



**PROPERTY WITHOUT  
PHYSICALITY: TOWARDS A  
DOCTRINAL FRAMEWORK FOR  
INTELLECTUAL PROPERTY,  
DIGITAL ASSETS, AND THE  
NUMERUS CLAUSUS PRINCIPLE IN  
INDIAN LAW**

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**Abstract**

The *numerus clausus* principle — that property rights exist only in legally recognised, standardised forms — represents one of the most fundamental organising concepts in the law of property. Yet despite its doctrinal salience, this principle has never been explicitly theorised within the Indian property law tradition. This lacuna has become increasingly consequential: Indian courts are now confronted with an accelerating proliferation of novel quasi-property claims with respect to domain names, databases, cryptocurrency, non-fungible tokens (NFTs), carbon credits, and virtual real estate without any principled theoretical framework to guide recognition or rejection.

This paper makes three related contributions. First, it recovers and applies Thomas Merrill and Henry Smith's foundational *numerus clausus* scholarship to the Indian property law context, demonstrating that the Transfer of Property Act 1882 and the intellectual property statutes already embody an implicit, untheorised version of the principle. Second, it offers

a critical examination of significant Indian judicial decisions confronting novel property claims, exposing the doctrinal incoherence generated by the absence of a principled framework. Third, and most distinctively, it proposes an original taxonomic instrument — the Digital Property Eligibility Matrix (DPEM) — comprising four criteria derived from the information-cost rationale of the *numerus clausus* and calibrated to the constitutional and statutory architecture of Indian property law. Applying this matrix across seven categories of emergent digital interests, the paper constructs the first systematic taxonomy of novel property claims in Indian law, identifying which interests satisfy the doctrinal requirements of property and which remain in a pre-legal or regulatory domain pending legislative action.

**I. INTRODUCTION**

When Lord Wilberforce declared, in *National Provincial Bank Ltd v Ainsworth*, that a right must be 'definable, identifiable by third parties, capable in its nature of assumption by third parties, and have some degree of permanence or stability' before it may be admitted into the category of property,<sup>1</sup> he was articulating what the common law had long intuited and what civilian legal systems had expressed far more candidly: that property rights are not infinitely malleable. They must conform to a closed, socially legible menu of legally recognised forms. This is the essence of what scholars call the *numerus clausus* principle.

That intuition has never found explicit doctrinal expression in Indian property law. The courts of India have proceeded largely by analogy and common law borrowing when confronted with novel property claims, producing a body of case law that is, in individual decisions, doctrinally energetic but, as a whole, theoretically adrift. This paper argues that the resulting incoherence is not merely aesthetically unsatisfying for property law scholars — it carries material costs of precisely the kind that Professors

<sup>1</sup>*National Provincial Bank Ltd v Ainsworth* [1965] AC 1175 (HL) 1248 (Lord Wilberforce).



Thomas Merrill and Henry Smith identified in their foundational article, ‘Optimal Standardization in the Law of Property: The Numerus Clausus Principle’,<sup>2</sup> as the inevitable consequence of allowing property rights to proliferate in uncontrolled, idiosyncratic forms: the costs of measuring, discovering, and transacting around undisclosed or unpredictable property interests fall on uninformed third parties who had no role in creating them.

The economic and legal landscape that Indian courts must navigate has changed dramatically since the Transfer of Property Act 1882 was enacted. Courts are now regularly asked to grant injunctions, attachment orders, and declarations of proprietary entitlement in relation to interests that the framers of that Act could not have imagined: a domain name registered with the Internet Corporation for Assigned Names and Numbers (ICANN), a database compiled by a pharmaceutical company through proprietary research, a cryptocurrency wallet holding Bitcoin, a non-fungible token representing purported ownership of digital art, a carbon credit issued under the Indian Carbon Market framework, and a plot of ‘virtual land’ in a blockchain-based metaverse. Each of these presents, in acute form, the question that the *numerus clausus* principle is designed to answer: which interests are, and which are not, the kind of thing that the law of property recognises and protects?

The stakes are high. An overly expansive judicial approach — one that recognises every commercially significant interest as property upon demand — generates information-cost externalities: third parties dealing with assets must investigate an indeterminate universe of idiosyncratic property claims. An overly restrictive approach leaves commercially important interests without legal protection, retarding innovation and investment. The challenge for Indian law is to find a principled middle ground, and the *numerus clausus*

principle provides precisely the theoretical architecture for doing so.

The paper proceeds as follows. Part II examines the theoretical foundations of the *numerus clausus* principle, drawing primarily on Merrill and Smith’s Yale Law Journal article and situating the principle within a broader account of property as a system of in rem rights. Part III maps the constitutional and statutory architecture of Indian property law, demonstrating that the existing framework embodies an implicit, untheorised *numerus clausus*. Part IV surveys the most significant categories of emergent property claims before Indian courts and regulators, exposing the doctrinal inconsistency of existing adjudication. Part V develops the affirmative case for explicit *numerus clausus* reasoning in Indian property law. Part VI introduces the Digital Property Eligibility Matrix and applies it across seven categories of emergent digital interests. Part VII offers conclusions and recommendations for judicial and legislative action.

## II. THE NUMERUS CLAUSUS PRINCIPLE: THEORETICAL FOUNDATIONS

### A. Property Rights as In Rem Entitlements

The starting point for any discussion of the *numerus clausus* is the distinction between property rights and contractual rights. A contractual right is, paradigmatically, in personam: it creates obligations between specific parties and binds no one else. A property right, by contrast, is in rem: it creates a duty of non-interference in all persons who might come into contact with the thing to which the right attaches — strangers, successors in title, and the world at large.<sup>3</sup> This in rem character is what gives property rights their distinctive social force and, correlatively, their distinctive social cost.

<sup>2</sup>Merrill and Smith, ‘Optimal Standardization in the Law of Property: The Numerus Clausus Principle’

(2000) 110 *Yale Law Journal* 1 [hereinafter Merrill & Smith, ‘Numerus Clausus’].

<sup>3</sup>Merrill & Smith, ‘Numerus Clausus’ (n 1) 3.



Hohfeld's analytical decomposition of legal relations illuminates the structure of this cost.<sup>4</sup> When an owner of property has a Hohfeldian claim-right of exclusion against all others, each of those 'others' bears a correlative duty not to interfere. The duty is not owed to the owner under any agreement; it arises simply from the existence of the property right and binds every person in the world. This means that every person in the world must, in principle, be aware of the content of that property right in order to know what is required of them. The information cost of a property right — unlike the information cost of a contract, which binds only identified parties — is therefore borne by an indefinite universe of third parties.

