **social cascades**.

Definition/Mechanism of Social Cascades:

- Many social groups, large and small, move rapidly and dramatically toward a certain set of beliefs or actions.
- These cascades are often driven by information.
- If an individual lacks substantial private information, they may rely on information provided by the statements or actions of others.

Stylized Example:

```
If Joan is unaware whether abandoned toxic waste dumps are in fact
hazardous, she may be moved in the direction of fear if Mary seems to think
that fear is justified. If Joan and Mary both believe that fear is
justified, then Carl may end up thinking that too, if he lacks reliable
independent information to the contrary. If Joan, Mary, and Carl believe
that abandoned hazardous waste dumps are hazardous, Don will have to have a
good deal of confidence to reject their shared conclusion.
```

This example illustrates how information travels and becomes entrenched, even if entirely wrong.

Impact of Balkanization on Cascades:

- Cascades are often local and take different forms in different communities.
- One group may end up believing something, and another group the exact opposite, due to the rapid transmission of different pieces of information.
- In a balkanized speech market, local cascades lead different groups to dramatically different perspectives.

The Internet dramatically increases the likelihood of rapid cascades based on false information. Although low-cost Internet communication also allows truth and corrections to spread quickly, this sometimes happens too late, leading to extreme balkanization.

Troublesome Example: South Africa and AIDS Denialism

- About 20% of the adult population in South Africa is infected by the AIDS virus.
- Widespread doubts about the connection between HIV and AIDS exist there.
- South African President Mbeki, known as an Internet surfer, learned the views of ‘denialists’ after stumbling across one of their Web sites.
- The denialists' views are not scientifically respectable, but their claims often seem plausible to a nonspecialist.
- President Mbeki fell victim to a cybercascade and accelerated one through his public statements.
- This led to many South Africans at serious risk being unconvinced by the association between HIV and AIDS, creating a cascade effect that "has turned out to be literally deadly".

6.1 Dangers of Fragmentation

A fragmented communications market creates considerable dangers for citizens of a heterogeneous democracy:

1. **Dangers for Individuals:** Constant exposure to one set of views is likely to lead to errors, confusions, or unthinking conformity (as emphasized by John Stuart Mill).
2. **Dangers for Society:** The process may make people less able to work cooperatively on shared problems by turning collections of people into noncommunicating confessional groups.

7. Common Experiences

In a heterogeneous society, it is extremely important for diverse people to have a set of common experiences.

7.1 Examples of Common Experiences

Many practices reflect this judgment, such as national holidays:

- National holidays help constitute a nation by encouraging citizens to think simultaneously about shared events.
- They enable diverse people to have certain memories and attitudes.
- In the US, with the possible exception of Independence Day, Martin Luther King Day is perhaps the closest thing to a genuinely substantive national holiday because it involves a concrete and meaningful celebration that is *about* something. (The fact that other national holidays have become mere days-off is considered a serious loss).

Communications and media are exceptionally important here.

- Millions sometimes follow the presidential election, the Super Bowl, or a coronation simultaneously because of the simultaneous actions of others.
- This relates to the historic role of public forums (where diverse people congregate) and general interest intermediaries (which give a simultaneous sense of problems and tasks).

7.2 Reasons Why Shared Experiences are Desirable

There are three principal reasons why shared experiences are desirable:

1. **Simple Enjoyment (Reinforced by Sharing)**: People enjoy many experiences more simply because they are being shared.
    - *Examples:* A popular movie, the Super Bowl, or a presidential debate.
    - For many, these goods are worth less, or possibly worthless, if others are not enjoying or purchasing them too.
    - *Example:* A presidential debate may be worthy of individual attention simply because so many other people consider it worthy of attention.
2. **Easing Social Interactions (Social Glue)**: Shared experiences ease social interactions, permitting people to speak with one another and congregate around a common issue, task, or concern, even if they have little else in common.
    - They provide a form of **social glue**.
    - They help diverse people believe they live in the same culture.
    - They help constitute that shared culture by creating common memories and experiences and a sense of common tasks.
3. **Fostering Fellow Citizenship**: People who would otherwise seem unfamiliar can come to regard one another as fellow citizens with shared hopes, goals, and concerns.
    - This is a subjective good for those involved and an objective good if it leads to cooperative projects.

- *Example:* When people learn about a disaster faced by fellow citizens, they may respond with financial and other help.
- This applies internationally, as massive relief efforts are possible because millions learn about the relevant need all at once.

7.3 The Internet's Impact on Shared Experiences

An increasingly fragmented communications universe will reduce the level of shared experiences salient to diverse people. This is a simple matter of numbers:

- When only three television networks existed, much of what appeared had the quality of a genuinely common experience (e.g., the lead story on the evening news provided a common reference point).
- As choices proliferate, diverse individuals and groups will inevitably have fewer shared experiences and common reference points.
- It is possible that events highly salient to some people will barely register with others.
- It is also possible that views and perspectives obvious to many will seem barely intelligible to others.

A common set of frameworks and experiences is valuable for a heterogeneous society, and a system with limitless options, creating diverse choices, compromises these underlying values.

8. Proposals for Addressing Fragmentation

The goal is to understand what makes a well-functioning system of free expression and to show how consumer sovereignty, in a world of limitless options, is likely to undermine that system. The essential point is that a well-functioning system includes a public sphere that fosters common experiences and where people hear challenging messages.

The sources do not offer a comprehensive set of policy reforms or a blueprint, acknowledging that this may be a domain where "the genie might simply be out of the bottle".

8.1 Three Fundamental Democratic Concerns

In thinking about reforms, the fundamental problems from the democratic point of view are:

1. The need to promote exposure to materials, topics, and positions that people would not have chosen in advance, sufficient to produce understanding and curiosity.
2. The value of a range of common experiences.
3. The need for exposure to substantive questions of policy and principle, combined with a range of positions on such questions.

While private choices might ideally create far more exposure to new topics and shared experiences, private and public initiatives should be considered to pick up the slack if they fail to do so. Private responses should be favored as they are less intrusive and generally more effective.

8.2 Five Simple Alternatives (Drawing on Regulation Developments)

The sources propose five alternatives, noting that different proposals work better for some communication outlets than others:

1. Disclosure

Producers of communications might voluntarily disclose important information about how they promote democratic goals. If they do not, they might be subject to disclosure requirements, not regulation.

- This strategy has yielded positive results in the environmental area (e.g., polluters disclosing toxic releases led to voluntary reductions due to fear of public opprobrium).
- It has been used for movies and television (ratings systems) partly to increase parental control.
- On the Internet, many sites disclose if they are inappropriate for children.

Potential Broader Use of Disclosure:

- Television broadcasters might be asked to disclose their public interest activities quarterly.
- They might report whether they have provided educational programming for children, free air time for political candidates, and closed captioning for the hearing impaired.
- They might also be asked if they have covered local community issues and allowed opposing views a chance to speak.
- The FCC in the United States has already taken steps in this direction and could do more.

Disclosure is unlikely to be a full solution, but modest steps are likely to do some good.

2. Self-Regulation

Producers of communications might engage in **voluntary self-regulation**.

- Some market difficulties stem from relentless competition for viewers and listeners, which often leads to outcomes journalists abhor and from which society does not benefit.
- Competition might be reduced via a code of appropriate conduct, agreed upon by various companies and encouraged (but not imposed) by government.
- *Example:* The National Association of Broadcasters maintained such a code in the US for decades.

Benefits of Self-Regulation: It avoids government regulation while reducing some harmful effects of market pressures.

Potential Code Contents: Such a code could call for:

- An opportunity for opposing views to speak.
- Avoiding unnecessary sensationalism.
- Offering arguments rather than quick ‘sound-bites’ whenever feasible.

Self-regulation seems feasible for television. Bloggers and Internet sites might enter informal, voluntary arrangements, agreeing to create links.

3. Subsidy

The government might subsidize speech, such as through publicly subsidized programming or Web sites.

- This is the motivating idea behind the Public Broadcasting System (PBS).
- However, the PBS model might be outmoded in the current environment.
- Other approaches promoting educational, cultural, and democratic goals could be ventured.
- *Example:* Government could subsidize a ‘Public.Net’ designed to promote debate on public issues among diverse citizens and create a right of access to speakers of various sorts (Shapiro 1999).

4. Links

Web sites might use links and hyperlinks to ensure viewers learn about sites containing opposing views.

- *Example:* A liberal magazine's Web site might link to a conservative magazine's site, and vice versa.
- The goal is to decrease the likelihood that people will only hear echoes of their own voices.
- While many people would not click on objectionable sites, some would, making the system operate similarly to general interest intermediaries and public forums.
- Voluntary action, not government mandates, is the ideal situation here.

5. Public Sidewalk

The most popular Web sites in any given period might offer links and hyperlinks designed to ensure more exposure to substantive questions. This addresses the problem of failing to attend to public issues.

- Under this system, viewers of popular sites would see an icon for sites that deal with substantive issues in a serious way.
- It is established that traffic is huge whenever a link is provided from a major site (like MSNBC).
- This imposes no requirements on viewers; they are not required to click.
- It is reasonable to expect that many viewers would click, if only out of curiosity.
- The result would be to create a kind of Internet **'sidewalk'**, promoting some purposes of the public forum doctrine.
- Ideally, Web site creators would move in this direction voluntarily.

Advertisers spend heavily to obtain brief access to people's eyeballs; this strategy might be used to create something like a public sphere as well.

9. Conclusion

A well-functioning democracy relies on far more than restraints on official censorship of controversial ideas and opinions. It also depends on some kind of **public sphere**, where:

- A wide range of speakers have access to a diverse public.
- Speakers have access to particular institutions and practices against which they seek to launch objections.

Emerging technologies, including the Internet, are not inherently an enemy and hold out more promise than risk, especially because they allow people to widen their horizons.

However, serious dangers are created to the extent that technologies:

- Weaken the power of general interest intermediaries.
- Increase people's ability to wall themselves off from topics and opinions they prefer to avoid.

If one believes that a system of free expression requires unrestricted choices by individual consumers, one will fail to understand these dangers. A free republic aspires to a system that provides a wide range of experiences—with people, topics, and ideas—that would not have been selected in advance. If new technologies diminish common spaces and reduce unanticipated, unchosen exposures for many, something important will have been lost.

Echo Chambers, Epistemic Bubbles, and Democracy

1.0 Foundational Concerns: The Individual and Democratic Life

1.1 Introduction: The Challenge of Unexamined Beliefs

This section captures the core concerns raised by instructor Manohar regarding the detrimental effects of informational isolation on both personal development and the health of a democratic society. The analysis draws from his introductory note in "Readings on Democracy and Internet," which frames the intellectual and civic challenge posed by modern information environments.

The central problem identified is the subtle yet powerful way our social and digital environments reinforce our existing beliefs. When we are surrounded primarily by like-minded individuals or curated social media feeds, our values and ideas go unchallenged. Over time, this constant reinforcement leads to a conviction that our own perspectives are the only valid ones to hold. This process, while often comforting, has profound negative consequences for both the individual and the collective.

The specific consequences of this reinforcement include:

- It curtails individual creativity and freedom.
- It induces a false sense of complacency and certainty about one's own ideas.
- It poses a significant and direct problem for the functioning of a democracy.

Recommended Readings

Manohar suggests the following readings for further exploration of these challenges:

- http://theconversation.com/the-problem-of-living-inside-echo-chambers-110486
- https://aeon.co/essays/why-its-as-hard-to-escape-an-echo-chamber-as-it-is-to-flee-a-cult
- https://theprint.in/opinion/the-echo-chamber-is-the-enemy-of-democracy/114236/
- https://medium.com/@drpolonski/the-biggest-threat-to-democracy-echo-chambers-in-your-social-media-feeds-cd2c3049f7

1.2 Philosophical Inquiries on Freedom and Selfhood

To prompt deeper reflection on the mechanisms of informational and social filtering, Manohar employs a series of philosophical questions. He invokes the Socratic principle that:

an unexamined life is not worth living

The relevance of this ancient maxim is clear: to truly understand our world and ourselves, we must put our beliefs, certainties, and perceived truths to the test. This testing can only happen in a "market place of ideas," a space where we encounter diverse people with differing opinions and beliefs.

Key Questions for Reflection

The following questions are posed to encourage critical examination of the forces that shape our social interactions, information consumption, and very sense of self.

- On Social Formation and Freedom:
    - "Imagine what will happen if who we meet is already ordained or decided by a parent, our society, our friends, an algorithm (in the case of a social media space)."

    - "Do you think this happens in our life? Is it a mere chance that we end up meeting people who we do? Or a lot of it has to do with our social locations and choices that are not in our control? of decisions others make on our behalf?"
    - "Do you think that freedom is lost in this case? What else is lost? Do you think you would be a different person if not for these interventions?"
- On Algorithmic Curation:
    - "Take a look at your social media feed. Try and figure out what goes in deciding what news item you will read, what kinds of friend recommendations you will have, what kind of recommendations of books/movies/songs etc. you will have?"
- On the Loss of Serendipity:
    - "Have you ever stumbled upon something by pure chance, because you were wandering around, and do you think that was an experience worth having?"
    - "What is lost if our capacity to wander is lost?"
- On Information and Identity:
    - "Imagine if the information we access is filtered. The imagination that we frame of our ourselves would that be the same?"

1.3 Context for Deeper Thought

Manohar concludes his introductory note by framing these "extraordinary times" as a catalyst for wonder and critical thinking. He suggests that periods of great challenge have always invited thinkers to make sense of the human condition and the structures that define our existence.

He leaves us with a final set of profound questions that situate the problem of echo chambers within the broader context of human existence and freedom:

- "why are we here?"
- "What got us here?"
- "is there something fundamental about us humans that we are exposed to this frailty?"
- "How can we make sense of this situation? Does this make us think more of our freedoms that we take for granted?"
- "Should we start trying to understand all that chains us and does not allow us to be free?"
- "What structures our responses and who we become?"

These inquiries serve as a bridge from the personal to the political, setting the stage for a more detailed analysis of the specific mechanics of informational isolation and their implications for democracy.

2.0 The Democratic Imperative Against Echo Chambers

2.1 Introduction: The Marketplace of Ideas Under Threat

This section analyzes Cass Sunstein's arguments from "The echo chamber is the enemy of democracy," which examines the civic and philosophical duty to engage with dissenting viewpoints. Sunstein grounds his analysis in historical principles of American democracy, exploring the delicate balance between freedom of expression and the responsibility of private institutions to curate public discourse.

The analysis is framed by a contemporary controversy: the decision by David Remnick, editor of the New Yorker, to rescind an invitation to former White House strategist Steve Bannon to speak at the magazine's

festival. This incident serves as a practical case study for applying foundational principles of public discourse in a polarized era.

2.2 A Model for Disagreement: The Case of William F. Buckley Jr.

Sunstein presents William F. Buckley Jr., a highly influential conservative and host of the television show "Firing Line," as an exemplar of intellectual engagement. Buckley did not shy away from disagreement; rather, he relished debate and was deeply committed to the "marketplace of ideas," consistently providing a forum for those whose leftist ideas he personally despised.

