
The Production Criterion: A Philosophical Framework for Non-Commodification in Bioethics

Akarsh Kumar Pandey

Working Paper in Philosophy · February 2026

First posted: PhilArchive

ABSTRACT

*Markets are commonly justified on the basis of consent: if two parties agree, the transaction is legitimate. This paper challenges that foundation. I develop and defend a production criterion for market eligibility: trade is legitimate only for entities that are produced through intentional human mediation. Entities that are 'given'—existing prior to any human creative act, including natural human organs, the body's reproductive capacity, and biological tissue—are ontologically ineligible for ownership and therefore for commodification, independently of consent, social meaning, or consequences. Drawing on Aristotle's *techne/physics* distinction and contemporary philosophy of action, I propose a graded continuum of biological mediation and apply it to organ markets, surrogacy, and emerging synthetic biology. The criterion offers a structural account of non-commodification that supplements and partially grounds existing frameworks (Satz, Anderson, Radin) with an ontological foundation those frameworks have identified as necessary but have not supplied.*

Keywords: commodification · producibility · organ markets · bioethics · custodianship · synthetic biology · market ethics · non-commodification

This is a working paper circulated for discussion and comment. Please do not cite without permission.

The author welcomes correspondence at: pandeyakarsh3@gmail.com

Contents

Executive Summary

1. Introduction: The Limits of Consent

- 1.1 The Problem
- 1.2 The Research Question
- 1.3 Scope and Limitations
- 1.4 Roadmap

2. What is Production? A Philosophical Account

- 2.1 The Need for Grounding
- 2.2 Aristotle's *Techne/Physis* Distinction
- 2.3 Production and Human Agency
- 2.4 The Graded Continuum of Biological Mediation
- 2.5 The Irreversibility Condition
- 2.6 Preliminary Definition

3. Custodianship and Human Dignity

- 3.1 From Ownership to Custodianship
- 3.2 Engaging Kantian Dignity
- 3.3 German Dignity Discourse and EU Law
- 3.4 Custodianship vs. Stewardship

4. Organ Markets: Testing the Criterion

- 4.1 The Landscape of Organ Procurement
- 4.2 The Iranian Model: The Strongest Counterexample
- 4.3 Pro-Payment Arguments: Satz, Taylor, and Others
- 4.4 Black Markets and Harm Reduction
- 4.5 Surrogacy as Comparative Case

5. Synthetic Biology: Threshold Cases

- 5.1 The Emerging Landscape
- 5.2 When Does Mediation Become Constitutive?
- 5.3 The Problem of Provenance
- 5.4 Implications for Organ Shortages

6. Conclusion: Contributions, Limits, and Open Questions

- 6.1 What This Paper Has Argued
- 6.2 Limits of the Framework
- 6.3 Open Questions for Future Research
- 6.4 The Modest Contribution

Bibliography

Appendix: Glossary of Key Terms

Executive Summary

Research Question: What distinguishes entities that can be legitimately traded from those that cannot, and how does this distinction apply to organ markets and synthetic biology?

Core Argument: I develop and defend a production criterion for market eligibility: trade is legitimate only for entities that are produced through intentional human mediation. Entities that are 'given' — including natural human organs — cannot be owned and therefore cannot be traded. This criterion offers a structural clarification of non-commodification debates in bioethics.

Method: Conceptual analysis, normative argumentation, engagement with empirical literature, case-based application.

Scope: This paper focuses exclusively on:

- Organ markets (natural organs, compensation schemes, trafficking)
- Surrogacy (as a secondary, comparative case)
- Synthetic biology (lab-grown organs, cultured tissue, threshold cases)

Contribution: A philosophically grounded account of production that:

- Distinguishes production from facilitation, cultivation, and natural growth
- Replaces rigid binaries with a graded continuum of biological mediation
- Engages the strongest counterarguments (Iranian organ model, regulated compensation)
- Provides threshold analysis for emerging synthetic biology cases

1. Introduction: The Limits of Consent

1.1 The Problem

Markets are often justified on the basis of consent: if two parties agree, the transaction is legitimate. This principle dominates bioethical debates about organ sales, surrogacy, and tissue commodification. Yet consent alone cannot settle whether certain things should be for sale. A contract to sell what cannot be owned—a kidney, a womb, a child—rests on a foundation that consent cannot provide.