Penner, writing from within a different theoretical tradition, captures the same point when he identifies excludability as the master concept of property: a property right is a right to a thing against the world, as distinct from a right against a person.<sup>5</sup> The right to exclude strangers — not merely the right to use — is the doctrinal signature of a property right. This is also why, as Radin has observed, property and personhood become linked: the things from which we can legitimately exclude others become, over time, constitutive of our social and economic identity.<sup>6</sup>

### B. Information Costs and the Standardization Tradeoff

Merrill and Smith's great insight is to connect the in rem character of property rights to a specific economic rationale for restricting their variety. Because property rights bind the world, the costs of learning about them fall on the world.<sup>7</sup> If legal systems permitted property holders to customize their rights in unlimited ways — appending novel conditions, obligations, and encumbrances to their title in any configuration they

desired — each person transacting in or around any asset would be required to investigate what bespoke arrangements might have been attached to it. These 'measurement costs' are not borne by the parties who created the idiosyncratic arrangement; they are externalized onto every third party who subsequently encounters the asset.

The *numerus clausus* principle is the law's institutional response to this externality. By restricting the forms that property rights may take to a closed menu of standardised types — sale, mortgage, lease, charge, easement, and so forth — the law reduces the information burden on third parties: they need only investigate whether one of a known, finite set of recognized property interests encumbers an asset. They do not need to imagine or inquire about arrangements that have no legal existence.<sup>8</sup>

Merrill and Smith acknowledge that standardization is not without cost. There are transactions parties might wish to conduct that the closed list of property forms does not accommodate — arrangements that would be value-maximizing for the immediate parties but that the law refuses to enforce as property. This is the 'standardization cost': the loss from foregone customization.<sup>9</sup> The *numerus clausus* strikes an implicit balance between these two types of cost: the information-cost savings from standardization must exceed the standardization costs of the closed list for the principle to be welfare-enhancing. Merrill and Smith's contribution is to show that, across the historical development of property law, this balance has consistently been struck in favour of a relatively closed list — and to explain why this is rational rather than historically contingent.

<sup>4</sup>WN Hohfeld, 'Some Fundamental Legal Conceptions as Applied in Judicial Reasoning' (1913) 23 *Yale Law Journal* 16.

<sup>5</sup>JE Penner, *The Idea of Property in Law* (Oxford University Press 1997) 68–74.

<sup>6</sup>Margaret Jane Radin, 'Property and Personhood' (1982) 34 *Stanford Law Review* 957, 971–972.

<sup>7</sup>Merrill & Smith, 'Numerus Clausus' (n 1) 8–14.

<sup>8</sup>ibid 26–38.

<sup>9</sup>ibid 40–42. The tradeoff may be stated: the marginal social benefit of an additional customised property form (allowing optimal tailoring of resource use) must be weighed against the marginal social cost in terms of the information-search burdens imposed on all third parties interacting with that resource.



This framework has important implications for the recognition of novel property forms. It suggests that new property types should not be created by courts acting unilaterally in response to transactional demand, because judicial creation of new property forms fails to provide the notice that the in rem bindingness of property rights requires. Novel forms should instead emerge from legislative action — visible, publicised, and accompanied by the explanatory record needed to give third parties the notice that property law demands.<sup>10</sup> Merrill and Smith make this point explicitly in a subsequent article: the creation of new property forms by parties to a single transaction imposes costs on all other persons in the legal system who had no role in that transaction, because they must now investigate and account for the newly created property form.<sup>11</sup>

### C. Numerus Clausus in the Common Law Tradition

The principle is most explicitly stated in civil law jurisdictions, where it appears in statutory form. In common law systems, it operates implicitly, through judicial reluctance to create new property types outside recognized categories. The canonical English articulation remains Lord Wilberforce's formulation in *National Provincial Bank Ltd v Ainsworth*.<sup>12</sup>

*Before a right or interest can be admitted into the category of property, or of a right affecting property, it must be definable, identifiable by third parties, capable in its nature of assumption by third parties, and have some degree of permanence or stability.*

This formulation operationalises the information-cost rationale in the language of common law adjudication. The requirements of definability and third-party identifiability are precisely the conditions that must be satisfied if third parties are to learn about and adjust to a property right without incurring prohibitive search costs. The requirement of 'permanence or stability' reflects the temporal dimension of information costs: a right that evaporates unpredictably cannot be factored into the planning of third parties even if they discover it.

It should be noted that the *numerus clausus* does not require that the menu of property forms remain frozen forever. Legal systems do recognize new property forms over time. The critical point is that recognition should occur through a process — typically legislative — that provides the systemic notice that the in rem bindingness of property rights demands.<sup>13</sup> The principle operates not as a barrier to legal development but as a direction about how and by whom that development should occur.

## III. PROPERTY IN INDIAN LAW: CONSTITUTIONAL AND STATUTORY ARCHITECTURE

### A. The Constitutional Foundation: Article 300A

The constitutional status of property in India underwent its most significant transformation through the Constitution (Forty-Fourth Amendment) Act 1978.<sup>14</sup> The Amendment deleted Article 19(1)(f) (the fundamental right to acquire, hold and dispose of property and Article 31, which had guaranteed compensation on compulsory acquisition and given rise to decades of contentious litigation) and

parties, which is the core market-failure justification for legislative standardisation).

<sup>10</sup>Thomas W Merrill and Henry E Smith, 'What Happened to Property in Law and Economics?' (2001) 111 *Yale Law Journal* 357, 385–386.

<sup>11</sup>*ibid* 360–362 (arguing that parties to individual transactions cannot internalise the information costs their novel property arrangements impose on third

<sup>13</sup>Penner (n 4) 68.

<sup>14</sup>The Constitution (Forty-Fourth Amendment) Act 1978.



substituted the current Article 300A: ‘No person shall be deprived of his property save by authority of law.’<sup>15</sup>

The implications of this transformation for the present analysis are profound. First, the constitutional protection of property is now contingent on the existence of ‘property’ in the first place — a question that Article 300A does not itself answer. Second, the requirement that deprivation occur only by ‘authority of law’ has been interpreted by the Supreme Court to require a valid law, not mere executive action.<sup>16</sup> Third, and most importantly for present purposes, the constitutional guarantee presupposes that the category of ‘property’ is defined somewhere, in statute or in common law, before constitutional protection can attach. This is a structural argument for the *numerus clausus*: the forms of property must be legally defined before they can attract constitutional protection.

The Supreme Court has confirmed that Article 300A extends to incorporeal property rights, including intellectual property rights and other intangibles.<sup>17</sup> However, the Court has not developed any principled test for determining what constitutes ‘property’ for this purpose. The result is that the constitutional guarantee is parasitic on whatever the ordinary law recognizes as property, making the definition of property in ordinary law a matter of first-order constitutional significance.