Buckley's approach, however, was not one of unconditional platforming. He practiced a form of "quality control," drawing a distinction between legitimate ideological opponents and those whose ideas he deemed outside the bounds of rational argument. This nuanced stance is illustrated below:

Hosted Opponents Refused a Platform Noam Chomsky Defenders of astrology Muhammad Ali The Ku Klux Klan Saul Alinsky Nazism Allen Ginsberg Soviet-style Communism John Kenneth Galbraith Robert Welch of the John Birch Society

The principle derived from Buckley's example is that private organizations are entitled to exercise their own freedom by refusing to host ideas they find despicable. This is not censorship but an expression of institutional values and a commitment to maintaining a standard of rational discourse.

2.3 Foundational Principles for Public Discourse

Sunstein distills the historical and philosophical arguments into two defining principles that should guide decisions about public forums and civic engagement.

1. Echo chambers are a disservice. They are fundamentally harmful to readers, listeners, students, and to the democratic process itself. By insulating citizens from opposing views, they undermine the consultative process that is essential for a functioning republic.
2. Humility is essential. A degree of humility is vital when engaging in political discourse. The recognition that one might not have a monopoly on truth is the foundational spirit of liberty and open-mindedness.

These principles are supported by key arguments from American legal and political history:

- In a landmark opinion on free speech, Justice Louis Brandeis argued that public discussion is not merely a right but a civic duty, indispensable to the discovery and spread of political truth.
- During debates over the Bill of Rights, Roger Sherman delivered the decisive objection to a proposed "right to instruct" representatives. As Sunstein recounts, Sherman argued that the very purpose of legislative assembly was consultation among differing views for the common good, ensuring that representatives would "meet others from different parts of the Union, and consult, and agree with them on such acts as are for the general benefit of the whole community."
- The economist Albert Hirschman warned of the dangers of polarization, coining a phrase to describe a key threat to democratic stability.
- Finally, Judge Learned Hand offered a pithy and profound maxim on the nature of liberty.

The ultimate lesson from these principles is that while being sure of one's beliefs is natural, being "not too sure" is what fosters a willingness to hear opposing views. This humility leads not only to greater understanding but also equips one to better defend the values they hold dear. This commitment to

intellectual humility is the democratic ideal. However, its practice depends on a foundation of shared epistemic trust—a foundation that, as the next section details, is systematically dismantled by the mechanics of the echo chamber.

3.0 A Conceptual Framework: Epistemic Bubbles vs. Echo Chambers

3.1 Introduction: Deconstructing Informational Isolation

These notes will now unpack the critical conceptual distinction between "epistemic bubbles" and "echo chambers," as articulated in C. Thi Nguyen's essay, "Why it’s as hard to escape an echo chamber as it is to flee a cult." The difference is captured perfectly in his framing: first you don’t hear other views, then you can’t trust them. Understanding this distinction is crucial for any meaningful intervention, as the two phenomena operate through entirely different mechanisms and therefore require distinct remedies.

3.2 Defining the Concepts

An epistemic bubble is when you don’t hear people from the other side. It is a state of informational omission, often accidental, where opposing viewpoints are simply not encountered.

an informational network from which relevant voices have been excluded by omission.

An echo chamber is what happens when you don’t trust people from the other side. It is a far more robust and pernicious structure built on the active discrediting of outside sources.

a social structure from which other relevant voices have been actively discredited.

The following table contrasts the key features of these two phenomena:

Feature Epistemic Bubble Echo Chamber Mechanism Exclusion by omission (inadvertent or from selective exposure). Exclusion by active discrediting of outsiders. Effect on Outsiders Contrary voices are not heard. Contrary voices are heard but actively dismissed as untrustworthy. Analogy A filtered social media feed. A cult that isolates members by alienating them from outside sources. Robustness Fragile; easily shattered by exposure to missed information. Pernicious and robust; can be strengthened by exposure to contrary views.

3.3 The Mechanics of an Echo Chamber

Drawing on the research of Kathleen Hall Jamieson and Frank Cappella on Rush Limbaugh, Nguyen explains that an echo chamber functions much like a cult. It systematically alienates members from any external epistemic sources by framing outsiders not as merely mistaken, but as "malignant and manipulative" and thus utterly untrustworthy.

This is achieved through a mechanism called "evidential pre-emption." The echo chamber’s belief system is constructed to turn the force of any contrary evidence against its source. As Nguyen describes it, "What’s happening is a kind of intellectual judo, in which the power and enthusiasm of contrary voices are turned against those contrary voices." For example, if a follower is taught that the mainstream media is part of a conspiracy to discredit their leader, then every critical news report becomes further proof of that conspiracy. In this way, exposure to contrary views can paradoxically reinforce the chamber's worldview.

A common but mistaken solution is to call for more "intellectual autonomy." However, as Nguyen argues, referencing philosopher Elijah Millgram, modern knowledge makes us "irredeemably dependent" on long chains of experts and a complex social structure of trust. We cannot independently verify the work of every

mechanic, biologist, and statistician we rely on. Echo chambers exploit this vulnerability, parasitically manipulating the very mechanisms of social trust that make knowledge possible.

It is crucial to recognize that echo chambers are not exclusive to any single political ideology. They can be found across various domains, including:

- Anti-vaccination communities
- Dietary movements (e.g., Paleo)
- Exercise techniques (e.g., CrossFit)

The key diagnostic question to identify an echo chamber is: "does a community's belief system actively undermine the trustworthiness of any outsiders who don't subscribe to its central dogmas?"

3.4 Echo Chambers and the "Post-Truth" Phenomenon

The echo chamber framework offers a more nuanced explanation for the "post-truth" era than simply attributing it to mass irrationality or a collective disinterest in facts.

Members of an echo chamber are not uninterested in truth; rather, they are "systematically misinformed about where to place their trust." They apply critical reasoning, but from a foundation of radically different beliefs about who constitutes a credible authority. When one side presents economic data, the other rejects its source, believing the newspaper or academic institution that produced it to be corrupt. Their reasoning is intact, but their foundational trust is misaligned.

This differs significantly from Orwellian doublespeak, which uses vague and ambiguous language to obscure meaning. Echo chambers do the opposite: they deliver "crisp, clear, unambiguous claims" and "clearly articulated conspiracy theories" about the untrustworthiness of the outside world.

3.5 The Challenge of Escape

Escaping an echo chamber is profoundly difficult, especially for someone raised within one. The order in which evidence is encountered shapes all future interpretation. Beliefs acquired first form the lens through which all subsequent information is filtered, trapping the individual within their initial belief system.

Nguyen proposes a radical solution: the "social-epistemic reboot." This is a modernized version of Descartes's method, where an individual must suspend all their beliefs—particularly their beliefs about whom to trust—and restart the social knowledge-gathering process from scratch with an "equanimous eye," as if a cognitive newborn. The contrast with the original Cartesian method is crucial: Descartes's goal was solitary, to find indubitable truth through independent reason. The social-epistemic reboot, however, is inherently social. Its goal is not to achieve certainty alone, but to regain the ability to learn from others by rebuilding a healthy foundation of social trust.

The story of Derek Black serves as a powerful real-world example of this process. Raised by a neo-Nazi father and groomed for leadership in the white nationalist movement, Black's transformation began in college. It was not data or debate that changed his mind, but the personal trust he developed with Matthew Stevenson, a Jewish undergraduate who invited him to Shabbat dinners. This act of goodwill pierced the chamber's armor of distrust. Black then embarked on a years-long project of self-reconstruction, immersing himself in the sources he had been taught to despise and rebuilding his entire belief system.

The key takeaway is that direct factual assault is ineffective and often counterproductive against an echo chamber. Escape is not an intellectual exercise alone; it is a profoundly social and human one. It depends on an intervention that attacks the root system of manufactured distrust and painstakingly rebuilds personal trust with an outsider. This highlights the fragile and deeply human path required to break free from the algorithm's cage and finally begin the work of living an examined life.

Relevance Realization and the Emerging Framework in Cognitive Science

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Abstract

Relevance realization (RR) is a pervasive problem within cognitive science. The authors argue that explaining relevance realization is becoming the **criterion of the cognitive**. A new framework for conducting cognitive science is emerging based on this criterion.

The paper articulates this new framework and uses it to provide a nascent theory of relevance realization. This theory incorporates many existing insights implicit in disciplines such as linguistics, machine learning, neuroscience, and psychology. Theoretical and technical innovations motivated by these insights are introduced.

The framework and theory help to clarify significant incompleteness and confusions found in **Montague’s work** and **Sperber and Wilson’s theory of relevance**.

Keywords

relevance, constraints, self-organization, opponent processing, framework.

1 Introduction

Cognitive science faces a family of seemingly intractable problems that cannot be ignored. A well-known example is the **problem of combinatorial explosion**, which confronted the general problem solving (GPS) framework of Newell and Simon.

These problems remain intractable due to a **theoretical circularity** stemming from the centrality of relevance to cognitive function. The attempt to deal with this circularity has been hindered by confusion about what can be scientifically explained.

The authors assert that a theory of relevance itself is impossible because the term ‘relevance’ does not correspond to a **stable, homogeneous class of entities**. Instead, a theory focusing on the **mechanisms of how relevance can be realized** is tractable. This is termed a theory of *relevance realization*.

- **Analogy:** One cannot have a theory of biological fitness, but one can theorize about the mechanisms of natural selection that realize it.

The only way cognitive science can circumvent this family of problems is by developing a **non-circular theory of relevance realization**.

Methodological Strategy

The essay first describes how intractable problems in cognitive science result in circular theories due to relevance. It then discusses the methodological attempt to circumvent these problems using **‘reverse engineering’** (Dennett).

Reverse engineering requires a **criterion of the cognitive** that does not rely on folk-psychological intuitions, as these intuitions presuppose relevance realization and thus lead back to the intractable problems. The solution proposed is to make **relevance realization the criterion of the cognitive**.

A full specification of relevance realization mechanisms requires empirical work, so the focus here is on the required **structural principles**. These include three lower order constraints and a fourth higher order constraint, which, when considered as **dynamic, opponent processes**, can lead to a non-circular structural theory.

1.1 The centrality of relevance realization to cognitive science

Cognitive science originated in 20th-century programs seeking to explain cognition via computation and language, linking cognitive psychology, AI, and linguistics. Central research areas included problem solving, causal interaction, categorization, induction, and communication. Significant problems arose in each area, preventing widespread theoretical acceptance, and these problems are related via relevance realization.

1.2 Relevance realization and problem solving

The foundational framework for problem solving in AI and cognitive psychology is the **GPS framework** of Newell and Simon. A success of GPS was revealing **combinatorial explosion**.

Problem Space Definition: A problem in GPS is defined by four elements:

1. A representation of the **initial state**.

2. A representation of the **goal state**.
3. A representation of all available **operators**.
4. **Path constraints**.

These elements generate a search space containing all possible state sequences. A solution is the sequence of operations leading from the initial to the goal state while respecting constraints.

The Scale of Combinatorial Explosion: Search spaces for problems humans solve are vast. For a typical chess game (approx. 30 legal operators, 60 turns), the number of pathways is 30^{60}. This number is too large for exhaustive search by any computer (e.g., the number of electrons in the universe is $\sim 10^{79}$).

Humans succeed using **heuristic search**, where large regions of the search space are not considered [33, p. 96]. However, current heuristic models are usually hand-crafted for specific problems, lacking general theoretical accounts of how to generate human-level competence mechanically.

Ill-Defined Problems: GPS failed because it assumed most problems could easily be turned into well-defined or formal problems. Many real-world problems (e.g., note-taking) are **ill-defined** because their elements (initial state, goal states, operators, path constraints) are vague, incomplete, or missing.

Human ability to avoid explosion stems from converting ill-defined problems into well-defined ones. This happens by immediately ruling out certain actions via non-inclusion in the problem space during formulation (e.g., not considering ambient temperature while taking notes). This ability relies on **zeroing in on the relevant information and structure** for good problem formulation.

The Theoretical Circle: Determining what is relevant requires determining what is irrelevant. Achieving the small, tractable search space requires initially considering the larger search space to segregate relevant from irrelevant information.

- Good problem formulation needs to solve combinatorial explosion, but good problem formulation itself appears to be a combinatorially explosive problem.
- Only an account of relevance realization that avoids combinatorial explosion can break this circle.

1.3 Relevance realization and interaction with the environment

The need to break the circularity is clear when agents interact with the environment and deal intelligently with **unintended side effects**.

Dennett's Robot Example: A robot trying to retrieve batteries (food) on a wagon which also contains a bomb illustrates the problem.

1. **Initial Failure:** The robot retrieves the battery (intended effect) but brings the bomb (unintended side effect), destroying itself.
2. **Improved Robot (Attempt 1):** Designed to deduce intended effects and *potential* side effects. Result: The robot stops, endlessly calculating, because the number of potential side effects is **indefinitely large**.
3. **Improved Robot (Attempt 2):** Designed to form a list of *potentially relevant* side effects. Result: The robot stops again, calculating endlessly, because it is creating two indefinitely large lists—one of relevant and one of irrelevant potential side effects.

An agent must intelligently ignore a great deal of information to take action, requiring **zeroing in on the relevant information** while *not even considering* most irrelevant information. This is known as **putting a frame around one's cognition**. This is a generalized version of the **frame problem**.

1.4 Relevance realization and categorization

Categorization is central to cognitive science, supported by the deep connection between problem formulation and categorization of novel information. Categorization creates classes supporting powerful inductive generalizations based on shared features.

Any two objects can be infinitely similar or dissimilar (Goodman), presenting formal categorization theory with a computational task similar to combinatorial explosion. The issue is how to **zero in on the relevantly shared properties** useful for inductive generalizations.

Implicit Theories and Failure: Schema, script, stereotype/prototype theories, and context-sensitivity theories all rely on an implicit theory of relevance realization. Relevance is typically specified in terms of one static property (e.g., frequency, invariance, prototypicality).

This approach fails. Medin noted that prototype theories fail to reflect the **context sensitivity** evident in human categorization, serving more as a caricature than a true characterization of conceptual representation.

- A much more complex and **dynamic account of relevance realization** is needed.
- Relevant information cannot simply be identical to frequent, invariant, or prototypical information, because **relevance is context sensitive**.

Barsalou argued for the context-sensitive application of information being central to the concept:

> a concept can be viewed as an agent-dependent instruction manual that delivers specialized packages of inferences to guide an agent's interactions with particular category members in specific situations [2, p. 626].

The Contextual Circle: The circle arises because any given context could contain an **infinite number of variables or predicates** regarding the environment. A sophisticated account of relevance realization is needed to dynamically integrate features like frequency and invariance, breaking this threat of circularity.

Embodiment and Action: Researchers trying to capture contextual sensitivity turned to understanding intelligence in terms of how agents are **embodied and embedded** in the world. This view holds that information must be processed in terms of how it is relevant for successful action. However, coupling actions to future effects relies on dealing with the problem of side effects, and the sources are unaware of any research program within embodied cognition that can solve this side-effect problem.