1.2 The Research Question

This paper asks: *What distinguishes entities that can be legitimately traded from those that cannot?* I propose that the answer lies in producibility: whether the entity is brought into being through intentional human mediation.

1.3 Scope and Limitations

This inquiry is restricted to bioethical contexts:

- **Primary case:** Organ markets (natural organs, compensation, trafficking)
- **Secondary case:** Surrogacy and reproductive arrangements
- **Threshold case:** Synthetic biology (lab-grown organs, cultured tissue)

Broader questions about land, data, gambling, and temporal commons are acknowledged but set aside as future research. The aim is depth, not comprehensiveness.

1.4 Roadmap

Chapter 2 develops the production criterion, engaging metaphysical questions about agency, mediation, and natural process. Chapter 3 situates the criterion within philosophical debates about dignity and custodianship. Chapter 4 tests the criterion against organ markets, engaging counterarguments. Chapter 5 examines synthetic biology as a threshold case. Chapter 6 concludes with contributions, limits, and open questions.

2. What is Production? A Philosophical Account

2.1 The Need for Grounding

The claim that 'only what is produced can be traded' requires a defensible account of production itself. This chapter provides that foundation.

2.2 Production vs. Natural Process: Aristotle's *Techne/Physis* Distinction

Aristotle's distinction between *techne* (art, craft, making) and *physis* (nature, self-originating growth) provides a starting point. For Aristotle:

- *Physis*: Things that have within themselves the principle of their own coming-to-be and passing away (e.g., a tree, a human, an organ) (*Physics*, II.1, 192b13)
- *Techne*: Things whose origin lies in the maker, not in themselves (e.g., a house, a bed, a machine) (*Physics*, II.1, 192b29)

Natural organs belong to *physis*; they are not made but grow. This does not settle the ethical question, but it clarifies the ontological distinction.

2.3 Production and Human Agency: Contemporary Philosophy of Action

Building on Anscombe's account of intentional action (1957) and Thompson's analysis of life and practical thought (2008), I distinguish:

- **Intentional governance:** The agent's purpose structures the process
- **Causal control:** The agent can initiate, modify, or terminate the process
- **Mediation:** The process occurs through means the agent designs or selects

These are matters of degree, not kind—leading to the graded account below.

2.4 The Graded Continuum of Biological Mediation

Rather than a rigid binary (produced vs. given), I propose a continuum:

Degree	Mode	Example	Tradability
0	Pure natural unfolding	Natural kidney growth	Non-tradable
1	Facilitation	Providing nutrients, avoiding harm	Non-tradable
2	Cultivation	Selective breeding, optimizing conditions	Threshold
3	Assisted continuation	IVF, gestation support	Threshold
4	Directed mediation	Tissue engineering, scaffold-based growth	Threshold
5	Synthetic construction	Lab-grown organ from designed cells	Tradable

The threshold for tradability lies where human intentional governance becomes *constitutive* of the entity's existence, not merely facilitative.

2.5 The Irreversibility Condition

Production also requires that the process not irreparably damage un-produced structures. This has two dimensions:

- **Ecological:** Does production destroy or preserve the generative source?
- **Human:** Does production impair the agency or integrity of any human subject?

Applied to organs: removing a kidney from a living donor does not produce the kidney; it transfers a given structure, potentially damaging the donor. This violates the irreversibility condition.

2.6 Preliminary Definition

Production is intentional human mediation that is constitutive of an entity's existence, where the process preserves the structural integrity of its sources and does not impair human agency. This is a matter of degree, with threshold cases requiring careful analysis.

3. Custodianship and Human Dignity

3.1 From Ownership to Custodianship

If natural organs are not produced, what is our relationship to them? I propose **custodianship** as an alternative to self-ownership. Custodianship means:

- We are entrusted with our bodies, not their owners
- We may use, care for, and protect them
- We may not alienate or commodify them
- We hold them in trust for...? This is an open question (dignity? the divine? future selves? humanity?)

3.2 Engaging Kantian Dignity

The custodianship model aligns with Kant's injunction against treating humanity merely as means. Kant's Formula of Humanity prohibits using persons as things (Kant, 1785/1996, 4:429); commodifying organs arguably does exactly that. However, Kant's framework requires refinement:

- Does selling a kidney necessarily treat oneself merely as a means?
- What about regulated, compensated donation?
- How do we distinguish use from mere instrumentalization?