## B. The Transfer of Property Act 1882: An Implicit Numerus Clausus

The Transfer of Property Act 1882 (TPA) is the primary statute governing the transfer of property in India. Section 5 defines ‘transfer of property’ as the act of conveying property in present or future to one or more other living persons.<sup>18</sup> The Act proceeds to specify, in separate chapters, the rules governing each recognized form of property transfer: sale (ss 54–57), mortgage (ss 58–99), charges (ss 100–104), leases (ss 105–117), exchanges (ss 118–121), gifts (ss 122–129), and transfers of actionable claims (ss 130–137).<sup>19</sup>

The TPA’s architecture embodies an implicit *numerus clausus*. By specifying the legal rules for each enumerated type of transfer, the Act implicitly forecloses the creation of novel forms of property transfer that do not conform to any recognized type. Courts applying the TPA have proceeded on this basis: the Act provides a relatively closed system of property interests, and courts have generally declined to imply new forms of property transfer outside it. What the TPA does not do — and what no Indian statute has done — is articulate the principle underlying this structure, explain its rationale, or provide criteria by which judges can evaluate claims to recognition outside the statutory scheme.<sup>20</sup>

This theoretical silence is precisely the gap that the present paper seeks to fill. The TPA was drafted for a

<sup>15</sup>Constitution of India, art 300A (inserted by the Constitution (Forty-Fourth Amendment) Act 1978, s 6).

<sup>16</sup>*Bishamber Dayal Chandra Mohan v State of Uttar Pradesh* AIR 1982 SC 33, where the Supreme Court held that ‘law’ in art 300A means a valid law, not mere executive action.

<sup>17</sup>See *Bishamber Dayal* (n 17). The Supreme Court has in subsequent decisions confirmed that art 300A protects all property rights, including incorporeal rights, but has not developed any test for determining what constitutes ‘property’ for this purpose: see *State of Haryana v Mukesh Kumar* (2011) 10 SCC 404.

<sup>18</sup>Transfer of Property Act 1882 (India), s 5.

<sup>19</sup>Transfer of Property Act 1882, ss 54, 58, 105, 118, 122, 130. The Act does not enumerate a general category of ‘property interests’; rather, it specifies the legal rules for each recognised form of transfer, thereby implicitly foreclosing recognition of novel forms outside the enumerated categories without legislative action.

<sup>20</sup>Transfer of Property Act 1882 (n 18)–(n 19). The TPA was based on the Third Report of the Indian Law Commission (1879) and was drafted specifically to codify and simplify the law governing transfers of immovable and some moveable property in India. Its structure — specifying the legal rules for each enumerated type of transfer — reflects a legislative *numerus clausus* choice.



world of immovable and moveable property; it says nothing about digital assets. When courts are asked to recognize property interests in cryptocurrency or NFTs, the TPA provides no guidance — not because it answers the question negatively, but because it was enacted before the question could have been conceived. The *numerus clausus* principle provides the theoretical framework needed to answer these questions consistently with the TPA's implicit architecture.

### C. Intellectual Property Statutes: Property in Intangibles

The Indian intellectual property regime comprises a family of statutes that collectively create property rights in a range of intangible assets. The Copyright Act 1957, as amended, defines 'literary work' to include 'computer programmes, tables and compilations including computer data bases',<sup>21</sup> and vests in authors and their assignees a bundle of exclusive rights constituting the copyright. The Patents Act 1970 creates a time-limited monopoly right in inventions, explicitly providing for assignment and transmission of patents.<sup>22</sup> The Trade Marks Act 1999 creates registered rights in marks that may be assigned like other property.<sup>23</sup>

Beyond the canonical IP statutes, the legislature has created additional regimes for specific categories of intangible assets: the Semiconductor Integrated Circuits Layout-Design Act 2000, the Geographical Indications of Goods (Registration and Protection) Act 1999, and the Protection of Plant Varieties and Farmers' Rights Act 2001.<sup>24</sup> Each of these creates a recognizably proprietary interest (a right to exclude others from using the protected subject matter) with defined incidents of assignment, licensing, and enforcement. They are, in the terms of the Merrill-Smith framework, examples of the legislature creating

new property forms through visible, noticeable action that places third parties on constructive notice of the existence and content of the right.

Read together, the TPA and the IP statutes demonstrate that Indian property law already operates on a *numerus clausus* model, albeit an implicit and untheorised one. The challenge is not to introduce the principle but to make it explicit, so that it can guide judicial and legislative responses to novel property claims that fall outside the existing statutory categories.

## IV. EMERGENT PROPERTY CLAIMS IN INDIAN ADJUDICATION: A CRITICAL SURVEY

### A. Domain Names: Quasi-Property Through Judicial Analogy

The treatment of domain names is the most developed chapter in the Indian judicial engagement with novel property claims. In *Yahoo! Inc v Akash Arora*,<sup>25</sup> the Delhi High Court granted an interim injunction restraining the defendant from operating under the domain name 'yahooindia.com', applying the law of passing off by analogy to the plaintiff's well-known mark. The Court recognised that a domain name serves as a business identifier and that its misappropriation could cause consumer confusion materially identical to conventional passing off.

The quasi-property character of domain names was further affirmed in *Tata Sons Ltd v Manu Kosuri & Ors*,<sup>26</sup> where the Delhi High Court granted an injunction protecting the plaintiff's name in the domain name context, and in *Rediff Communication*

<sup>21</sup>Copyright Act 1957 (India) s 2(o), s13(1)(a).

<sup>22</sup>Patents Act 1970 (India), s 2(1)(m).

<sup>23</sup>Trade Marks Act 1999 (India), s 2(1)(zb), s 37.

<sup>24</sup>The Semiconductor Integrated Circuits Layout-Design Act 2000 (India); the Geographical Indications of Goods (Registration and Protection)

Act 1999 (India); the Protection of Plant Varieties and Farmers' Rights Act 2001 (India).

<sup>25</sup>*Yahoo! Inc v Akash Arora* (1999) 19 PTC 201 (Del HC).

<sup>26</sup>*Tata Sons Ltd v Manu Kosuri & Ors* (2001) 23 PTC 265 (Del HC).



*Ltd v Cyberbooth*,<sup>27</sup> where the Bombay High Court held that domain names are ‘valuable corporate assets’ deserving legal protection.