1.5 Relevance realization and rationality

Many theories in psychology and AI presuppose a background normativity—that cognitive processes should be rational.

Cherniak's Minimal Rationality: Cherniak argues that being rational is not simply being logical, as logic algorithms lead to combinatorial explosion. Rationality involves **zeroing in on a relevant subset of logical inferences** for the task at hand.

- **Cherniak's Proposed Mechanism:** Memory compartmentalization. Dividing memory into labelled, content addressable compartments allows the system to search only the relevant compartment, constraining the search.
- **Critique:** This account viciously presupposes relevance realization. Forming and using such compartments requires determining how things are relevant to each other. Any explanation using pre-existing memory organization presupposes the need for relevance realization to perform **categorization** needed for content addressability.

Putnam's Context-Dependent Induction: Putnam argues that inductive inferences cannot rely on an **invariant syntactic formalization**. The success of an inductive logic is **relative to the operating environment**.

- **Example:** A noisy environment requires cautious induction; a low-noise environment benefits from less cautious action.
- To implement environmentally dependent inference (e.g., changing caution parameters), a system must determine the **context of the inductive inference**, which presupposes relevance realization.

Putnam's argument highlights that solving these problems through an invariant syntax of inference seems misplaced.

1.6 Relevance realization and communication

The pragmatic aspect of language is crucial, especially concerning the relationship between language and communication. Seminal philosophers Austin and Grice showed that we often perform actions or convey more information than we explicitly state.

Grice's Conversational Implicature: Conveyance cannot be folded into semantics (which would overload the lexicon) but must be continually worked out between individuals via **rational cooperation**, constrained by four maxims:

1. Quantity.
2. Quality.
3. Manner.
4. Relevance.

Sperber and Wilson's Unification of Maxims: They argue the first three maxims collapse into relevance:

- Quantity = 'provide the **relevant** amount of information'.
- Manner = 'use the **relevant** format'.
- Quality = sharing the **relevant** truths (since conveying all truths is computationally impossible).

Computational Dilemma: Since there are infinite truths, segregating the relevant from the irrelevant in a computationally tractable manner seems impossible. Theories of pragmatics thus share the same relevance realization problems as problem solving and categorization. Sperber and Wilson identified this problem and attempted a theory of relevance.

Summary of Pervasiveness: Fundamental research streams in cognitive science have encountered essential problems related to computational intractability. These problems are systematically related in a family of interdependence, highlighting the pervasiveness and systematic theoretical appearance of relevance realization.

1.7 Reverse engineering and the emerging criterion of the cognitive

One attempt to avoid the conceptual/theoretical issues of relevance realization is **'reverse engineering'**. This involves abandoning direct cognition studies, designing an intelligent machine, and then using the machine's principles as a theoretical account of cognition.

The Criterion Problem: This method assumes knowing when a machine is intelligent. The Turing test screens off comparison factors, but this implicitly uses assumptions about intelligence shaped by folk or scientific psychology.

Green argued in 1994 that without a widely agreed-upon **criterion of the cognitive**, we cannot determine the correct comparison factors, leaving AI interpretation in question. For example, the mid-1980s criterion that cognitive processes are inferential processes operating on syntactic representations faced heavy criticism from connectionists.

Relevance Realization as the Criterion: The systematic importance of RR makes it the obvious choice for the criterion of the cognitive.

> **Criterion Statement:** *Any attempt to engineer an intelligent system must ultimately focus on the development of a system that can realize relevance.*

Current work in machine learning and theoretical neuroscience (e.g., categorization, optimal control, reinforcement learning) already focuses on developing systems that cope with the computational intractability rooted in the need for relevance realization. The goal is developing systems that determine relevant features, controls, or actions for real-world problems.

This criterion is **already emerging**. Unlike past criteria intuitively generated from folk psychology, the emerging criterion is based on solving difficult technical problems. An explicit theory of relevance realization will thus facilitate new techniques and deepen the understanding of cognition.

1.8 Towards a theory of relevance realization

A framework must be established to avoid circularity, which arises both from relevance's privileged position in cognition and its role in the practice of science itself.

The authors identify three guidelines for theorists:

1. A theory of relevance is impossible; a theory of **self-organizing mechanisms for relevance realization** is required.
2. A theory of RR mechanisms must be **economic**, not representational or syntactic.
3. A theory of RR cannot rely on a completely **general purpose learning algorithm**, but must involve **competition between multiple competing learning strategies**.

2 The importance of a theory of a self-organizing relevance realization mechanism

The idea that a theory of relevance must pick out all relevant things is a fundamental mistake. By analogy with evolution, where fitness is heterogeneous and context-dependent, we require a theory articulating a mechanism for how relevance is **realized in a contextually sensitive manner** (like natural selection).

Circularities in Scientific Practice: The attempt to create a theory of relevance encounters a vicious infinite regress because scientific practice itself relies on relevance realization:

- **Provisos:** Articulating a scientific statement (e.g., 'sugar is soluble') requires implicitly identifying relevant and irrelevant factors to protect it from trivial falsification.
- **Pragmatic Conveyance:** Scientific communication relies on people realizing relevant implications/implicatures. A theory of relevance should not presuppose this ability.
- **Inference to the Best Explanation (Abduction):** Selecting the best explanation requires ignoring the infinite number of alternatives based on concepts like simplicity and similarity, which rely heavily on determining **relevant features**.

Evolutionary Coherentism: To stop this regress without resorting to foundationalism ('proto-relevance'), an **evolutionary coherentism** is proposed. Relevance realization is a **dynamic, self-designing, self-organizing process** not equated with an immutable identity. This dissolves the threat of cyclic explanations. The ‘intelligent design’ framework for cognitive systems must be abandoned.

The Logos Multi-Machine (LMM) Metaphor

The classical metaphor viewed cognition as computation, the brain as a static computer running software governed by linear causal order and syntactic/inferential relations.

The **Logos Multi-Machine (LMM)** is the new emerging metaphor:

Classical Metaphor (Computer)	Logos Multi-Machine (LMM) Metaphor
Cognition is essentially computation.	Cognition is essentially **Logos** (logistics and making information belong together).
Hardware is static and irrelevant to software.	Instantiated in a **plastic neural network**. No clear hardware/software line.
Causal order is linear.	Causal order is **circular**, reflecting a self-organizing dynamic system.
Information organized syntactically/inferentially.	Information organized in terms of **economic properties** and relevance relations.
Developmental history is irrelevant.	Developmental history is **always relevant** to explaining cognition.

The LMM is a machine that increases its capacity for learning by making itself into new kinds of machines.

3 The requirement for an economic model of relevance realization

The brain faces a vicious explanatory circularity involving representation:

1. Relevance realization depends on interests and goals (future states).
2. Directing behavior requires a **representation** of that future state.
3. Representations are **aspectual**; they do not represent all features.
4. Relevance realization is therefore required to generate good representations (by picking relevant aspects).

To avoid this, theories of relevance realization must be pitched at a **sub-representational level**, using completely **immanent properties and relations** of available information.

Fodor's Critique of Syntactic Models: The typical response in cognitive science is dropping to the logical/syntactic level (computational functionalism). However, Fodor argues that relevance cannot be captured by syntax.

- Relevance/importance are aspects of **cognitive commitment** (how much resources a system devotes).
- Cognitive commitment is an **economic issue**, globally defined and contextually sensitive.
- Syntax, being logical, is locally defined and contextually invariant. Fodor stated: **"syntax is locally defined but relevance is globally defined"**.

This means a viable RR theory must use **sub-syntactic properties** (e.g., vectoral representations) whose locally defined operations have global effects.

The Economic Approach

The economic approach provides the mechanism Fodor sought. In economies, local decisions contribute to global organization, and global organization constrains future local processing, all without centralized control (self-governing).

The economic approach uses internal measures of **cost** (e.g., metabolic) and **reward** (e.g., dopaminergic). Evolution is presumed to have worked out the "pre-established harmony" between internal economic variables and successful behavior in the world. The cognitive economy imports sensory data and exports motor commands, which constrain future imports. The core relationship to discover is the balance of internal economic variables that results in successful interaction with the world.

4 The impossibility of a general learning algorithm solution

Relevance realization must be a set of **pervasive constraints on processing**, not a specialized mechanism. A specialized mechanism would merely shift the frame problem.

Meta-Learning Regress: In meta-learning, a meta-learner assesses the applicability of base learning strategies. While this dynamically modifies the bias in base learners, the meta-learner itself must have an *a priori* fixed bias. Creating a meta-meta-learner leads to an infinite regress, reflecting the imposition of an intelligent design framework. The solution is to make meta-learning **self-organizing and immanent** to the learning process.

No-Free-Lunch Theorems: Hopes for a completely general purpose learning algorithm failed. The no-free-lunch theorems show that there is no completely general learning algorithm. All practical algorithms have an explicit or implicit **prior or bias** favoring some functions over others.

Opponent Processing: Since algorithms are tuned to specific problems, a cognitive system can use **complementary strategies** that are in a trade-off relationship. **Opponent processing** is a powerful way to implement a heuristic solution to the no-free-lunch restriction by continually competitive trade-off. This allows for self-organizing, immanent strategy shifts.

The high-level phenomenon of relevance realization **emerges from the brain's attempt to dynamically balance its economic requirements**. *Relevance is never explicitly calculated by the brain at all.*

Overview of Economic Constraints and Interactional Problems

The core mechanism involves balancing three internal economic constraints, which correspond to external interactional problems.

Internal Economic Property	Interactional Problem	Opposing Processes
Cognitive Scope (CS)	Applicability	Compression ↔ Particularization; General Purpose ↔ Special Purpose
Cognitive Tempering (CT)	Projectability	TD Learning ↔ Inhibition of Return; Exploiting ↔ Exploring
Cognitive Prioritization (CP)	Flexible gambling	Cost function J1 ↔ Cost function J2; Focusing ↔ Diversifying

4.1 The applicability problem: cognitive scope

The interactional problem is optimizing **applicability** by balancing **general purpose** versus **special purpose** machinery.

Cognitive Scope (CS) Mechanism: This is formalized by engineering solutions for training neural networks, specifically the inclusion of a weight decay (regularization) term. The standard gradient descent weight update is:

$$ \Delta w_{ij} = - \eta \frac{\partial J(\cdot)}{\partial w_{ij}} \tag{1} $$

A weight decay term (αw_{ij}) is added to penalize large weights and simplify the network, which improves generalization. The generalized update is:

$$ \Delta w_{ij} = - \eta \frac{\partial J(\cdot)}{\partial w_{ij}} - \alpha w_{ij} \tag{2} $$

The ratio of the gradient term and the weight decay term determines the trade-off between maximizing performance on trained data (**particularization**) and improving performance on new data (**compression/generalization**). This opponent processing is defined as **Cognitive Scope (CS)**, capturing the analogy of general versus specific.

CS tracks applicability. This idea uses Hinton's insight of **internalization**, such as in the wake/sleep algorithm, where the network treats itself as a **micro-environment** (statistical patterns in stored data serving as a virtual world) to train procedural abilities.

4.2 The projectability problem: cognitive tempering

The interactional problem is optimizing **projectability**, defined as the **dynamic balance between exploiting the here-and-now** and **exploring the there-and-then**. Exclusive exploitation risks opportunity cost, while exclusive exploration risks losing immediate payoffs.

Cognitive Tempering (CT) Mechanism: This is achieved by coupling **Temporal Difference (TD) learning** with a temporally decaying **inhibition of return trace**.

- **TD Learning (Reinforcement of Return - Exploitation):** Reinforces recent actions (via a memory trace) associated with high rewards, even in the distant future. This pushes the system to return to

rewarding states/actions (exploitative tendency). The value function update is:

$$ V(s_t) \leftarrow V(s_t) + \alpha \left[r_{t+1} + \gamma V(s_{t+1}) - V(s_t) \right] $$

- **Inhibition of Return (Exploration):** A decaying memory trace that softly discourages the machine from returning to recently seen states/actions, promoting intelligent exploration.

This internal opposition is called **Cognitive Tempering (CT)**, referencing time and metallurgic flexibility. CT can be trained to track projectability.

4.3 The problem of flexibly gambling: cognitive prioritization

The interactional problem is how to **gamble flexibly** when faced with ambiguous information, requiring a trade-off between **focusing** cognitive resources and **diversifying** strategies. This flexibility is necessary because organisms run on energy reserves ('batteries').

Cognitive Prioritization (CP) Mechanism: CP concerns the **structure and prioritization of cost functions**. It allows agents to adapt the *sorts of tasks* they optimize, not just their behavior.

Illustrative Example (Joint Cost Function $J_{1,2}$): Consider two basic goals: finding food (J_1) and predator avoidance (J_2). J_1 tracks energy reserves and is multiplied by a leaky integrator function (β) tracking satiation.

The joint cost function is:

$$ J_{1,2}(\beta, \alpha) = \frac{1}{\beta} J_1(\alpha, \cdot) + J_2(\alpha, \cdot) \tag{3} $$

- J_2 (Predator Avoidance) resolves ambiguity by emphasizing **misses over mistakes** (don't miss the predator).
- J_1 (Food Acquisition) initially emphasizes **mistakes over misses** (don't eat poison).
- When satiation (β) is low (e.g., $1/\beta$ is large), J_1 becomes dominant and pressures $J_{1,2}$ to **focus resource investment** into food acquisition.

CP operates as a constraint allowing the flexible trade-off and balance of multiple cost functions.

4.4 Interaction between the three constraints

CS, CT, and CP are **mutually constraining** within an internal economic arena. Higher order constraints operate on this internal economy:

Higher Order Constraint	Goal/Effect	Opposes
Efficiency (Selection)	Selective constraint to be as efficient as possible. (Integration)	Resiliency.
Resiliency (Variation)	Opposing constraint to maintain capacity for repair, relearning, or redesign. (Diversification)	Efficiency.

If only efficiency is pursued, latent preadaptive functions are lost, leading to brittleness. Resiliency introduces variation, and efficiency introduces selection, causing the whole system to **continually evolve**.

- This mirrors Siegler's idea that cognitive development shows parallels to evolution.
- Relevance realization is continuously **self-adaptively self-designing**.
- This suggests cognition is inherently **developmental in nature** (developmental complexification involves dialectics of integration for efficiency and diversification for resilience).

Critique of Sperber and Wilson on Efficiency: Sperber and Wilson define relevance as efficiency: maximizing cognitive effect and minimizing cognitive effort (cognitive profit).

Problems Identified:

1. **Resiliency Conflict:** Since the brain pursues resiliency (maintaining ability to repair), it may process information *inefficiently* in the short term. Efficiency should be a **higher order constraint** operating in opposition to resiliency, not defining relevance.
2. **Level Confusion:** Sperber and Wilson confuse the economic level with syntactic (logical inferential relations) and semantic/representational (belief revision) levels. This intrusion subjects their theory to circularities.
3. **Context Selection Regress:** Their theory calculates cognitive profit based on the active context. However, selecting the optimal context from memory itself requires relevance realization, creating a circularity. They address this by positing accessibility relations between contexts in memory, which means the system faces the **explore versus exploit problem transferred internally**. This issue suggests how memory organization could bootstrap Cognitive Tempering (CT).
4. **Foundational Deficiency:** Memory organization presupposes relevance realization, so it cannot be foundational. Sperber and Wilson's inadequate attempt to solve these foundational problems by combining **modularity** and a **blind hill-climbing algorithm** fails to clarify how relevance realization develops or how processing is realized internally.