These questions are engaged, not settled, in this chapter.

3.3 German Dignity Discourse and EU Law

The German Basic Law's protection of human dignity (Art. 1 GG) has generated extensive jurisprudence on commodification. The Constitutional Court's decisions on surrogacy, embryo protection, and organ donation provide a legal-philosophical resource for the custodianship model.

Key insight: Dignity is not only about autonomy but about *non-availability*—the recognition that certain aspects of persons are not at their own disposal for exchange.

3.4 Custodianship vs. Stewardship

Custodianship differs from environmental stewardship: stewardship typically concerns external nature, while custodianship concerns the self in relation to its own givenness. Both reject ownership but for different reasons. This distinction matters for the synthetic biology cases below.

4. Organ Markets: Testing the Criterion

4.1 The Landscape of Organ Procurement

The analysis proceeds across four procurement models:

- Deceased donation
- Living donation (related, unrelated, altruistic)
- Regulated compensation models (Iran, US pilot programs)
- Black markets and trafficking

Each raises different questions for the production criterion.

4.2 The Iranian Model: The Strongest Counterexample

Iran operates a regulated, state-compensated living kidney donation program. Proponents claim it has eliminated waiting lists and reduced black markets. If this model produces stable, non-exploitative outcomes, it challenges the production criterion.

Analysis: The Iranian model does not produce kidneys; it facilitates transfer of given structures. The question is whether compensation and regulation can make such transfer ethical despite ontological ineligibility.

Reply: The production criterion predicts that even regulated markets will exhibit exploitation and dignity erosion. Evidence is mixed: quantitative studies show Iranian donors report satisfaction, but long-term outcomes are understudied; critics note persistent poverty among donors and lack of follow-up care; and the model's uniqueness (Shi'a jurisprudence, state monopoly) limits generalizability.

Conclusion: The Iranian case does not falsify the criterion but demands refinement of the distinction between transfer and trade.

4.3 Pro-Payment Arguments: Satz, Taylor, and Others

Debra Satz argues that organ markets can be acceptable if they address background injustice. James Stacey Taylor defends a strong self-ownership view. These arguments are engaged directly.

Satz's concern: Markets are problematic when they are 'noxious' — when they undermine equality, exploit vulnerability, or corrupt important values (Satz, 2010, pp. 94-95). Regulated markets might avoid these features.

Reply: The production criterion offers a structural reason why even non-noxious markets fail: they commodify what was never produced. This supplements Satz's consequentialist concerns with an ontological foundation.

4.4 Black Markets and Harm Reduction

Some argue that prohibition drives trafficking underground; regulated markets would reduce harm.

Reply: This is an empirical claim. Evidence from India (Goyal et al., 2002) suggests that even legal markets, before prohibition, produced exploitation. That study found that 86% of sellers experienced a decline in health after selling, and 79% reported that they regretted the decision. The production criterion predicts that commodification itself, not just illegality, generates harm. This is testable.

4.5 Surrogacy as Comparative Case

Surrogacy raises parallel questions:

- The womb is a given structure
- The child is not produced but conceived
- Pregnancy is facilitated, not manufactured

Application: Commercial surrogacy commodifies reproductive capacity without producing it. Altruistic surrogacy, where only medical expenses are compensated, may be compatible with

custodianship.

Threshold case: Artificial wombs (ectogenesis) would shift the analysis. If gestation becomes fully mediated, the resulting child might be 'produced' in the relevant sense—raising entirely new questions.

5. Synthetic Biology: Threshold Cases

5.1 The Emerging Landscape

The following technologies challenge the production criterion by blurring the line between given and made:

- Lab-grown organs (organoids, decellularized scaffolds)
- 3D bioprinted tissues
- Cultured meat (as analogous case)
- Chimeric organs (human-animal hybrids)

5.2 When Does Mediation Become Constitutive?

Drawing on the continuum from Chapter 2, the following threshold analysis applies:

Technology	Degree of Mediation	Analysis
Decellularized scaffold + patient cells	High mediation, given scaffold	Threshold—scaffold is given, cells are given, but assembly is produced
3D bioprinted organ	Very high	All components are produced or ethically sourced; likely tradable
Organoid from induced pluripotent stem cells	High	Cells are given (donor), but transformation is mediated; threshold
Chimeric organ (human cells in pig)	Complex	Hybrid organ; whose production? Requires new analysis

5.3 The Problem of Provenance

Even if an organ is lab-grown, its cellular origins may be given. The derivative origin question: Does using non-tradable inputs (donated cells) taint the final product?