The Supreme Court addressed the matter comprehensively in *Satyam Infoway Ltd v Sifynet Solutions Pvt Ltd*.<sup>28</sup> The Court held that internet domain names serve a business identification function equivalent to trade names and that misrepresentation in their use is actionable under the law of passing off.<sup>29</sup> The Court grounded protection explicitly in the law of tort, i.e. passing off rather than in any recognised property right, drawing the analogy to trade name protection.<sup>30</sup>

The doctrinal significance of *Satyam Infoway* for present purposes is twofold. On one hand, it demonstrates judicial readiness to recognise that economically significant digital interests deserve legal protection — a normatively sound impulse. On the other hand, it reveals the ad hoc character of the protection offered: the Court reached for the nearest available legal tool (passing off) without addressing whether domain names constitute property in a more fundamental sense, and without articulating any principle that would guide the treatment of the next novel digital interest to come before the courts.<sup>31</sup>

The consequence of this ad hoc approach is that the protection of domain names in Indian law is fragile and doctrinally incomplete. Passing off protects

against misrepresentation causing damage to goodwill; it does not protect against all interferences with a domain name interest. A domain name holder who suffers economic loss through wrongful transfer, unauthorised modification, or expropriation has no clear property law remedy, because no court has held that the domain name is property — only that certain uses of similar names are tortious.

### B. Data and Databases: Copyright Without Property

The legal treatment of data and databases in Indian law illustrates a different form of doctrinal incompleteness: the existence of some legal protection without the full incidents of property. Under Section 2(o) of the Copyright Act 1957, the definition of ‘literary work’ explicitly includes ‘computer programmes, tables and compilations including computer databases’.<sup>32</sup> Copyright therefore subsists in original databases as literary works, and the copyright holder enjoys the full bundle of exclusive rights enumerated in Section 14 of the Act.

The Supreme Court’s decision in *Eastern Book Company v D B Modak*,<sup>33</sup> however, introduced an important qualification: copyright in a compilation subsists only where the selection or arrangement reflects a ‘modicum of creativity’ — a threshold imported from the comparative jurisprudence of the United States Supreme Court. Raw data, however laboriously compiled, is not protected if its selection

<sup>27</sup>*Rediff Communication Ltd v Cyberbooth & Anr* AIR 2000 Bom 27.

<sup>28</sup>*Satyam Infoway Ltd v Sifynet Solutions Pvt Ltd* (2004) 6 SCC 145.

<sup>29</sup>*ibid* (the Court observing, by analogy to trade name protection, that domain names can serve a business identification function equivalent to trade names and that goodwill may attach to a domain name as it does to a trade name).

<sup>30</sup>*ibid* (the Court grounding domain name protection in the law of passing off and analogising domain names to trade names for the purpose of determining whether misrepresentation had occurred, without characterising the domain name as property per se).

<sup>31</sup>See the discussion in *Satyam Infoway* (n 24) [15]: the Court clarified that the trade mark law and the law of passing off have no direct application to domain names but may be applied by analogy — a formulation that reveals the court’s uncertainty about the primary doctrinal category.

<sup>32</sup>Copyright Act 1957, s 2(o) (n 20). Note that the copyright subsists in the original selection and arrangement of the compilation, not in the underlying data as such: see *Eastern Book Company v D B Modak* (2008) 1 SCC 1, where the Supreme Court applied a ‘modicum of creativity’ standard to determine subsistence of copyright in a compilation.

<sup>33</sup>*Eastern Book Company v D B Modak* (2008) 1 SCC 1.



and arrangement are entirely mechanical. This means that the most commercially valuable kind of dataset — a comprehensive, systematically collected body of data representing a significant capital investment — may attract no copyright protection precisely because its completeness (a virtue from the perspective of commercial utility) forecloses the selective arrangement that copyright requires.

The Digital Personal Data Protection Act 2023 creates an extensive regulatory framework for personal data, imposing obligations on Data Fiduciaries and creating rights for Data Principals.<sup>34</sup> However, the Act is a regulatory instrument, not a property statute. It does not vest proprietary rights in personal data in the individual; rather, it creates governance obligations in those who process personal data. The Information Technology Act 2000 similarly provides a functional definition of ‘data’<sup>35</sup> and remedial provisions for unauthorized access,<sup>36</sup> but does not create property rights in data as such. Indian law, therefore recognizes copyright property in original compilations but lacks any principled framework for addressing claims to property in raw data — a gap of increasing commercial significance as India’s digital economy grows.

### C. Cryptocurrency: Attachment Without Recognition

The legal status of cryptocurrency in India has been shaped primarily by regulatory conflict rather than property law adjudication. The Reserve Bank of India, by circular dated 6 April 2018, directed entities regulated by it to cease providing banking services to persons dealing in virtual currencies.<sup>37</sup> This was challenged before the Supreme Court by the Internet and Mobile Association of India, which contended that the circular was unconstitutional and disproportionate.

In *Internet and Mobile Association of India v Reserve Bank of India*,<sup>38</sup> the Supreme Court set aside the circular, holding it to be disproportionate. The Court found that the RBI had not demonstrated any actual or potential harm to regulated entities from the provision of banking services to cryptocurrency businesses, and that the sweeping prohibition failed the proportionality test accordingly.<sup>39,40</sup>

Crucially for present purposes, the Court in *IMAI v RBI* did not hold that cryptocurrency is property under Indian law. The judgment was decided entirely on the ground of proportionality within the RBI’s regulatory powers; the property law question was neither raised

<sup>34</sup>Digital Personal Data Protection Act 2023 (India), s 2(n) (defining ‘personal data’ as any data about an individual who is identifiable by or in relation to such data); the Act establishes obligations for Data Fiduciaries (ss 8–11) but does not create property rights in personal data as such.

<sup>35</sup>Information Technology Act 2000, s 2(1)(o) (defining ‘data’ as a ‘representation of information, knowledge, facts, concepts or instructions which are being prepared or have been prepared in a formalised manner, and is intended to be processed, is being processed or has been processed in a computer system or computer network’). This is a functional, not proprietary, definition.

<sup>36</sup>Information Technology Act 2000 (India), s 43A (providing compensation for body corporates that fail to implement and maintain reasonable security practices in relation to sensitive personal data or information).

<sup>37</sup>The RBI circular dated 6 April 2018 (RBI/2017-18/154) directed all entities regulated by the RBI to cease providing services to persons or entities dealing in virtual currencies, or to any exchanges or intermediaries.

<sup>38</sup>*Internet and Mobile Association of India v Reserve Bank of India* (2020) 10 SCC 274.

<sup>39</sup>*IMAI v RBI* (n 36) (the Court examining whether the RBI circular was a proportionate exercise of the Bank’s regulatory powers and whether regulated entities had suffered harm sufficient to justify the prohibition).