5 Conclusion

Relevance realization is a pervasive problem in cognitive science. The emergence of relevance realization as the criterion of the cognitive means that the explanation of cognition will ultimately be in terms of RR processes. The emerging framework is beginning to discover the tools required to address the mechanisms of relevance realization in the brain, and the proposed theory sketch is a plausible starting point for the correct answer.

Disability

Disability and Justice

Introduction and Context

This entry, originally published on Thursday, May 23, 2013, and substantively revised on Tuesday, July 2, 2019, explores the relationship between disability and justice.

Justice is often considered the **"first virtue of social institutions"** (Rawls 1971: 3), making it central to evaluating social policies and public institutions. Disability has played two distinct, central roles in recent discussions of social justice:

1. **Paradigm of Unchosen Disadvantage:** Disability is frequently seen as a paradigm example of unchosen disadvantage.

    - It plays a central role in internal discussions of **luck egalitarianism**, specifically concerning the **"currency" question** (equality of what?).
    - It is involved in external discussions regarding whether luck egalitarianism is disrespectful or stigmatizing.
2. **Limit Case for Contractualist Theories:** People with disabilities, especially intellectual or cognitive disabilities, have been seen as a **"limit case"** for contractarian or contractualist theories of justice.
    - This centers discussions on the **eligibility conditions** for being party to the contractual procedures by which principles of justice are chosen and for being subject to those chosen principles.

Disability as Social or Group Identity

Disability also poses complex issues as a **social or group identity**, defined roughly as a central part of how an individual understands, presents, or values herself.

- The **civil rights movement** made this aspect salient by establishing disability as an important category in anti-discrimination law.
- Theories assessing justice by distributing resources or opportunities are sometimes criticized for failing to account adequately for such identities.
- However, embracing social identity as a justice component can also be problematic.

Two Senses of Injustice and Disability

Disability is of special interest because it juxtaposes two basic and powerful senses of *injustice*. These senses are commonly expressed as the distinction between:

1. **Justice of Distributions** (or **Distributive Justice**).
    - **Roughly defined:** The injustice of certain *outcomes*, specifically outcomes involving inequality of income, wealth, health, or other aspects of well-being resulting from morally irrelevant factors.
    - **Correction requirement:** Primarily requires a change in the **distribution of resources** (broadly construed) that affect well-being.
2. **Justice of Recognition** (or **Relational Injustice**).
    - **Roughly defined:** The injustice of certain forms of *treatment*, specifically treating some people *as* moral, social, or political inferiors based on morally irrelevant characteristics.
    - **Correction requirement:** Primarily requires a change in the **structure and character of interpersonal relationships**, which may necessitate changes to social and institutional norms and practices.

The relationship and comparative importance of these two forms of injustice are heavily discussed, and there is no canonical statement of the distinction (Fourie et al. 2015; Anderson 1999; Fraser 2001, 1996; Honneth 1992).

Entry Organization

The entry is structured as follows:

Section Number	Section Title

Section 4 examines how contractarian and egalitarian theories have largely overlooked the environmental and social character of disability by narrowly focusing on functional limitation and neglecting exclusionary attitudes and practices. Recent rectification efforts include:

- Broadening the metric for just distributions to include respectful relationships and social practices.
- Arguing that a just distribution is better achieved by modifying the environment than by redistributing individual resources.
- Adopting outcome standards aimed at reducing or eliminating disrespectful inequalities rather than requiring strict equality on every metric.

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1. Disability, Recognition, and Redistribution

People with disabilities have historically suffered both **distributive injustices** and treatment as **moral and social inferiors** (relational injustice) (see generally, Barclay 2018).

Examples of Injustice

- People with disabilities are routinely **denied jobs** for which they are highly qualified because they are considered incompetent or employers are uncomfortable with their presence.
- Individuals with certain disabilities are often consigned to **segregated institutions and facilities** because they are regarded as incapable of making decisions or caring for themselves, or because others do not want to interact with them.

Concrete Material Inequalities

These forms of relational injustice are directly linked to concrete material inequalities:

- In 2009, nearly 20 years after the Americans with Disabilities Act (ADA) passed, the **employment-population ratio** of people with disabilities in the U.S. was **19.2%**, compared to 64.5% for persons without a disability (Bureau of Labor Statistics 2010).

- Based on 1996–1999 data, researchers estimate that **47.4%** of working-age adults who experienced poverty for a year or more had at least one disability (Fremstad 2009).

The Pincer Movement and the Cost of Justice

The combination of these facts suggests that people with disabilities have been subjected to a **"pincer movement"** between Nancy Fraser's two impediments to parity: **"misrecognition"** and **"maldistribution"** (Calder 2010: 62).

People with disabilities are comparable to members of other **"discrete and insular minorities"** that suffer both distributive and relational injustice, but with a significant difference: **Cost**.

- Eliminating disrespect and misrecognition toward racial, ethnic, and sexual minorities is not necessarily "particularly **expensive**".
- However, achieving relational justice for people with disabilities may require **accommodation and reconstruction of the built environment**, which means diverting significant resources from other causes.
- Achieving justice for people with disabilities thus requires addressing the relationship between relational justice and distributive justice to a degree usually unnecessary for other groups.

Accommodation and Compensation

The costs of accommodation and environmental reconstruction should not be seen as **compensation** for alleged deficits of people with disabilities.

- These costs would exist even if disabilities were viewed as intrinsically neutral physical or mental characteristics differing merely from a statistical majority.
- In any society designed for average members, people with disabilities are disadvantaged because of their **minority status**.
- **Feminist Analogy:** Feminist scholars made a similar point regarding structural discrimination in workplaces designed exclusively for men. Expenses for additional restrooms or pumping stations do not compensate women for deficiencies; they accommodate differences ignored in a male-centric society (Wendell 1996; Wasserman 1998: 178–179).

The rectification of structural discrimination raises more difficult issues for people with disabilities than for women:

- There is greater uncertainty and potential for disagreement about the extent of changes needed to treat people with disabilities as social and political equals.
- The range of physical and mental differences raises distributive justice issues with **no obvious analogue** for other stigmatized groups.
- A **"gender-neutral"** environment is easily conceived and achieved at modest cost.
- In contrast, disability scholars and activists have not specified what an **"ability-neutral"** environment would entail, and some argue this idea is either conceptually incoherent or prohibitively expensive (Barclay 2011, 2018).
- Questions about reconstructing the built environment would likely arise regarding disability even in a society with no history of invidious attitudes, which is less likely to be true for sexism.

Conclusion of Section 1: Justice for people with disabilities involves a complex, disputed relationship between distributive justice and relational justice, posing a significant challenge for theories of justice.

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2. Models of Disability and Their Implications for Justice

Definition of Disability

"Disability" is typically defined by two elements:

1. A physical or mental characteristic labeled or perceived as an **impairment or dysfunction**.
2. A significant **personal or social limitation** associated with that characteristic.

The relationship between these two elements, and the role of the environment in mediating them, is a core issue in conceptualizing disability and the social response to it.

The Medical Model

The **medical model** treats disability as an individual physical or mental characteristic with significant personal and social consequences.

- It views the limitations faced by people with disabilities as resulting **primarily or solely from their impairments**.
- It would not deny that disability raises justice issues.
- It might support the view that disadvantages inherent to disability raise urgent claims of justice (Barclay 2011, 2018).
- It does **not recognize a principled rationale** for preferring reconstruction of the environment over compensation or correction (Wolff 2009a, 2009b).
- This model is less often explicitly defended than **unreflectively adopted** by health care professionals, bioethicists, and philosophers who underestimate the contribution of social/environmental factors.

The Social Models

The various **social models** view disability as a **relationship between individuals and their social environments**.

- Physical and mental characteristics are limiting **only or primarily in virtue of social practices** that lead to exclusion.
- Exclusion is manifested in deliberate segregation, built environments, and social practices that restrict participation (see SEP entry on disability: definitions, models, experience).
- The social model **strongly supports reconstruction** as a rationale for correcting disadvantage, as it construes disadvantage as *essentially* connected to exclusion.
- It construes reconstruction as a **public good**—accessible structures and inclusive practices benefit a wide variety of people, achieving a fairer distribution of tangible and intangible goods.

Convergence and Disagreement

In their extreme forms (treating impairment or environment as the *sole* cause of limitation), neither the medical nor the social model has many defenders.

- **Most scholars** acknowledge roles for both impairment and environment. Disagreement centers on the assessment of their comparative contribution and interaction.
- Scholars embracing the social model acknowledge that impairments (deviations from species-relative statistical norms) can cause discomfort and limitation even without disadvantaging social practices (e.g., Shakespeare 2006, Thomas 2004). They argue, however, that these adverse effects are magnified by hostile environments and far less damaging than social exclusion.
- Awareness of the environmental contribution to disability and partial embrace of the social model are growing even among medical-focused groups (Cureton and Brownlee 2009).

The Link Between Disadvantage and Injustice

Critics argue that social model theorists assume any disadvantage caused by the social environment is *ipso facto* unjust (Samaha 2007).

- This is an oversimplified view. Causing disadvantage does not automatically imply a duty of justice to correct it; this depends on alleviation costs and comparison with advantages/disadvantages resulting from alternative social arrangements.
- *Example:* Spending a municipal arts budget on a concert hall rather than an art museum disadvantages those who cannot hear, but this is not necessarily unjust if non-auditory aesthetic experiences are available or if the museum cost is high.
- *Example:* Placing ramps in new high-rises is inexpensive, while placing them in older walk-ups is expensive.

The difficulty of inferring injustice from socially caused disadvantage is clear when incremental provision is involved.

- Providing N vs. $N + 1$ restricted parking spaces for wheelchair users marginally benefits them, but an injustice cannot be inferred from the N choice alone. The allotment should be proportional to the number of users, but social causation provides no guidance on the necessary amount.

Conversely, the failure to alleviate a disadvantage not caused by social arrangements may still be unjust.

- The state's duty to support victims of natural disasters (like hurricanes or tsunamis) is plausible even if the state is not responsible for causing or exacerbating them (Wasserman 2001).
- Luck egalitarianism does not distinguish between disadvantages caused versus merely not corrected by society's institutions, provided they are equally severe and unchosen.

Relevance of Social-Model Causal Claims

Causal claims made by social-model theorists are relevant to justice in several ways:

1. The fact that the social environment can be modified to alleviate disadvantages associated with impairment places demands for alleviation **within the scope of justice**.
2. If disadvantages are caused by social arrangements, this matters for theories that hold society has a **stronger duty not to create or aggravate disadvantages** than to prevent or correct them (Wasserman 2001, Schemmel 2012).
3. Alleviating disadvantages due to prejudice or stigma enjoys **priority** on any theory treating such disadvantage as a greater injustice than innocently-created disadvantage.

Versions of the Social Model

Different versions of the social model emphasize different features of exclusionary practices:

1. Minority Group Model

- Regards people with impairments as a **stigmatized minority group**.
- Holds that special hardships result from **discrimination akin to that faced by racial or ethnic minorities** (Hahn 1987, Oliver 1990).
- Measures are dictated primarily by a demand for **recognition and respect**, correcting past expressions of disrespect (knowing exclusion).

2. Human Variation Model

- Holds that challenges result not from deliberate exclusion but from a **mismatch between their characteristics and the environment** (Scotch and Schriner 1997).
- Construes people with disabilities as simply people who **differ in degree** from the statistically normal majority.
- The purpose of reconstruction is to create a more inclusive environment, not to end specific exclusionary practices.
- Appeals principally to norms of **distributive fairness**, ensuring equal or adequate access.

Both versions require removing barriers and reconstructing the environment to include people with disabilities. The discrimination emphasized by the minority group model typically results in the failure to accommodate stigmatized differences.

- Disparities in access initially caused by resource or technological limits are often maintained by stigma. For instance, refusing to include modestly priced accessibility features in technology upgrades is not justified by the historical absence of accessible technology when the original purchase was made.

Limitations of Inclusion

The demand for greater inclusiveness is **less categorical** than the demand to eliminate discrimination.

- Any environment can be made more inclusive, but **none can be fully inclusive for everyone** (Barclay 2010, 2018).
- **The problem is general**:
    1. For many characteristics (height, mathematical aptitude), one “size” does not fit all.
    2. Providing different sizes increases fit for a wider range, but at increasing cost.
    3. It is often impractical and potentially unjust to ensure everyone is equally well- or ill-fitted (e.g., too expensive to ensure extremely tall or left-handed individuals suffer *no* inconvenience).

Full inclusion, like universal design, is an ideal that must be compromised to satisfy other legitimate claims.

Modest Changes and Autism Examples

Even if full inclusion via wholesale changes is impossible or unreasonable, **modest changes can significantly increase inclusion at little cost**.

- A study on environmental modification for autistic individuals (Owren 2013) highlights challenges. People with autism face barriers because they find common stimuli (applause, light touching, deodorant) aversive, and require explicit instruction about social expectations.
- The author recognizes that the “neurotypical majority” cannot be expected to abandon nuanced communication, such as innuendo, double meanings, irony, implied meaning, flirtation, or "feeling each other out" (2013: 23-24).
- However, the majority could benefit from modest accommodations, such as being more explicit, a point illustrated by couples therapy focusing on stating needs directly (2013: 92).

Feasible "best practices" suggested include (2013: 111):

- Incorporating access to **low stimulation areas** in mainstream settings into Universal design.
- Creating more public acceptance of autistic behaviors like **stimming**, which help autistic people reduce the impact of aversive sensory stimuli.

These strategies involve tradeoffs of small economic and social costs for the majority to achieve large inclusion gains for a minority.

Challenges for Intellectual and Psychiatric Impairments

The challenges for social models of disability appear greatest for **intellectual, psychiatric, and complex physical impairments** (e.g., fibromyalgia, multiple chemical sensitivity) that radically and unpredictably affect functioning (Wendell 1989, 1996; Davis 2005).

1. **Dual Aspects:** These conditions strikingly display both aspects of impairment: as **markers for stigma** and as **sources of functional limitation**. Cognitive and psychiatric impairments evoke strong prejudice and present difficult functional limitations (e.g., limits on practical reasoning, recognizing intentions, or participating in shared activities).
2. **Practical Challenge:** Some theorists contend these conditions pose a greater practical challenge for the social model than severe physical disabilities, partly because required measures for greater inclusion are **less concrete or tangible** and demand greater imagination.

Jonathan Wolff, who favors reconstruction ("status enhancement") as the most respectful intervention, questioned what it would mean to change the world so people with cognitive disabilities could equally find a worthwhile place (2009a: 407).