Proposed principle: A utility is tradable if all inputs were either (a) themselves produced, or (b) given entities used with custodial consent and without structural damage. This allows donation-based cell lines to ground tradable products, provided consent is genuine and donors are not exploited.

5.4 Implications for Organ Shortages

If lab-grown organs become viable, the production criterion predicts: they should be tradable (unlike natural organs); this could address shortages without commodifying bodies; but vigilance is needed about cell sourcing. This is a policy-relevant implication of the framework.

6. Conclusion: Contributions, Limits, and Open Questions

6.1 What This Paper Has Argued

- The production criterion offers a structural account of market eligibility grounded in the metaphysics of agency and mediation
- Custodianship provides an alternative to self-ownership that aligns with dignity discourse
- Applied to organ markets, the criterion predicts exploitation even in regulated contexts
- Synthetic biology creates threshold cases that refine and test the framework

6.2 Limits of the Framework

This paper does not claim to:

- Settle all commodification debates (e.g., data, land, time are excluded)
- Provide a complete theory of justice in healthcare
- Offer policy prescriptions without empirical context
- Resolve deep metaphysical disagreements about agency and nature

The production criterion is a proposal, not a proof. It requires testing against cases, refinement through critique, and humility about its scope.

6.3 Open Questions for Future Research

- Does the framework extend to intellectual property? (Ideas are produced but not tangible)
- How should we understand chimeric entities? (Multiple species, multiple agencies)
- Can custodianship be institutionalized? (Legal frameworks, enforcement)
- What about global variation in ontological commitments? (Engaging non-Western traditions)

6.4 The Modest Contribution

This paper offers a structural clarification of non-commodification in bioethics. It does not revolutionize markets or redefine liberty. It provides a tool for thinking clearly about what belongs in exchange and what does not—a tool that can be tested, refined, or discarded as evidence and argument demand.

Bibliography

Anscombe, G. E. M. (1957). *Intention*. Harvard University Press.

Aristotle. (1984a). *Nicomachean Ethics* (W. D. Ross, Trans.). In J. Barnes (Ed.), *The Complete Works of Aristotle*. Princeton University Press.

Aristotle. (1984b). *Physics* (R. P. Hardie and R. K. Gaye, Trans.). In J. Barnes (Ed.), *The Complete Works of Aristotle*. Princeton University Press.

Goyal, M., Mehta, R. L., Schneiderman, L. J., and Sehgal, A. R. (2002). Economic and health consequences of selling a kidney in India. *JAMA*, 288(13), 1589-1593.

Kant, I. (1785/1996). *Groundwork of the Metaphysics of Morals* (M. Gregor, Trans.). Cambridge University Press.

Kant, I. (1996). *The Metaphysics of Morals* (M. Gregor, Trans.). Cambridge University Press.

Sandel, M. J. (2012). *What Money Can't Buy: The Moral Limits of Markets*. Farrar, Straus and Giroux.

Satz, D. (2010). *Why Some Things Should Not Be For Sale: The Moral Limits of Markets*. Oxford University Press.

Scheper-Hughes, N. (2003). Keeping an eye on the global traffic in human organs. *The Lancet*, 361(9369), 1645-1648.

Taylor, J. S. (2005). *Stakes and Kidneys: Why Markets in Human Body Parts Are Morally Imperative*. Ashgate.

Thompson, M. (2008). *Life and Action: Elementary Structures of Practice and Practical Thought*. Harvard University Press.

Appendix: Glossary of Key Terms

Term	Definition
Production	Intentional human mediation constitutive of an entity's existence, preserving source integrity
Custodianship	Relationship of entrusted use without ownership, applied to given structures
Given	Entities whose existence precedes and does not depend on human mediation
Mediation	The degree to which human agency structures a process or entity
Threshold	The point on the mediation continuum where an entity becomes tradable
Derivative Origin	The requirement that inputs to production be ethically sourced