<sup>40</sup>*ibid* (the Court finding that the RBI had not demonstrated any harm, actual or potential, to regulated entities from continuing to provide banking services to cryptocurrency-related businesses, and holding the circular disproportionate on this ground).



in the terms of argument nor answered in the terms of the decision.<sup>41</sup> This creates a significant doctrinal void: the prohibition on banking services to crypto businesses has been removed, but the civil law status of cryptocurrency holdings remains undetermined.

In the enforcement context, the Enforcement Directorate has proceeded on the assumption that cryptocurrency constitutes attachable property under the Prevention of Money Laundering Act 2002 — an assumption illustrated by attachment proceedings against major cryptocurrency exchanges.<sup>42</sup> These proceedings assume, without explicitly deciding, that cryptocurrency is ‘property’ for the purpose of the proceeds-of-crime framework. However, regulatory and enforcement treatment does not constitute property law recognition: as the Merrill-Smith framework makes clear, property rights bind the world only when they are legally recognised in a form that gives the world notice of their existence and content.

The contrast with the approach adopted in English law is instructive. The UK Jurisdiction Taskforce, in its 2019 Legal Statement on Cryptoassets and Smart Contracts, concluded that cryptoassets satisfy the criteria for property under English law, relying primarily on Lord Wilberforce’s test from *Ainsworth*.<sup>43</sup> The Law Commission of England and Wales, in its 2023 Report on Digital Assets, went further, recommending recognition of a third category of personal property, beyond choses in possession and choses in action, specifically designed to

accommodate digital assets, including cryptocurrency and NFTs.<sup>44</sup> India has no comparable institutional analysis, and no comparable recommendation has been forthcoming from the Law Commission of India.

#### D. NFTs and Virtual Real Estate: The Pre-Legal Domain

Non-fungible tokens (NFTs) and virtual real estate represent the frontier of the emergent property problem. An NFT is a unique cryptographic token recorded on a blockchain, associated with a specific digital or physical asset. It is technically non-fungible — no two NFTs are identical — and ownership is controlled through the associated private key. The ownership of an NFT does not, however, confer any legal rights in the underlying asset by operation of law: whether the NFT holder acquires copyright, a licence, or merely a technical right to control the token depends entirely on the terms of the smart contract or any associated legal agreement, not on any general rule of property law.

Indian courts have not had occasion to adjudicate the property status of NFTs in any reported decision as of this writing. This is not merely an evidentiary gap; it reflects the deeper problem identified in this paper. In the absence of a principled *numerus clausus* framework, Indian law has no mechanism for evaluating whether NFTs satisfy the requirements for property recognition or for determining what legal incidents should attach to them if they do. The result is a regulatory vacuum in which significant

judicially untested at the level of a final adjudication by the Supreme Court or a High Court.

<sup>43</sup>UK Jurisdiction Taskforce, *Legal Statement on Cryptoassets and Smart Contracts* (LawTech Delivery Panel, November 2019) [48]–[58] (concluding that cryptoassets satisfy the criteria for property under English law and are capable of being owned).

<sup>44</sup>Law Commission of England and Wales, *Digital Assets* (Law Com No 412, 2023) [4.2]–[4.16] (recommending recognition of a third category of personal property — beyond choses in possession and choses in action — to accommodate digital assets including cryptocurrency and NFTs).

<sup>41</sup>The judgment explicitly did not address whether cryptocurrency is property under Indian law: *ibid*. The Court’s analysis was confined to the RBI’s regulatory powers under the Reserve Bank of India Act 1934 and the proportionality of the circular, leaving the civil property law status of cryptocurrency holdings undetermined.

<sup>42</sup>See, for instance, the Enforcement Directorate’s attachment proceedings against Zanmai Labs Pvt Ltd (operating the WazirX exchange) under the Prevention of Money Laundering Act 2002 in 2022–2023, which proceeded on the assumption that cryptocurrency constitutes attachable property under s 2(1)(u) PMLA — an assumption that remains



commercial transactions occur in an entirely pre-legal space: buyers and sellers of NFTs acquire technical entitlements with no supporting legal framework.

Virtual real estate (digital land parcels in blockchain-based virtual worlds such as Decentraland or The Sandbox) presents an even more acute version of this problem. The ‘ownership’ of a virtual parcel is represented as an NFT and enforced entirely within the software architecture of the relevant platform. It has no existence independent of the platform. If the platform ceases to operate, the property right evaporates. This is precisely the feature that fails Lord Wilberforce’s requirement of ‘permanence or stability’ — a failure that is constitutive of the interest, not contingent on any particular failure of enforcement.

#### E. Carbon Credits: Regulatory Property in Formation

Carbon credits occupy an intermediate position in the taxonomy of novel property interests. The Energy Conservation (Amendment) Act 2022 introduced Section 14A into the Energy Conservation Act 2001, empowering the Central Government to establish a carbon credit trading scheme and designating the Bureau of Energy Efficiency as the administrator of the Indian Carbon Market.<sup>45</sup> The Carbon Credit Trading Scheme, notified in June 2023, provides for the issuance, registration, and trading of carbon credits as instruments.<sup>46</sup>

Carbon credits are therefore legislatively recognised instruments — they have a legal basis, a regulatory administrator, and a trading framework. However, the

Energy Conservation Act does not address the property law incidents of carbon credit holdings: whether a creditor can take security over carbon credits, whether they pass on insolvency, whether they are subject to attachment in execution of a civil judgment, and what happens to them on transfer are questions that the Act leaves unanswered. The recognition of carbon credits as regulatory instruments has raced ahead of their recognition as property, creating a gap that the *numerus clausus* framework is well-suited to address.

#### F. The Pattern of Doctrinal Incoherence

The survey in this Part reveals a consistent pattern. Indian courts and regulators confront novel property claims and respond by reaching for the nearest available doctrinal tool — passing off for domain names, copyright for databases, proportionality review for cryptocurrency, regulatory attachment for enforcement purposes — without asking whether the underlying interest is property and, if so, what kind of property. Each of these responses is individually defensible; collectively, they constitute what this paper terms ‘unprincipled pluralism’: a multiplication of inconsistent doctrinal treatments of structurally similar interests, generating precisely the information-cost externalities that the *numerus clausus* principle is designed to prevent.<sup>47</sup>

The domain name holder cannot predict whether her interest will be treated as property or as a basis for a passing-off action. The database developer does not know whether she can take security over her compilation. The cryptocurrency investor cannot

<sup>45</sup>Energy Conservation (Amendment) Act 2022 (India), introducing s 14A into the Energy Conservation Act 2001, empowering the Central Government to specify a carbon credit trading scheme and the Bureau of Energy Efficiency as the administrator of the Indian Carbon Market.