- Most rights, privileges, and jobs require certain levels of cognitive capacity (e.g., voting, contract signing, or requirements for regular hours, uninterrupted activity, undivided attention, and general sociability) (Wikler 1979).
- A total relaxation of these requirements would impose **large, even “unduly burdensome” costs**.
- However, many modifications for inclusion (simplified task explanations, warning labels, telecommuting, individualized schedules) would also **benefit people with typical cognitive function**.

Subjects of Justice and Cognitive Disability

There is sharp disagreement on whether individuals with the most severe intellectual impairments qualify as subjects of justice.

- Nussbaum (2009) argues that equal citizenship requires they be enabled to exercise political rights (voting, jury service) through **appropriate surrogates**.
- Wasserman and McMahan (2012) question whether those rights could be meaningfully exercised by surrogates for individuals with the most severe intellectual disabilities.

Philosophical Pessimism and the Card-Game Analogy

Dan Wikler's 1979 essay, "Paternalism and the Mildly Retarded," hinted at a social model approach, arguing that the category of cognitive disability was **socially constructed by competence thresholds**. Wikler concluded the issue was one of justice—fairly distributing the burdens of threshold setting—but questioned if justice required necessary modifications.

Wolff cited Wikler in stating that modern life relies on enforceable contracts assuming a certain intellectual competence, and lowering that bar **"would have tremendous costs"** (2009a: 407).

- This pessimism led Wolff to emphasize **"targeted resource enhancement"** (entitlement scheme for personal assistance/social support) over "status enhancement" for cognitive disabilities. He regards antidiscrimination measures as essential status enhancement but accepts Wikler's conclusion that broader changes carry "intolerable costs" (2009a: 413).

Buchanan et al. (2000) asserted excessive social costs in reconstructing society for full participation of people with significant cognitive impairments. They used the **card-game analogy**:

- **Analogy:** They compared societal reconstruction for inclusion to a family only playing card games a young child understands, arguing society would be **"dumbed down"** (like adults tiring of Go Fish).
- **Critique of Analogy:** This analogy oversimplifies the challenge by presenting inclusion as a zero-sum allocation. It wrongly assumes every activity must be done by everyone.
- **Apt Analogy:** A better analogy is an assortment of games played by different combinations of people. Some games could be played by everyone, others modified to preserve interest for non-disabled players, and some beyond reach. Society may function better with varying aptitudes. A smaller set of activities for people with cognitive impairments is not a problem unless it results in social isolation or denies intellectual challenges (Parens & Asch 2000: 25–26).

Social inclusion does not require individuals with significant cognitive impairments to make binding contracts in every domain; it requires **graduated competence standards** reflecting task complexity so they are not categorically excluded (Buchanan and Brock 1990). Practical work in educational and workplace inclusion rebuts the "intolerable costs" fear (e.g., Biklen 1992; Block 2006; Hehir 2002; McGuire et al. 2006).

The social model was originally conceptualized for physical disabilities, and its aptness varies depending on the nature of the impairments at issue.

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3. Justice, Reconstruction, and Reasonable Accommodation

Social-model theorists shift the focus from claims for correction and compensation to claims for **reconstruction**, emphasizing the environment's impact and malleability.

The Height Variation Example

Consider a hypothetical society with greater height variation:

- Even if extreme height variation were neither stigmatized nor functionally limiting, the society would be obliged to construct public spaces, buildings, and vehicles to **accommodate them**.
- They would be treated unjustly if construction ignored them, causing significant disadvantage.
- This suggests that the demand for a more inclusive environment should be seen as accommodating a wide range of **human variation**, not compensating for internal deficits.
- No plausible theory requires equally accommodating all heights, but all would condemn some environments as unjustly restrictive.

Reasonable Accommodation: Redistribution or Recognition?

The legal requirement of **"reasonable accommodation"** raises the question of whether reconstruction is primarily about redistribution or recognition.

- Under the ADA (1990) and ADAAA, accommodations include ramps, elevators, flexible schedules, interpreters, and job assistance.
- The failure to make reasonable accommodation constitutes discrimination (with exceptions).
- This concept was introduced in religious discrimination cases (Karlan and Rutherglen 1996). People with disabilities, like religious minorities, must be "reasonably accommodated," unlike women, people of color, or older people.

Distributive Justice Perspective (Human Variation Model)

For the human variation model, reasonable accommodation requires physical and social changes.

- Some changes can be expensive; if the cost imposes an **"undue" burden or hardship**, further change may be unreasonable.
- The legislative understanding of accommodation as a matter of **distributive justice** is reflected in the qualifying use of "reasonable" and the undue burden exemption (Wasserman 1998).

Recognition Perspective (Equality Requirement)

It is also possible to view reasonable accommodation as a requirement of **equality** without recourse to a theory of distributive justice (e.g., Crossley 2004; Karlan and Rutherglen 1996).

- Accommodating religious practices may be expensive, but it is not seen as compensating for deficits; rather, the state disfavors rules interfering with observance due to the requirement to treat adherents with **equal respect and concern** (Dworkin 2003).
- Similarly, a state showing equal respect and concern for people with disabilities will disfavor arrangements interfering with their participation.
- Substantive equality may require unequal provisions for both groups, but the amount required is **indeterminate**, stemming from the indeterminacy of equal respect demands, not a lack of a complete distributive theory.

In addressing the cost of accommodation (e.g., for an IT technician with emphysema), consulting what **respect demands** based on social practice and convention may be more useful than consulting abstract distributive justice theory. The utter lack of accommodation is clearly unjust, but a determinate answer on the exact amount required may be elusive.

Conflicts Between Recognition and Distribution

The debate over minority group accommodations often reflects a complex mix of redistribution and recognition claims.

- **Example (Restaurant Access):** Wheelchair users sometimes access restaurants through the service entrance. Owners claim this is reasonable because ramps already exist (a distributive consideration). Advocates argue it treats wheelchair users as second-class customers (a claim of **misrecognition**). In this specific case, recognition claims often trump conflicting distributional claims.

However, recognition does not always trump distribution. Resolving such conflicts involves judgment, similar to religious accommodation debates.

- Some jobs may not be available to people whose Sabbath falls on Friday/Saturday if essential functions require working those days. The "essential function" standard is subject to distributive considerations (e.g., staffing requirements).
- Refusing to sustain any revenue loss to accommodate a minority religion might be a distributive injustice. Willingness to sustain greater losses for Jewish/Adventist employees than Muslim ones might involve misrecognition.

The uncertainty regarding the distributive nature of reasonable accommodation suggests it is **often difficult to sharply distinguish claims for redistribution and recognition**. Recognition may necessitate redistribution, and redistribution should aim to secure recognition.

- Asch (1989) argued that **recognition must precede redistribution**; if people with disabilities were recognized as equals capable of contribution, society would be more willing to adopt appropriate redistributive and reconstructive measures.

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4. Disability in Contemporary Theories of Justice

The philosophical interest in justice often dates to John Rawls' *A Theory of Justice* in 1971. For the 25 years after its publication, many justice theorists tacitly adopted the **medical model** (e.g., Dworkin 1981a,b; Daniels 1985), treating disability as an individual limitation and the principal cause of disadvantage.

- Disability posed problems for theories based on mutual advantage or hypothetical agreement because people with disabilities did not appear to offer reciprocal advantages, complicated hypothetical agreement, and made the goal of equality seem overly demanding.

By the late 1990s, some mainstream political philosophers and disability theorists began engaging with social models.

Two Types of Distributive Theories

It is useful to distinguish two types of distributive theories:

1. Modern Social Contract Theories (Rawlsian)

- **Goal:** Determine the fair terms of social cooperation to which individuals (with limited knowledge of their situations) would agree.
- **Nature:** Procedural; a distribution is just if consistent with principles chosen by those individuals (e.g., Rawls' "difference principle").

- **Disability Critique Focus:** Assumptions about the **eligibility conditions** for individuals to make the hypothetical contract or participate in the cooperative scheme. Critics focus on the eligibility of people with disabilities or their representatives (Richardson 2006; Silvers and Francis 2005; Stark 2007).

2. Outcome-Oriented Theories (Egalitarian)

- **Goal:** Determine the kind of **end state** a just society should strive for (equality on some metric or reduction of inequality).
- **Disability Critique Focus:** Advocating for **outcome metrics** that account for the social contribution to disability-related disadvantage, and standards for distributions oriented toward **disrespectful inequalities** (Anderson 1999; Nussbaum 2006a; Wolff 2009b).

4.1 Disability and Contemporary Social Contract Theories

Social contract theories are often categorized as **contractarian/Hobbesian** (narrowly self-interested, hard-bargaining parties) or **contractualist/Lockean** (self-interest balanced by commitment to justifying to others, proceeding by deliberation).

Rawls and the Original Position (OP)

A Rawlsian approach might seem more congenial, deriving the basic structure from the hypothetical **Original Position (OP)**, where a veil of ignorance prevents reliance on actual limitations.

- **Exclusionary Assumptions:** Rawls stipulated that the idealized society was restricted to members who would be **"fully-cooperating"** over their adult lives. He assumed this excluded people with severe and permanent disabilities (Rawls 1993: 18–20). Their fate was consigned to the later, legislative phase.
- **Moral Powers Restriction:** Participation in the OP was restricted to those with two **"moral powers"**:
    1. The capacity to form and revise one's own conception of the good.
    2. The capacity for a sense of justice (to act on and apply fair terms of cooperation).
- **Critique:** These powers are doubtful for people with the most severe intellectual and psychiatric impairments. Furthermore, if deliberators know they won't represent the severely disabled, they have no prudential reason to choose a structure providing for their inclusion, especially if such inclusion imposes costs on the able-bodied.

Proposed Modifications to Rawlsian Framework

- Some argue the "full cooperation" requirement and reciprocity can be liberally interpreted to include most people with significant physical disabilities (Hartley 2009b; Stark 2009).
- Henry Richardson (2006: 427) suggests Rawls' arguments using the OP device do not essentially depend on any reciprocity premise. He proposes modified OPs that drop the assumption of no severe/permanent disabilities, yielding principles sensitive to the continuous nature of abilities and the stigmatization from false dichotomization.
    - **Nussbaum's response:** She concedes Richardson's reconstruction largely avoids exclusion but argues it is a radical departure, suggesting the theory loses its contractual character if reciprocity and roughly equal physical/mental powers are dispensed with (2006b: 490–498).
- **Addressing Moral Powers:**

    - Harry Brighouse (2001) notes that modifying cooperation still excludes those lacking the two moral powers due to cognitive impairment.
    - Sophia Wong (2009, 2007) argues those powers can be acquired with adequate social support.
    - Francis (2009) and Silvers and Francis (2009) contend many with severe cognitive impairments can collaborate to construct individualized conceptions of the good.
    - Silvers and Francis (2005) and Hartley (2009a) suggest people with severe intellectual impairments can be adequately represented in a trust-building, rather than hard-bargaining, contracting process.
- **Exclusion vs. Disrespect:** Cureton (2008) argues exclusion from the OP is merely part of its idealization and does not diminish the urgency of claims. Stark (2007) proposes lifting the full-cooperation requirement at the second, legislative stage of deliberation.

Rawls' Restatement and Representation

Rawls' *Restatement* (2001) clarified that OP participants are **representatives** of future society members, not actual future citizens denied knowledge.

- If representatives consider the possibility they represent disabled individuals, their interests might be better ensured.
- This representational role avoids conflicts of interest faced by unimpaired individuals representing *themselves* and impaired individuals.

Reciprocity and Dependency

Philosophers vary in optimism about including people with disabilities in contractual deliberations.

- Lawrence Becker (2005) suggests even selfish, hard-bargaining contractarians (the "tough crowd") would accept an expansive notion of **"reciprocity"** due to recognizing their own or loved ones' needs and vulnerabilities, thus placing a premium on social provisions for health (2005: 35).
- Eva Kittay (1999) argues that Rawls' scheme, even liberally interpreted, neglects the fact of pervasive, inevitable human dependency: **"those within relationships of dependency fall outside the conceptual perimeters of Rawls' egalitarianism"** (1999: 79).

Scope of Justice: Natural vs. Social Inequalities

A crucial debate concerns whether justice is concerned only with the distribution of social goods or also with the rectification of **"natural inequalities"** (Pogge 1989: 44–47).

- Pogge (1995) argues it would be irrational for OP parties to ignore the contribution of natural advantages to well-being, but claims eliminating those inequalities goes **beyond the scope of justice**.
- Others argue natural inequalities *are* within the scope of justice, and health care to mitigate them is a requirement (Daniels 1985; Buchanan et al. 2000).
- Some disability scholars deny inequalities associated with impairments are "natural" (Amundson 1992; Wasserman 2001), joining a broader debate about distinguishing between natural and artificial/social inequalities (see Lippert-Rasmussen 2004; Nagel 1997; Pogge 2004a,b; Aas and Wasserman, 2016). Many inequalities in abilities may be largely attributable to the physical and social environment, making them artificial (Bickenbach 1993).

4.2 Disability, Outcome-Oriented Theories, and the “Currency” of Justice

Outcome-oriented theories focus on the end-state society should pursue, differing based on the outcome metrics they adopt, the **“currency” of distributive justice** (Cohen 1989). These include resource metrics (Dworkin 1981b), opportunity for welfare (Arneson 1989), access to advantage (Cohen 1989), or capabilities (Nussbaum 1990; Sen 1980).

Luck Egalitarianism

Luck egalitarianism (e.g., Arneson 2000; Dworkin 2003; Lippert-Rasmussen 2015) claims it is unjust to have unfair inequalities in the distribution of **“brute luck”**—disadvantage not attributable to individual choice or fault.

- **Option luck**, conversely, is disadvantage acquired through foreseeable consequences of actions.
- Stronger versions deny that option luck generates justice claims. Thus, only disabilities resulting from brute bad luck (e.g., congenital impairments) generate justice claims, while those resulting from free choice (e.g., unhealthy lifestyle) do not.
- **Critique 1:** Some philosophers view these implications as a *reductio ad absurdum* (Anderson 1999).
- **Critique 2 (Disability Scholars):** The conflation of disadvantages from unchosen impairments with disadvantages from unchosen social conditions under the single heading of “bad brute luck” is problematic. Luck egalitarianism offers no principled rationale to distinguish between equally severe setbacks resulting from disability discrimination (social bad luck) and intrinsically disadvantageous physical abilities (natural bad luck).

4.3 The Appropriate Metric for Distributive Justice

Outcome-oriented theories are assessed based on their metric ("currency") and their distributive standard (equality, priority, or sufficiency).

Social Primary Goods (Rawls)

Rawls used **“social primary goods”** (opportunities, basic liberties, income, social bases of self-respect) as the metric.

- **Intention:** To achieve neutrality between competing conceptions of the good, as these are “all-purpose means”.
- **Disability Critique:** This metric fails to account for the **environment** in which these goods must be utilized, which profoundly affects their value. Two people with the same share of primary goods and similar projects may differ greatly in the value derived if one is disabled.

Resource-Based Approaches (Dworkin)

Directly egalitarian resource-based approaches, such as Dworkin’s (1981a,b), often take the social environment for granted.

- Giving people with impairments equal material shares would not satisfy equality demands in an environment designed only for standard endowments.
- **Dworkin's Solution:** Adjust individual shares to include **insurance payouts** against poor environmental fit, rather than redesigning the environment.

- **Critique:** Dworkin tacitly assumes a **medical model** where limitations are solely attributable to impairment. Compensation ensures survival but limits or hinders participation if compensating disabilities expresses disrespect (Anderson 1999). Furthermore, the insurance payout size is determined by how much the able-bodied would insure against incurring that disability, risking **"baking in" flawed assumptions** about the disability experience (Bodenheimer 1997a,b).

Capabilities Approach (Nussbaum and Sen)

The **capabilities approach** (Nussbaum 2006a; Sen 1980) assesses outcomes based on resources *and* **what a person is able to do with them** (her "capability" of engaging in valuable "functionings," e.g., affiliation, sensory experience).

- **Shift in Focus:** Nussbaum's later formulations are more congenial to social models, moving away from strict emphasis on species-typical functioning. She now recognizes the social contribution to "natural" deficits (Wasserman 1998; Terzi 2009).
- **Individuation of Capabilities:** Nussbaum abstracts from differences to find a common claim to the *means* of moving about (architectural, vehicular, mechanical, or prosthetic).
- A person with emphysema can increase capacity for affiliation and environmental control (two of Nussbaum's capabilities) not only by increasing lung capacity but also by increasing access to social venues via better transit and architectural design.
- **Flourishing:** Nussbaum's framework allows for recognizing the prospects for flourishing of people with severe impairments.
- **Incorporation of Recognition:** Nussbaum incorporates **recognition and respect** into her basic capabilities. For instance, the capability for "affiliation" includes self-respect and dignity; "control over the environment" includes both material and political environments.

Wolff's Classification of Enhancement Measures

Jonathan Wolff (2009b) classifies equality-enhancing measures by the extent to which they address recognition and redistribution:

Measure Type	Description	Focus	Wolff's Preference
Cash Compensation	Financial payments to address individual limitations.	Redistribution (Cash)	Generally disfavored as less respectful.
Personal Enhancement	Medical, surgical, or rehabilitative measures to correct limitations.	Correction	Generally disfavored as less respectful.
Targeted Resource Enhancement	Intermediate option; uses restricted resources (personal assistance, assistive technology) to improve individual/environment fit.	Redistribution (Resources)	Used primarily for cognitive disabilities when status enhancement is deemed impossible/too costly.

Measure Type	Description	Focus	Wolff's Preference
Status Enhancement	Alters the built environment and social practices to reduce the impact of individual ability differences on social equality.	Recognition / Reconstruction	**Favored** as the most respectful, stable intervention, shaping the environment to the needs of all members.

Wolff's preference for status enhancement (reconstruction) could be justified by a modified OP, where decision makers, knowing they might represent individuals with severe impairments, would prioritize capabilities and find status enhancements more effective and respectful than other measures (Richardson 2006).

Limits of Individual Well-Being Metrics

Doubts remain about whether recognition, respect, and social equality can be fully captured in any outcome metric of individual well-being.

- Christian Schemmel (2012) argues that treating people as equals requires respectful relationships among individuals and institutions, which cannot plausibly be viewed in **"recipient-oriented" terms** (Pogge 2004a,b) as components of individual well-being.
- The moral significance of respectful treatment is not exhausted by its contribution to individual well-being. People may need affiliation to flourish but do not necessarily require social and political equality for their own well-being (Schemmel 2012: 19).

4.4 The Appropriate Standard for Distributive Justice

Two approaches moderate distributive justice ambitions to be more inclusive of people with disabilities:

1. Sufficientarianism

- **Standard:** Requires that every member of society reach some **minimum** in the appropriate "currency".
- Nussbaum suggests this approach but does not endorse it as the sole standard. It makes capabilities a less demanding metric.
- Setting the minimum can appeal to the requirements for participation in a democratic society (Gutmann 1987; Anderson 1999).
- **Critiques (Arneson 2006; Wasserman 2006; Wolff and de-Shalit 2007):** It demands too much if the minimum must be met despite recalcitrant impairments, yet too little if attaining the minimum still leaves the individual with a miserable life. It also lacks a clear mechanism for prioritizing capabilities or assessing if the minimum is reached (Wolff and de-Shalit 2007; Riddle 2010).

2. Social Equality or Equality of Respect

- **Standard:** Replaces equality on a specific metric of advantage with **social equality or equality of respect** (Anderson 1999; Miller 1999; Norman 1997, 1999).
- This departs radically from luck egalitarianism.
- It views justice in terms of **recognition** (as well as redistribution).

- A society of social equals, rich in mutual respect, can arguably tolerate significant disparities in welfare, resources, opportunities, or capabilities.

Relational vs. Distributive Equality

This social equality approach rests on the distinction between relational and distributive theories of justice.

- **Distributive Dimension:** How well-off individuals are, absolutely and comparatively.
- **Relational Dimension:** The kinds of social relationships people stand in to one another.

Relational justice cannot simply be reduced to distributive justice.

- There is a structural difference between two people having the same relation to *some third thing* (a good) and two people having the same relation *to one another* (e.g., being respected equally).
- The social model of disability aligns with the relational view: disability is not a one-place property of individuals (a welfare deficit) but an **n-place relation** (n>2) defined by stigmatizing or excluding attitudes, practices, and forms of treatment.

Disrespectful Compensation Debate

Pogge (2002) and Anderson (1999) argue it is **disrespectful** to attribute a person's disadvantage to their natural endowment because it treats them as needy, deficient, or inferior.

- They argue redistributive measures must be justified as redressing **discrimination**, not correcting natural inequalities.

Barclay (2010, 2018) challenges this, claiming a demand for redistribution only needs to recognize that some traits are less suited for specific environments.

- This contingency does not imply intrinsic superiority or inferiority of an endowment.
- Barclay sees inclusion as maximizing **environmental fit**, which may require expending more resources for some individuals.
- Demands for accommodation by very tall or left-handed people do not presuppose inferiority, only minority status.

Nonetheless, **specific grounds for compensation may be demeaning**.

- Compensation based on medical classification may reinforce the stereotype of **“the cripple” as helpless and pitiable**, posing a grave threat to social equality.
- Even if disability is a “bad difference,” this does not imply that individuals are entitled to compensation simply by virtue of that fact.

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5. Justice, Disability Identities, and Epistemic Injustice

Disability as Social Identity

Social categories rely on social/historical context and individual preferences.

- **Identity Politics:** Identity politics gain importance as historically excluded groups challenge their status.

- The awareness of disability as an oppressed group identity was shaped by exclusionary laws and customs, from **“ugly laws”** (prohibiting public appearance of physical deformities) to state-sponsored involuntary sterilization of “mental defectives”.
- The social model of disability, informing the civil rights movement, emphasized the common experience of **stigmatization and exclusion**, promoting disability as a powerful social identity.

Critics like Fraser argue that social identity is poorly captured by individual advantage metrics.

- An effective response requires **recognition and transformation** (changes in cultural framing), which redistribution poorly serves.
- Overemphasis on redistribution can be **self-defeating**, exacerbating stigma (Fraser 1995, 1997; Olsen 2001).

Recognition and Group Identity

A key issue in recognition is whether justice requires respect for individual members *and* their **group or cultural identities**.

- Does a just society require recognizing **“group-specific cultural identity”** or merely **“the status of group members as full partners in social interaction”** (Fraser 2001: 23, 24)?.
- Very little philosophical work addresses what a disability identity looks like or what recognition claims it implicates.

In distributive justice, a parallel issue is whether society must allocate resources to support members’ group and cultural identities, based on the claim that such identities are a constituent of individual well-being (Kymlicka 1989, Sparrow 2005).

- It is doubtful that disability in general plays a comprehensive role in the lives of *all* people with disabilities sufficient to provide a “context of choice”.

Practical Identity

The sense of identity most relevant to respect and recognition is **practical identity**.

- **Definition (Korsgaard 1996, 2009):** A description under which a person **values herself**, treating herself as a source of reasons. (E.g., identifying as a mother means treating the fact of being a mother as a source of normative practical reasons).
- Dropping this identification involves changing one’s sense of who one is and what gives one’s life value.

Practical identities should be normatively significant for others because:

1. Many significant **interests** derive from practical identities.
2. Respecting practical identities falls under the general requirement of respect for **personal autonomy**.

Individual vs. Collective Identity

Individual identity has a collective/social dimension (Appiah 2005: 21).

- **Collective Identity** (e.g., Palestinian identity).

- **Ascription:** Collective identity is, to a greater extent than individual identity, **imposed or "ascribed"** by the larger society rather than chosen.

Being disabled subjects one to particular treatment.

- One can experience this treatment without regarding disability as part of one's **practical identity**.
- Ascribed disability identity often entails being the object of discriminatory, demeaning, or degrading treatment. This applies to both observable and hidden impairments (e.g., epilepsy seizure in public) (Schneider and Conrad 1985; Davis 2005).
- This treatment injures the self-respect of the individual and constitutes **misrecognition**.

Desirable Change in Social Identities

Desirable change is possible in two ways:

1. **Control over Salience:** Although aspects of self (e.g., paraplegia or deafness) are unchosen, how central they are to one's self-conception is **to some extent within voluntary control**. However, if the identity is ascribed and emphasized by the larger society (especially if not "hidden"), it is difficult to reduce its importance in one's practical reasoning.
2. **Change in Valence:** The label's meaning can be transformed from negative to positive, championed as a source of self-respect and pride (e.g., the term "queer"). John Lawson discusses transforming special education from a source of negative identity to a **"site for the positive promotion of disability as a cultural identity"** (2001: 203–21).

The Dilemma of Difference

When political action targets the social recognition of disability (identity politics), it gives rise to the **"dilemma of difference"** (Minow 1990).

- **Example (Special Education):** Labeling a child "disabled" risks stigmatization and isolation, implying inferiority. Alternatively, the label secures attention and entitlement to appropriate educational assistance, implying difference requires special provision.
- **Resolution Attempt:** The movement for **universal design in education** aims to refashion classrooms to encourage participation for all students, minimizing the need for "special education" (Biklen 1992; Gartner and Lipsky 2002; Lipsky and Gartner 1996).
- Success in resolving this dilemma may reduce the political importance of disability identity for justice; disability could become as significant or insignificant as height or aptitude.

Risks of Identity Politics

There are risks for an identity politics of disability:

1. **Assuming Shared Culture:** The danger of assuming members of a marginalized group share the same culture. This is discouraged by recognizing that culture is complex and that people with the same disability need not share a common culture. **Deaf culture** is perhaps the best-known example, but many deaf people do not participate or identify as Deaf (Tucker 1997). Deaf culture also does not appear to be the kind of "encompassing" or "comprehensive" culture that provides a "context of choice" (Kymlicka, Margalit, Raz).

2. **Privileging One Identity (Intersectional Identities):** Conflicts may arise for people with multiple or **"intersectional" identities** (e.g., African-American and disabled, female and disabled).
    - **Example:** African-American women with mobility impairments reported feeling estranged from the disability-rights movement due to predominantly white leadership and goals emphasizing independence, which conflicted with their communal values (Feldman and Tegart 2003).
    - Mainstream feminism's focus on independence tends to exclude women with disabilities. Disabled women are highly vulnerable to injustices motivating feminism (sexual exploitation, financial dependency, low income) (Crawford and Ostrove 2003; Olkin 2003, 1999; Wendell 1996).

Comparing Models on Disability Identity

There have been major challenges in mobilizing people with disabilities around an affirmative group identity.

- **Initial Challenge:** Getting people to recognize commonality despite diverse impairments and socioeconomic/racial backgrounds (Scotch 1988).
- **Obstacle:** The overwhelmingly negative connotation of the label "disabled." The challenge for people with visual, motor, and psychiatric impairments is sharing a "disabled" identity while denying it makes them dependent, child-like, or powerless (Asch 1985; Scotch 1988).

Medical Model and Identity

The medical model suggests an identity that is both **fragmented and negative**.

- It defines disability by particular impairments, recognizing only strictly **functional commonalities** (e.g., viewing a blind person and deaf person as having different problems).
- It treats similar social consequences (stigmatization, exclusion) merely as **secondary effects**.
- It encourages distinctions based on **etiology** (e.g., distinguishing causes of blindness).
- This narrow, clinical focus obscures the recognition of disability as a social and political problem, except for perennial questions about distributing scarce health-care resources (Barnartt et al. 2001).

Social Models and Identity

Social models were explicitly formulated to support a disability identity for claims of respect and recognition.

- International laws (UN convention) and national laws (US civil rights) have helped forge a **shared disability identity**.
- **Minority Group Model:** Promotes a **trans-impairment identity** by treating disabled people as a "discrete and insular minority" facing a stigmatizing majority. This is useful for anti-discrimination laws but risks emphasizing *differences* between disabled and non-disabled people.
- **Human Variation Model:** Tempers the emphasis on difference and resists essentialism by viewing the group as **socially constructed**. It sees "the disabled" category as an artificial dichotomy imposed on a continuum of variation. Conceptualizing disability as one source of difference can undercut the sense of a unique and exclusive identity.

A society guided by a thoroughgoing human-variation model, where disabilities lack current social and practical significance, might fully recognize the equality of people with disabilities without making disability a salient feature of their identities. However, the psychic experience of certain impairments (e.g., gestural

communication for Deaf people, moving on wheels) may still create a strong affinity and distinctive way of life (see SEP entry on disability: definitions, models, experience).

Epistemic Injustice

The link between disability models and identity leads to a third important category of injustice: **epistemic injustice** (Fricker 2007; Barnes, 2016).

Epistemic injustice is defined as a person being **wronged in her capacity as an epistemic subject**.

1. Testimonial Injustice

- **Definition:** Being wronged in one's capacity as a **subject of knowledge**.
- **Mechanism:** Someone's testimony is given **less credence than warranted** due to prejudice on the part of the hearer.

2. Hermeneutical Injustice

- **Definition:** Being wronged in one's capacity as a **subject of understanding**.
- **Mechanism:** Someone's experiences are **obscured from individual and collective understanding** due to wrongful exclusion from the practices generating those understandings.

Example: Quality-Adjusted Life Years (QALYs)

QALYs are used to assess the prospective benefits of health care interventions.

The standard method of **"quality adjustment"** involves:

1. Assigning a value of **1** to each life-year one can reasonably expect to save through intervention.
2. **Discounting** each life-year lived by a person with a disability by a coefficient (between 0 and 1) reflecting the perceived badness of living with that disability.

- *Example:* If survey data show people would trade 8 years of life with blindness for 4 years with sight, a QALY of **0.5** is assigned to each year lived with blindness.
- **Implication:** Saving non-disabled life-years is preferred in the QALY model.

This method leads to criticism of **"double jeopardy"**: people with disabilities are disadvantaged twice, first by the disability, second by having their health care needs discounted (Singer et al. 1995; Bognar 2011; John et al. 2017).