<sup>46</sup>Bureau of Energy Efficiency (Ministry of Power, Government of India), *Carbon Credit Trading Scheme* (Gazette Notification, June 2023), framed under s 14A of the Energy Conservation Act 2001 as amended.

<sup>47</sup>The phrase ‘unprincipled pluralism’ is used here to describe a judicial practice of resolving property-adjacent claims by selecting, case-by-case, whichever legal tool (passing off, conversion, unjust enrichment, regulatory attachment) is available, without theorising a general account of what makes the underlying interest property. The consequence is doctrinal fragmentation of precisely the kind that Merrill & Smith identify as the inevitable result of abandoning the *numerus clausus* framework: Merrill & Smith, ‘Numerus Clausus’ (n 1) 62–68.



predict whether her holdings will be treated as property in civil proceedings or only as attachable assets in enforcement proceedings. The legal uncertainty is not merely academic: it affects investment decisions, financing arrangements, and the governance of commercial relationships. This is the material cost of the theoretical gap that this paper seeks to address.

## V. THE CASE FOR AN EXPLICIT NUMERUS CLAUSUS FRAMEWORK IN INDIAN LAW

### A. The Information-Cost Argument

The central argument for an explicit *numerus clausus* framework in Indian property law is that the information costs of the alternative are borne disproportionately by third parties who have no voice in the process of ad hoc property creation. When a court in *Satyam Infoway* recognises domain names as quasi-property interests through passing off doctrine, it does so in a single case, with a single set of parties, without systematically notifying the universe of persons who might subsequently acquire, lend against, or otherwise deal with domain names that a new quasi-property form has been judicially created.<sup>48</sup> The regime of protection that results is functionally incomplete and commercially uncertain.

The information-cost rationale is particularly acute in the Indian context. India's large informal economy, its evolving title registration systems for tangible property, and the information asymmetries that characterise many segments of commercial life all amplify the costs of investigating idiosyncratic property claims. The social costs of unprincipled property pluralism are not distributed uniformly: they fall most heavily on those with the least capacity to conduct sophisticated legal due diligence. A principled *numerus clausus* framework would reduce these costs by providing clear, predictable categories

of recognised property interests that market participants can learn and apply.

### B. The Constitutional Argument

There is a further, specifically Indian argument for explicit *numerus clausus* reasoning. Article 300A guarantees that no person shall be deprived of 'property' without the authority of law.<sup>49</sup> This guarantee is both facilitative and constraining: it protects recognised property interests against deprivation, but it also requires that 'property' be defined somewhere in the legal order before the guarantee can operate. The absence of a principled framework for recognising novel property interests is therefore not merely a matter of private law architecture: it creates a constitutional lacuna. Property interests that are not legally recognised cannot attract the protection of Article 300A, which means that holders of commercially significant digital interests may be deprived of those interests by state action without any constitutional remedy.

The constitutional imperative thus reinforces the common law *numerus clausus* argument. The forms of property must be clearly defined — either by statute or by authoritative judicial decision — before they can attract constitutional protection. This is a systemic argument for developing an explicit account of which digital interests qualify as property and which do not, and for doing so through a principled framework rather than on an ad hoc basis.

### C. The Legislative Supremacy Argument

Merrill and Smith argue that new property forms should, in the first instance, emerge from legislative rather than judicial action.<sup>50</sup> Their argument is that legislatures are better positioned than courts to provide the systemic notice that the in rem bindingness of property rights demands: legislative action is publicly visible, accompanied by explanatory memoranda and parliamentary debates that inform third parties about the new right, and subject to

<sup>48</sup>Merrill & Smith, 'Numerus Clausus' (n 1) 3–8.

<sup>49</sup>Constitution of India, art 300A (n 15).

<sup>50</sup>Merrill & Smith, 'Numerus Clausus' (n 1) 62–68.



democratic deliberation about whether the social costs of recognising the new form are justified by its benefits.

In the Indian constitutional context, this argument has particular force. The Parliament and state legislatures have historically been the primary architects of property law in India — the TPA, the Registration Act, the IP statutes, and the Land Acquisition Act being among the most significant examples. The extension of property law to accommodate digital assets is a task of precisely the kind that belongs, in the first instance, to Parliament: it involves value choices about which interests deserve legal protection, systemic design questions about the incidents of the new property forms, and institutional questions about registration, enforcement, and priority that courts are poorly equipped to resolve on a case-by-case basis.

This is not to say that courts should be passive in the face of novel property claims. The *numerus clausus* principle does not require judicial inaction; it requires judicial clarity about the basis and limits of any recognition that courts do offer. Courts adjudicating novel property claims should make explicit whether they are: (i) recognising a new property form as such; (ii) extending an existing property form by analogy; or (iii) providing a tortious or equitable remedy for an injury to a commercial interest that falls short of property. Each of these responses is legitimate, but each has different implications for third parties, and conflating them — as Indian courts have done in the domain name and cryptocurrency contexts —

generates precisely the doctrinal incoherence that the *numerus clausus* is designed to prevent.<sup>51</sup>

## VI. THE DIGITAL PROPERTY ELIGIBILITY MATRIX: AN ORIGINAL TAXONOMIC FRAMEWORK

### A. The Four Criteria

This paper proposes the Digital Property Eligibility Matrix (DPEM) as an original doctrinal instrument for evaluating whether a novel interest satisfies the requirements for recognition as a property right in Indian law. The DPEM comprises four criteria, each of which is derived from the theoretical framework developed in Parts II and V above and calibrated to the constitutional and statutory architecture of Indian property law.<sup>52</sup>

**Criterion 1—Excludability.** The putative property interest must be capable of effective exclusion: the alleged owner must be able, in principle, to exclude all others from the resource to which the interest relates. This criterion imports the economic insight that property rights are a response to scarcity and the legal insight that the right to exclude is the master concept of property.<sup>53</sup> The excludability criterion distinguishes property from public goods (which are non-excludable by nature) and from interests that depend on the consent of others for their realisation. Note that ‘effective’ excludability is a legal concept, not merely a technical one: a right that is exclusory only through technological means (such as an NFT smart contract)

<sup>51</sup>For a comparative perspective, note that the UK Law Commission’s 2023 report on digital assets (n 43) expressly recommends common law development in the first instance, reserving legislation for specific gaps — a contrast to the argument advanced here that the Indian constitutional and statutory context makes a legislative approach more appropriate.

<sup>52</sup>The four criteria of the Digital Property Eligibility Matrix are derived from, but not identical to, the factors identified in Merrill & Smith (n 1) and

supplemented by Penner’s account (n 4) of the essential incidents of ownership. The matrix is calibrated specifically to the Indian constitutional and statutory context, as explained in the text.