Epistemic Injustice Critique of QALYs:

1. **Testimonial Injustice:** The "exchange rate" is based primarily or exclusively on the **judgments of able-bodied people**. This disrespects the **first-person authority** of people with disabilities, reflecting prejudicial or biased attitudes.
2. **Hermeneutical Injustice:** This approach **exaggerates the difference in quality** between able-bodied and disabled lives because able-bodied people often overestimate how bad life with disability is, relying on stereotypes (e.g., life is tragic, occlusive of major goods). This poor understanding results from the exclusion of disabled people's perspectives from the public sphere.

6. Conclusion and Future Research

Unique Challenge of Disability: Expense

A distinguishing feature of disability, compared to other characteristics grounding justice claims (race, sex, religion), is that achieving full inclusion for people with disabilities is **expensive** to a degree that achieving full inclusion for other minorities is not.

- Inclusion requires considerable **accommodation and environmental reconstruction**.
- Achieving the appropriate degree of accommodation necessitates **diverting significant amounts of resources** from other worthy goals.
- This feature forces a direct comparison and potential trade-off between **relational justice** (demand for full inclusion/equality) and **distributive justice** (demand for fair distribution of scarce resources).

Models and Justice

- The **medical model** attributes limitations primarily to functional impairments and lends itself to a narrow distributive interpretation of justice claims.
- The **social model** emphasizes the mediating role of the social environment (physical space, accommodations, norms, practices) in generating disadvantage. It highlights relational aspects such as stigma, invisibility, and exclusion.

Disability in Contemporary Theories

Disability has served as a **“limit case”** for contractualist theories of justice concerning idealizing assumptions about capacities.

- In outcome-oriented theories (luck egalitarianism), disability is seen internally as a paradigm of **unchosen disadvantage** (currency debate).
- Externally, it is central to **relational criticisms** of luck egalitarianism, which are accused of failing to attribute normative significance to the social environment's causal contribution and potentially expressing disrespect by characterizing disabled people as “mere” unfortunates.
- These criticisms have influenced distributive justice theorists, particularly proponents of the **capabilities approach**.
- The entry highlighted the **normative significance of disability as a social identity** and its connection to **epistemic injustice**, topics that require more attention.

Questions for Further Exploration

This entry raises several questions for future research:

1. **Distributive vs. Relational Justice:** How exactly should the distinction between distributive and relational values of justice be understood?
2. **Weight of Values:** How should the comparative weight or importance of these values be assessed? If pluralism about justice is the answer, how do relevant trade-offs apply to disability, which raises both concerns simultaneously?
3. **Epistemic Injustice:** Further research is needed on the link between disability and epistemic injustice. Disability may be a powerful example because the phenomenological experiences of people with

disabilities often differ considerably from the able-bodied majority, raising the question of how well we must understand others to treat them justly.

Bibliography and Administrative Information

Academic Tools

- How to cite this entry.
- Preview the PDF version of this entry at the Friends of the SEP Society.
- Look up topics and thinkers related to this entry at the Internet Philosophy Ontology Project (InPhO).
- Enhanced bibliography for this entry at PhilPapers, with links to its database.

Related Entries

Relevant entries include:

- cognitive disability and moral status
- contractarianism
- disability: definitions and models
- feminist philosophy, topics: perspectives on disability
- identity: over time
- identity politics
- justice: distributive
- luck: justice and bad luck
- Rawls, John
- recognition
- redistribution

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Code Blocks: Citations and Footnotes

Footnote Content and Citations

The sources reference numbered footnotes, which are captured below:

▶ Source Footnotes

```
 Footnote 1: Intuitively, the allotment (of restricted parking spaces)
should be proportionate to the number of wheelchair users in the community
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or at the facility, but that number may be uncertain, and a range of spaces
would likely satisfy any proportionality requirement.
 Footnote 2: Although many “natural” disasters like Hurricanes Katrina owe
much of their destructive impact to social arrangements, it is plausible
that the state’s duty to support the victims of hurricanes and tsunamis is
not contingent on its responsibility for causing or exacerbating them
(Wasserman 2001).
 Footnote 3: Finally, alleviating the disadvantages attributable to
prejudice or stigma will enjoy priority on any theory of justice that
treats disadvantage resulting from prejudice or stigma as a greater
injustice than innocently-created disadvantage.
 Footnote 4: Stimming (self-stimulatory behavior).
 Footnote 5: Second, some theorists contend that these conditions
(intellectual, psychiatric, and complex physical impairments) pose more of
a practical challenge for the social model than even the most severe
physical disabilities, in part because the measures required for greater
inclusion are not as concrete or tangible, and may demand greater
imagination to envision and implement.
 Footnote 6: The uncertainty about the distributive character of reasonable
accommodation suggests that in the case of disability, it may often be
difficult to sharply distinguish claims for redistribution and recognition.
 Footnote 7: Other philosophers and disability scholars would deny that the
inequalities associated with impairments can be regarded as “natural”
(Amundson 1992; Wasserman 2001). In questioning the very notion of “natural
inequalities”, they join a broader philosophical debate about whether it is
possible to draw a coherent distinction between natural and artificial or
social inequalities (see Lippert-Rasmussen 2004; Nagel 1997; Pogge 2004a,b;
Aas and Wasserman, 2016).
 Footnote 8: As we will discuss, however, it is doubtful that disability in
general, or particular impairments, play such a comprehensive role in the
lives of many—let alone all—people with disabilities.
 Footnote 9: For example, Palestinians living in the West Bank have a
distinct collective identity. This is different from, though certainly
compatible with, some specific West Bank resident having as part of his
individual identity being a Palestinian.
 Footnote 10: But many people who are deaf, particularly those who do not
sign, do not identify as Deaf or take part in Deaf culture (Tucker 1997).
 Footnote 11: And even for those who participate, Deaf culture does not
appear to be the kind of “encompassing” or “comprehensive” culture claimed
by Kymlicka, Margalit, and Raz to provide a “context of choice” for its
members.
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Data on Injustice (2009 US Data)

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Employment-Population Ratio (2009, US):
- Persons with disabilities: 19.2% (Bureau of Labor Statistics 2010)
- Persons without a disability: 64.5% (Bureau of Labor Statistics 2010)

Poverty Rate (1996–1999 Data, US):
- Working-age adults who experienced poverty for a year or more and had at
least one disability: 47.4% (Fremstad 2009)
```

The Ethics of Care, Dependence, and Disability

I. Introduction and Abstract

This text, written by **EVA FEDER KITTAY**, originally appeared in *Ratio Juris*, Vol. 24, No. 1, March 2011 (pages 49–58). The article is a rewritten and shortened version of two previously published papers (Kittay 2006 and 2007). The Abstract was written by Fabio Lelli.

A. Core Argument/Abstract Summary

According to the most important theories of justice, personal **dignity is closely related to independence**. The care received by people with disabilities is often viewed as a means for them to achieve the **greatest possible autonomy**.

However:

- Human beings are naturally subject to **periods of dependency**.
- People without disabilities are only **"temporarily abled"**.
- Assistance should be considered a **resource** rather than a limitation.
- This approach forms the basis of a social vision that accounts for **inevitable dependency relationships between "unequals"**.
- This vision aims to ensure a fulfilling life for both **the carer and the cared for**.

B. Context and Discrimination

People with disabilities continue to suffer from **discrimination** in jobs, education, and housing. They are deprived of basic capabilities, such as the **freedom to move about**. Especially if they are cognitively disabled, they may find themselves **excluded** from aspects of life like friendships (Reinders, 2008).

Disability needs an ethics that can:

1. Articulate the harms faced by people with disabilities (discrimination threatening dignity and well-being).
2. Offer moral resources for redress.

II. Autonomy, Dignity, and Dependency in Dominant Theories

A. The Link Between Dignity and Autonomy

In most dominant theories of justice, **dignity is coupled with the capacity for autonomy**. A person's well-being or welfare is typically a prerequisite to autonomy.

When individuals find themselves dependent on others for self-care, economic security, and safety (as many people with disabilities do), **the dignity which comes with autonomy appears threatened**.

B. Disability Community Perspective on Dependency

Many people within the disability community share the view of **Michael Oliver** (Oliver 1989, 17):

- Dependency is **“created amongst disabled people”**.
- This creation is **not due** to the effects of functional limitations on capacities for self-care.
- It is because their lives are shaped by a variety of **economic, political, and social forces** that produces this dependency.

C. The Independent Living Movement (ILM)

People with disabilities have insisted on their **right to live independent lives** and be granted the same justice bestowed on the **“temporarily abled”**.

- The need for care, or "assistance," is viewed not as a sign of dependence, but as a **sort of prosthesis that permits one to be independent**.
- **Judy Heumann**, a founder of the Independent Living Movement, wrote: “To us, independence does not mean doing things physically alone. It means being able to make independent decisions. **It is a mind process not contingent upon a normal body**” (cited in Stoddard 1978, 2).

D. The Americans with Disabilities Act (ADA)

The pioneering work of disability advocates led to accomplishments, most notably the ***Americans with Disabilities Act*** **(ADA)**, enacted in July 1990 in the United States.

The ADA states that the nation’s proper goals for individuals with disabilities are to assure:

- **Equality of opportunity**.
- **Full participation**.
- **Independent living**.
- **Economic self-sufficiency** for such individuals (ADA [a],).

E. Care Instrumentalized or Repudiated

The ADA legislation views the provision of care **instrumentally**.

The instrumental view is compared to dependence on farmers: most people do not encounter the farmers but pay a middleman, resulting in an **exchange between independent actors** in the marketplace.

Problems with Instrumental Care:

- Care providers must **co-exist** with the individuals they care for.
- Carers exert **direct control over the minutiae** of the life of their charge.
- The “middlemen” in care provision are the **arbiters** of whether and what kind of care is provided.
- The person in need of care is in the carer's power regarding **intimate details of life**.
- This intrusion can be **oppressive** and is experienced as being at odds with dignity when it turns the disabled person into a **supplicant**.

F. Capability Theory vs. Autonomy

Capability theory is somewhat exempt from the criticism that dignity is solely tied to autonomy.

- Capability theory offers a richer conception where dignity is tied to **freedom of functioning** or a set of capabilities.

- However, these capabilities presuppose a **capacity to act** on the freedoms or capabilities that are socially available.
- Some people with disabilities only possess these capabilities (or a subset of them) when they can **depend on others for care**.

G. The Stigma of Dependency

In a world where independence is the norm of human functioning, if impairment requires a carer, **care (and the carer) is stigmatized by dependency**.

The **British Council of Organisations of Disabled People** responds to this stigma:

- The need to be “looked after” may describe how non-disabled people perceive disabled candidates for “community care”.
- This perception has led to many disabled people becoming **passive recipients** of interventions.
- While passivity and dependency creation may benefit the careers of service providers, it is **bad news for disabled people and the public purse** (Cited in Oliver 1989, 13).
    - *Note:* A capability theory would be baffled by this view, as providing such services is exactly what it calls for.

III. The Necessity of an Ethic of Care

A. Problems with Extolling Independence

The author finds the approach that extols independence as the route to dignity and denigrates dependence to be problematic.

1. **Idealization as Fiction:** The emphasis on independence extols an idealization that is a **mere fiction** for all people, not just those with disabilities.
2. **Exclusion by Choice:** The emphasis on choice leaves out many people with disabilities for whom **making choices is problematic** due to seriously impaired cognitive function.
3. **Invisibility of Carers:** The denigration of care and dependency makes the **work and value of the carers invisible**, creating one oppression while trying to alleviate another.

B. Suggesting an Ethics of Inclusion

The author suggests that an ethics based on the autonomous individual, which eclipses dependence and models ethical interaction on **reciprocal exchanges between equals**, should **not be preferred** for constructing an ethics of inclusion. This approach needs the correction of an **ethic of care**.

- A theory of justice based on capabilities avoids some difficulties but **does not address dependency head-on** and still requires supplementation with an ethic of care.

C. Personal Investment and Example

The author’s position is situated first as a **parent** who encountered the issue of disability.

The author's daughter, Sesha:

Characteristic	Detail
Disposition	Sparkling young woman, lovely disposition.
Incapacitation	Very significantly incapacitated.
Physical Limitations	Incapable of uttering speech, reading, writing, or walking without assistance.
Dependence	Cannot do anything for herself without assistance. She is **fully dependent**.
Diagnoses	Mild cerebral palsy, severe intellectual disability, and seizure disorders.
Cognitive Function	Appears limited.
Joyful Pursuits	Loves music, bathing, good food, people, attention, and love.
Future Prognosis	At age 40, her total dependence is **quite certain not to alter much**.

The author learned about disability from the perspective of one who cannot speak for herself. This experience led to a **profound appreciation of care** as a practice and an ethic.

Sesha's disabilities threaten her with a **life of diminished dignity**. Only with **care of the highest quality** can she live a joyful and dignified life and be included and loved. The author's concern is that persons with **cognitive disabilities** and their **caregivers** not be left out of considerations of justice and moral personhood.

IV. Defining Care and Its Moral Scope

The author, as a resolute carer, is invested in the idea that care is an **indispensable, central good**. Care makes a life of dignity possible and is itself an **expression of a person's dignity**. The author argues elsewhere that the ability to **give and receive care is a source of dignity** for humans, no less than the capacity for reason (Kittay 2005).

The question remains: Can care be recuperated as a valued concept, and can an ethic of care be relevant to an ethics of inclusion for disabled persons?.

A. The Three Meanings of Care

The term "care" (in English) can denote a labor, an attitude, or a virtue.

1. Care as Labor

Care as labor is the work of **maintaining others and ourselves** when in need.

- It requires **skills** on the part of the carer and **uptake** on the part of the cared for.
- It is most noticed in its absence.
- It is most appreciated when it can be **least reciprocated**.

2. Care as Attitude

Care as attitude denotes a **positive, affective bond and investment** in another's well-being.

- The labor can be performed without the appropriate attitude.

- Without the attitude of care, the **open responsiveness** essential to understanding another's requirements is not possible.
- Labor unaccompanied by the attitude of care **will not be good care** (Kittay 1999).

3. Care as Virtue

Care as a virtue is a **disposition** manifested in caring behavior (the labor and attitude).

- It involves a **shift from the interest in our life situation to the situation of the other** (the one in need of care) (Gastmans, Dierckx de Casterle, and Schotsmans 1998, 53).
- Relations of affection facilitate care, but the disposition can be directed at **strangers as well as intimates**.

B. Normative Characteristics of an Ethic of Care

An ethic of care develops and refines the normative characteristics in the labor, attitude, and disposition.

Characteristic	Description
Moral Subject	Conceived as a **relational self**, constituted in part by relationships important to a person's identity.
Moral Relations	Occur not only between equals (who voluntarily entered the relationship) but also among **those not equally situated or empowered**. Individuals may find themselves in relationships they did not choose (e.g., child-parent relation).
Moral Deliberation	Requires not reason alone, but also **empathy, emotional responsiveness, and perceptual attentiveness**.
Moral Scope	While often limited to intimate settings, it can tread in areas usually occupied by **justice**, especially where justice practices are inadequate to cover **contextual and narrative complexities**.
Moral Harm	Understood less as the **violation of rights** and more as the consequence of **failures in responsibility and responsiveness**. The aim is to avoid the **severing of valued connections**, not the clash of interests.