<sup>53</sup>The excludability criterion draws on the economic literature on property as a response to scarcity: a resource must be susceptible of exclusion for property rights to be meaningfully assigned to it. See Harold Demsetz, ‘Toward a Theory of Property Rights’ (1967) 57 *American Economic Review* 347 (Papers and Proceedings).



does not satisfy the criterion unless the legal system reinforces the technological exclusion.

**Criterion 2: In Rem Bindingness.** The interest must bind third-party strangers — that is, persons who are not parties to any agreement creating the interest. This criterion directly implements the Merrill-Smith information-cost rationale.<sup>54</sup> An interest that is binding only between contracting parties is a contractual right, not a property right, and does not generate the in rem information costs that justify *numerus clausus* standardisation. The criterion requires that the interest be capable of asserting itself against a subsequent purchaser, lender, or stranger in tort — not merely against the person who agreed to the arrangement.

**Criterion 3: Transmissibility.** The interest must be capable of voluntary transfer, testamentary disposition, and encumbrance. As Penner observes, transmissibility is a necessary incident of property: ‘a right is a property right if, and only if, it is a right that both runs with the thing and can be transferred.’<sup>55</sup> An interest that is personal to its holder and incapable of alienation is more accurately characterised as a personal right than a property right. Note that transmissibility should not be confused with free alienability: property rights in Indian law may be subject to restraints on alienation in specific contexts, but they must be capable of some form of transfer if they are to function as economic assets.

**Criterion 4: Legal Recognition.** The form of the interest must be either: (a) legislatively enacted

(created or recognised by a statute of Parliament or a state legislature) or (b) authoritatively recognised by the Supreme Court or a High Court in a decision with a clear ratio decidendi establishing the interest as property.<sup>56</sup> This criterion gives effect to the constitutional requirement that property interests be legally defined before they can attract the protection of Article 300A, and to the Merrill-Smith argument that new property forms should emerge through visible, notice-generating processes rather than through ad hoc judicial extension. The criterion is deliberately demanding: commercial significance and technical sophistication do not substitute for legal recognition.

## B. Applying the Matrix

### 1. Traditional Intellectual Property Rights

Patents, copyright, trademarks, geographical indications, and plant variety rights satisfy all four criteria. Excludability: each regime grants the right-holder a statutory right to prevent third parties from using the protected subject matter. In Rem Bindingness: the rights bind all persons in the world, not merely contracting parties, and are enforceable against strangers through civil and criminal remedies. Transmissibility: each regime expressly provides for assignment and licensing. Legal Recognition: each is created by an Act of Parliament. These interests represent established property in Indian law and present no *numerus clausus* difficulty. They are the benchmark against which novel interests should be measured.

<sup>54</sup>The in rem criterion directly implements the Merrill & Smith *numerus clausus* rationale: unless an interest binds third-party strangers, it does not generate the information-cost externalities that the *numerus clausus* principle is designed to manage, and the case for restricting its form is correspondingly weaker. The criterion thus serves a dual function — it identifies genuine property candidates and explains why the *numerus clausus* applies to them.

<sup>55</sup>Transmissibility as a necessary incident of property is the basis on which Penner (n 4) distinguishes property from personal rights: ‘a right is a property

right if, and only if, it is a right that both runs with the thing and can be transferred’.

<sup>56</sup>The legal recognition criterion reflects the constitutional imperative in art 300A: property interests derive their legal force from legislative enactment or authoritative judicial recognition, not from commercial significance or technical architecture. A technically sophisticated system of exclusion (as in an NFT smart contract) is not a property right merely because it is effective; it must be legally recognised.



## 2. Domain Names

Domain names present a more nuanced picture. On Excludability: *Satyam Infoway* and its predecessors establish that the holder of a domain name can, through passing off and related remedies, prevent others from using confusingly similar domain names. However, this protection is narrower than a property right of exclusion: it requires demonstration of goodwill, misrepresentation, and damage, and it extends only to confusingly similar uses rather than all unauthorised interference with the domain name itself. Excludability is therefore partial. On In Rem Bindingness: the protection extends beyond contracting parties — it operates against the world — but it is framed in tort rather than property law, which means its incidents are determined by the law of passing off rather than the law of property. On Transmissibility: domain names are technically transferable through ICANN processes. On Legal Recognition: there is judicial recognition of quasi-proprietary protection but no statute creating property rights in domain names as such.

The DPEM therefore classifies domain names as ‘quasi-property’: they satisfy the transmissibility criterion fully and the legal recognition criterion partially, but fall short on full excludability and in rem bindingness. The appropriate legislative response would be to create a statutory right in registered domain names — analogous to the registered trade mark — that provides clear in rem protection with defined incidents of transfer, security, and priority.

## 3. Data and Databases

The case of data and databases is the most analytically complex. On Excludability: original compilations protected by copyright carry a right to prevent copying; raw data carries no such right. On In Rem Bindingness: copyright in compilations binds the world, but there is no in rem right in raw data. The DPDPA creates regulatory obligations in relation to

personal data but not property rights binding third parties. On Transmissibility: copyright in compilations is transmissible; there is no legal mechanism for the transfer of property in raw data. On Legal Recognition: copyright in original compilations is recognised by statute; property in raw data is not recognised at all.

The DPEM therefore bifurcates the data category: copyright in original databases is established property, satisfying all four criteria, but raw data as such is pre-property — it satisfies none of the criteria in the terms of a property right distinct from copyright.<sup>57</sup> The sui generis database right, which exists in European Union law following Directive 96/9/EC, provides a model for the legislative recognition of a separate property right in databases irrespective of originality — a right that would address the gap in Indian law that *Eastern Book Company v D B Modak* has exposed. The absence of such a right in India creates an anomaly: India’s copyright law imports a creativity threshold that excludes precisely those databases most valuable for commercial and research purposes.

## 4. Cryptocurrency

Cryptocurrency performs well on Excludability (cryptographic control of the private key provides effective exclusion) and Transmissibility (blockchain transactions effect legally operative transfers, implicitly recognised in the enforcement proceedings discussed in Part IV above). On In Rem Bindingness: the treatment of cryptocurrency as attachable property in enforcement proceedings implies some recognition of its in rem character, but this has not been established by a binding judicial decision at the level of the Supreme Court. On Legal Recognition: the *IMAI v RBI* decision removed the prohibition on banking services but did not recognise cryptocurrency

<sup>57</sup>*Eastern Book Company v D B Modak* (n 32). The Court’s modicum-of-creativity standard aligns with the approach under the United States’s *Feist Publications v Rural Telephone Service Co* 499 US

340 (1991), which held that ‘sweat of the brow’ alone does not confer copyright.



as property; no statute creates or recognises cryptocurrency property rights.<sup>58</sup>

The DPEM therefore classifies cryptocurrency as ‘emergent / contested property’: it satisfies the excludability and transmissibility criteria and has partial implicit recognition, but fails the in rem bindingness criterion (as a matter of established law) and the legal recognition criterion. The trajectory of the law is clearly towards recognition — the enforcement agencies already treat cryptocurrency as an asset — and the appropriate response is legislative recognition that specifies the incidents of cryptocurrency property with the clarity that the *numerus clausus* demands.