An ethic of care aims at an **ethics of inclusion**, including all within a network of valued members.

V. Addressing Critiques: Strengths in Alleged Weaknesses

Care-based ethics has been criticized as unsuitable for an ethics of inclusion. The author argues that these critiques highlight what is valuable about an ethic of care for disability issues.

A. Critique 1: Care Ethics as a "Slave Morality"

The Charge

If the model of caring relations is work traditionally expected of women and part of their subjugation, an ethics based on caring labor might be a **"slave morality"** (as Nietzsche would have it). Can a group struggling to emerge from subordinate status, like disabled persons, usefully adopt it?.

The Reply

An ethic that springs from the labor of subjugated persons shows that the **subordinated do have a voice**. This voice can **reveal value** where none was previously acknowledged and prevent newly empowered people from colluding with the values used in their own subjection.

The Problem of Instrumentalizing Carers: Extolling independence for the physically disabled can inadvertently lead to habits mimicking privileged groups. If Judy Heumann defines independence as a "mind thing," we must ask about those who perform the **"body things"** (washing, dressing, toileting). The carers (called the **"moral proletariat"** by Annette Baier (1995, 53)) lose independence and control when they are **mere instruments** of another's independence (Kittay 2000).

Better Alternatives Proposed:

1. **Acknowledge dependency** as a feature of all human life.
2. Develop relationships that are genuinely caring and respectful.
3. Relationships of dependency should include **affective bonds** that transform unpleasant intimate tasks into times of **trust and demonstrations of trustworthiness**.
4. Care relationships must be understood as genuine relationships involving labor that is due **just compensation and recognition**.

Viewing people as moving in and out of dependence relationships makes the disabled person's need for assistance **not the exception**, but a possibility **inherent in being human**. Societies should be structured to accommodate **inevitable dependency** within a dignified, flourishing life for both the cared for and the carer. Caregiving work is the realization of the conception of the self-in-relation, achieved by giving care generously and receiving it graciously.

B. Critique 2: Relations of Care as Relations among Unequals

The Charge

The typical paradigm (mother/child relation) is often criticized as unsuitable for relationships between disabled adults and care providers. Dependency implies **power inequalities**, which a care-based ethics appears to embrace rather than challenge.

The Reply

Adults are **not always equals**; they are not equally situated or empowered when incapacitated, ill, or facing experts with greater power.

The "Sham" of Equality (Annette Baier): Baier criticizes the **"sham"** in the "'promotion' of the weaker so that an appearance of virtual equality is achieved". This includes treating children as adults-to-be or the ill/dying as continuers of their "earlier more potent selves". While this pretense may offer protection, it masks the question of **what our moral relationships *are* to those who are our superiors or our inferiors in power**.

- A morality relying on this pretense, if not supplemented, may leave people "unfit" to be anything other than "ones who have no interest in each others' interests," lacking adequate moral resources to deal with **genuine inequalities of power and situation**.

The urgencies of need (medical emergencies, equipment breakdown, disabling conditions) render disabled persons (and often their carers) **vulnerable**.

Alternatives to Autonomy/Paternalism: If autonomy is the norm of all human interaction, **paternalism** is the only alternative. Better alternatives are **cooperative, respectful, attentive relations** toward those who depend on us.

Distributive Justice: A model based on equal parties in social cooperation relies on reciprocity, a level playing field, and fair equality of opportunity. Assuming equality, negative rights suffice. However, differences in powers and situation require a **more positive conception of rights and responsibilities** toward the less situated/empowered.

- An ethic of care provides strong justification for **positive provisions** as entitlements, requiring carrying out **responsibilities** for another's flourishing.
- Ensuring equal opportunity is admirable only if people can take advantage of the opportunities.
- For persons with severe intellectual disabilities (like Sesha), no accommodations, anti-discrimination laws, or guarantees of equal opportunity can make them **self-supporting and independent**.
- Even the less disabled require the positive provision of **attendants, equipment, appropriate housing, specialized vans**, and an **attitude of care and concern**.
- Care ethics requires that the provision offered **can be taken up** by the person cared for; otherwise, it is **not care**.

C. Critique 3: Taking Care Ethics Public

The Charge

A care-based ethic is only suited for the **private domain** of intimate relations, failing to address the structural problems of the social model of disability.

The Reply

The idea that the **distribution of public resources can be a matter of care** counters the notion that care ethics is only private. Many scholars (Tronto 1993, Ruddick 1989, Slote 2001, Held 2006, Noddings 2002) have explored how society can govern social policy on a care paradigm.

- The virtues guiding intimate care can introduce **new values into the public domain**.
- The author has argued for a **public ethic of care** based on the idea that **we are all embedded in nested dependencies**.
- It is the **obligation and responsibility of the larger society** to enable and support dependency work taking place in intimate settings, as this is a major purpose of social organization.

VI. The Virtues of Acknowledged Dependence

The emphasis on dependence and connection in a care ethics should be viewed as **resources**, not limitations.

A. Dependence vs. Isolation

Carol Gilligan cites two definitions of dependency offered by high-school girls:

1. Opposition between **dependence and independence**.

2. Opposition of **dependence to isolation**.

The dominance of an ideology of independence eclipses the **positive experience of connectedness** that can be experienced through dependence.

B. Integrating Dependency into the Species Norm

Acknowledging the inevitable dependency linked to disability, and setting it within the context of the **inevitable dependencies of all sorts**, helps to **reintegrate disability into the species norm**.

Species Typicality	Details
Vulnerability	It is part of our species typicality to be vulnerable to disability.
Dependency Periods	It is part of our species typicality to have periods of dependency.
Caring Responsibility	It is part of our species typicality to be responsible to care for dependent individuals.
Human Uniqueness	Humans are unique (or nearly so) in the extent to which they **attend to dependency**, likely due to the **long dependency of youth**.

When society recognizes dependency as an aspect of being human, it can begin to confront the **fear and loathing of dependency and disability**. We can start embracing needed dependencies when we acknowledge how dependence on another **saves us from isolation** and provides the connections that make life worthwhile.

C. The Lesson of Trust (Richard Pryor Example)

American comedian **Richard Pryor**, who developed Multiple Sclerosis, stated in an interview (T. Gross, *Fresh Air*, 27 October 2000) that the MS was **"the best thing that had ever happened to me"**.

- Pryor explained that he had previously lived a life where he felt he could **never trust anyone**.
- Because he *must* depend on a person to walk from one end of a room to the other, he **learned how to trust for the first time** in his life.

The trust Pryor learned, and the need for trustworthiness, should be a feature of all lives.

D. Independence as Constructed

Dependency may be socially constructed, and unjust practices create unnecessary dependence. However, **independence is still more constructed**. We cannot turn away from this fact and rid ourselves of prejudices against disability.

Economic Rationale for Independence in the ADA: The last finding that prefaces the ADA reads: "[T]he continuing existence of unfair and unnecessary discrimination and prejudice [. . .] **costs the United States billions of dollars in unnecessary expenses resulting from dependency and nonproductivity**" (ADA, [a]). The independence touted is advanced as a **cost-saving measure**, not primarily as a commitment to the flourishing of each disabled person.

From her daughter Sesha, the author received a knowledge of the **“virtues of acknowledged dependency”** (MacIntyre 1999). This reveals the extraordinary possibilities in care relationships toward one who:

- Reciprocates, but **not in the same coin**.
- Cannot be independent, but makes a **gift of her joy and her love**.

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Ruddick, Sara	1989	*Maternal Thinking*. New York, NY: Beacon.	
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VIII. Author and Publication Information

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Term/Concept	Definition & Key Thinkers	Case Study/Example
Contextual Integrity (CI)	A theoretical benchmark for privacy asserting that adequate protection is maintained when norms specific to a context (e.g., medical, commercial) are upheld. This requires that information gathering and dissemination be appropriate for that context and obey governing norms of flow or distribution. **Key Thinker(s)/Tradition:** Helen Nissenbaum (developed the concept), Michael Walzer (theory is built upon his concept of spheres of justice).	**Public Records Online:** Placing public records (e.g., arrest records, property ownership) online and making them globally accessible breaches established norms of flow that previously restricted access to local geography and limited their aggregation by third parties.

Term/Concept	Definition & Key Thinkers	Case Study/Example
Informational Injustice	A moral grievance derived from Michael Walzer's spheres of justice, where a privacy violation is viewed as the morally inappropriate transfer or "cross-contamination" of personal data across separate spheres. It signifies a disrespect for the boundaries of spheres of access. **Key Thinker(s)/Tradition:** Michael Walzer, Helen Nissenbaum.	**Data Cross-Contamination:** A person accepts the use of their medical data for strictly *medical* purposes (curing diseases) but objects if that same data is used in the commercial sphere to deny a mortgage or used in the political sphere to refuse political office.
Moral Autonomy (Self-Presentation)	The capacity to shape one’s own moral biography and manage one's self-presentation, which requires zones of privacy to engage in "experiments in living" without the risk of public opinion rigging or prematurely fixing one's moral identity. **Key Thinker(s)/Tradition:** Liberal View, Williams (Moral Identification).	**Fixation of Moral Identity:** Data protection laws protect against the "fixation of one’s moral identity by others" through stereotyping or identity-management tools, ensuring the individual can view themselves not as a fixed reality (*sum* or "I am"), but as something becoming (*sursum* or "higher").
The Daily Me	A communications package that is entirely personalized and individually designed, where the consumer has unlimited power to choose exactly what content and points of view they want to see, and nothing more. **Key Thinker(s)/Tradition:** Nicholas Negroponte (coined the term), Cass Sunstein (analyzes the risks of complete individuation).	**Zatso.com:** This platform allows users to create ‘a personal newscast’ by telling the service precisely what TV news stories or topics (e.g., crime, weather, government/politics) they are interested in, resulting in a fully customized content universe.
Group Polarization	The phenomenon in which, after deliberation, groups of like-minded people are likely to move toward a more extreme point in the direction toward which they were already inclined. **Key Thinker(s)/Tradition:** Cass Sunstein.	**Predisposed Groups:** A group of moderately profeminist women becomes more strongly profeminist after discussion; conversely, whites predisposed to racial prejudice offer more negative responses after discussion. This effect is heightened on the internet when people think of themselves as part of a shared group identity.

Term/Concept	Definition & Key Thinkers	Case Study/Example
Epistemic Bubble	A state of informational isolation defined by **omission**, where relevant voices or opposing viewpoints are simply not heard or encountered by the members of the network. **Key Thinker(s)/Tradition:** C. Thi Nguyen (articulated the distinction).	**Filtered Social Media Feed:** An analogy for a bubble is a filtered social media feed where relevant information from outsiders is excluded, making contrary voices non-present. Such a bubble is considered fragile, easily shattered by exposure to the missing information.
Echo Chamber	A social structure defined by **active discrediting**, where relevant voices from the outside are actively heard but systematically rejected and dismissed as malignant, manipulative, or utterly untrustworthy. **Key Thinker(s)/Tradition:** C. Thi Nguyen, Kathleen Hall Jamieson and Frank Cappella.	**Evidential Pre-emption/Cult Analogy:** If a member is taught that the mainstream media is part of a conspiracy, then every critical news report targeting the chamber's leader becomes further proof of that conspiracy, paradoxically reinforcing the chamber’s worldview.
Relevance Realization (RR)	The process, proposed as the criterion of the cognitive, that explains how intelligent systems dynamically circumvent the problem of combinatorial explosion by zeroing in on the relevant information and structure necessary for good problem formulation and successful action. **Key Thinker(s)/Tradition:** John Vervaeke, Timothy P. Lillicrap, Blake A. Richards (proponents of the RR framework).	**The Frame Problem (Dennett's Robot):** A robot attempting to take action must intelligently ignore the indefinitely large list of potential, irrelevant side effects (e.g., calculating ambient temperature or air pressure changes) by **not even considering** most irrelevant information.
Social Model of Disability	A perspective that views disability as a **relationship** between individuals and their social environments. It argues that physical or mental characteristics become limiting primarily because of exclusionary social practices, norms, and built environments. **Key Thinker(s)/Tradition:** Minority Group Model, Human Variation Model, Michael Oliver.	**Height Variation Example:** In a hypothetical society with extreme height variation, justice requires constructing public spaces and vehicles to accommodate them, viewing the environmental modification as accommodating a wide range of human variation rather than compensating for an internal deficit.

Term/Concept	Definition & Key Thinkers	Case Study/Example
Relational Injustice / Justice of Recognition	One of two powerful senses of injustice; it refers to the injustice of certain forms of **treatment**, specifically treating people as social, moral, or political inferiors based on morally irrelevant characteristics, requiring changes to interpersonal relationships and social norms. **Key Thinker(s)/Tradition:** Nancy Fraser (Misrecognition), Elizabeth Anderson.	**Restaurant Service Entrance:** When a wheelchair user is required to use the service entrance of a restaurant, advocates argue this constitutes misrecognition, as it treats them as second-class customers, even if their need for physical access (distributive justice) is met by a back-alley ramp.
Ethics of Care (EOC)	A moral theory that rejects the normative ideal of independence, centering instead on the inevitable and pervasive fact of human **dependency** and connection. It conceives the moral self as relational and bases moral deliberation on empathy and responsiveness, focusing on failures of responsibility rather than rights violations. **Key Thinker(s)/Tradition:** Eva Feder Kittay (proponent for dependency and disability), Carol Gilligan, Annette Baier.	**The Fully Dependent Child:** For persons with severe intellectual disabilities (like Kittay's daughter, Sesha) who cannot achieve economic independence, the Ethics of Care justifies **positive provisions** (attendants, specialized equipment) as entitlements, ensuring that the labor of care is provided with the required attitude of dignity and respect.
Epistemic Injustice	A category of injustice in which a person is wronged in their capacity as an **epistemic subject** (a subject of knowledge or understanding). It can manifest as testimonial injustice (a person's testimony is given less credence than warranted) or hermeneutical injustice (a person's experiences are obscured from collective understanding). **Key Thinker(s)/Tradition:** Miranda Fricker.	**Quality-Adjusted Life Years (QALYs):** In health resource allocation, QALY calculations often discount the life-years of people with disabilities because the "quality adjustment" coefficient is based primarily on the judgments of able-bodied people, reflecting prejudicial attitudes and stereotypes about disabled life (testimonial and hermeneutical injustice).
Status Enhancement	A classification of equality-enhancing measures (distinct from compensation or personal enhancement) favored by some theorists. It involves altering the built environment and social practices (reconstruction) to reduce the social impact of individual differences on equality, promoting respect and full membership. **Key Thinker(s)/Tradition:** Jonathan Wolff.	**Reasonable Accommodation:** The legal requirement of reasonable accommodation, such as providing ramps, elevators, flexible schedules, or interpreters under the Americans with Disabilities Act (ADA), exemplifies status enhancement by modifying the social and physical environment.