### 5. NFTs

NFTs satisfy the Excludability criterion in the technical sense — the private key holder can prevent others from transferring or minting identical tokens — and the Transmissibility criterion — NFTs are technically transferable on the blockchain. However, they fail on In Rem Bindingness: the ownership of an NFT does not, as a matter of Indian law, confer any legally enforceable right against third parties independent of the smart contract. The copyright in the underlying work, for example, is not transferred by the transfer of the NFT unless there is a separate written assignment complying with Section 19 of the Copyright Act 1957.<sup>59</sup> The NFT holder has no in rem right; she has a contractual right against the terms of the smart contract. NFTs also fail the Legal Recognition criterion: no Indian statute or Supreme Court or High Court decision has recognised NFTs as a category of property.

The DPEM therefore classifies NFTs as ‘pre-legal’: they are commercially significant instruments that generate transactional complexity, but they have not crossed the threshold into property. The appropriate regulatory response is not to refuse recognition but to enact a clear framework — ideally incorporating the recommendations of the Law Commission of England and Wales on the third category of personal property,<sup>60</sup> adapted to the Indian constitutional context — that specifies the conditions under which digital tokens attract legally enforceable property rights.

### 6. Carbon Credits

Carbon credits satisfy Excludability (the registry-based system assigns credits to identifiable holders), Transmissibility (trading is the purpose of the scheme), and partial In Rem Bindingness (the regulatory framework creates rights as against other market participants and the administrator). However, the civil law incidents of carbon credit ownership — security, priority in insolvency, set-off, and attachment — are not addressed in the Energy Conservation Act 2022 or the Carbon Credit Trading Scheme.<sup>61,62</sup> Legal Recognition is therefore partial: the instrument is legislatively created, but its property law incidents are unspecified.

The DPEM classifies carbon credits as ‘regulatory-property in formation’: the legislative foundation for property recognition is present, but the completion of the proprietary incidents requires supplementary legislation or authoritative judicial decision. The most appropriate institutional vehicle would be an amendment to the Energy Conservation Act specifying that carbon credits are personal property of

<sup>58</sup>The IMAI v RBI proportionality analysis (n 36) implicitly assumed that cryptocurrency represents a legitimate economic interest of the petitioners capable of attracting regulatory harm — an assumption that is difficult to sustain without attributing some form of protected property status to virtual currency holdings.



the holder with defined incidents of transfer, security, and priority.

**7. Virtual Real Estate**

Virtual real estate — NFT-based land parcels in blockchain metaverse platforms — fails the DPEM analysis at multiple levels. Excludability is platform-dependent: the right to exclude others from a virtual parcel exists only within the platform’s software environment and is entirely contingent on the platform’s continued operation. In Rem Bindingness is absent: there is no legal order that enforces the ‘property right’ against strangers; the right is entirely contractual and platform-specific. Transmissibility is technically present but platform-dependent. Legal Recognition is absent entirely.

More fundamentally, virtual real estate fails Lord Wilberforce’s requirement of ‘permanence or stability’: the interest evaporates if the platform ceases to operate, is updated to remove the relevant feature, or is restructured commercially. This platform-dependency problem is constitutive, not contingent: a virtual real estate interest cannot, by its nature, survive the platform that generates it. The DPEM accordingly classifies virtual real estate as ‘pre-legal’: it does not satisfy the criteria for property recognition and is unlikely to do so without a fundamental redesign of the platforms involved to create legally independent property interests.

**C. The Taxonomy in Summary**

The results of the DPEM analysis are summarised in the following table. The categories are arrayed from the most fully established to the most legally nascent, providing courts and legislators with a reference point for evaluating novel property claims.

Category	Excludability	In Rem	Transmissibility	Legal Recognition	Proposed Status
<b>Traditional IP Rights (Patents, Copyright, Trade Marks, GIs)</b>	✓	✓	✓	true	<b>Established Property</b>
<b>Domain Names</b>	Partial	Partial	✓	Judicial Only	<b>Quasi-Property</b>
<b>Databases / Raw Data</b>	Partial	✗	Limited	Limited (s 2(o) CA)	<b>Pre-Property (partial copyright)</b>
<b>Cryptocurrency</b>	✓	Partial	✓	Contested	<b>Emergent / Contested</b>
<b>NFTs</b>	✓	✗	✓	false	<b>Pre-Legal</b>
<b>Carbon Credits</b>	✓	Partial	✓	Regulatory Only	<b>Regulatory-Property in Formation</b>
<b>Virtual Real Estate</b>	Platform Only	✗	Platform Only	false	<b>Pre-Legal</b>

*Table 1: Digital Property Eligibility Matrix — Application to Emergent Property Interests in Indian Law*

A critical observation emerges from this taxonomy: the most commercially significant emergent property



interests — cryptocurrency and carbon credits — are those closest to satisfying the full set of DPEM criteria. Both have legislative or quasi-legislative foundations (at least partially), both are excludable and transmissible, and both have partial in rem recognition from enforcement and regulatory proceedings. They are the most appropriate candidates for immediate legislative attention, and the framework developed in this paper provides the criteria against which the adequacy of any legislative response should be measured.

## VII. CONCLUSION

The argument of this paper can be stated simply. Indian property law confronts a rapidly expanding universe of novel digital interests — domain names, databases, cryptocurrency, NFTs, carbon credits, and virtual real estate — without any principled theoretical framework for evaluating whether and how those interests should be recognised as property. The courts of India have responded with creativity and commercial intelligence, but without the doctrinal architecture necessary to ensure consistency, predictability, and systemic coherence. The information costs of this unprincipled pluralism are real and material, and they are borne disproportionately by those with the least capacity to investigate complex legal questions.

The theoretical solution to this problem already exists in the property law scholarship of the common law world. The *numerus clausus* principle — the principle that property rights exist only in legally recognised, standardised forms — provides precisely the framework that Indian property law needs. Merrill and Smith's articulation of the information-cost rationale for the *numerus clausus* translates directly into the Indian context, and the implicit architecture of the Transfer of Property Act 1882 and the intellectual property statutes already embodies the principle, albeit untheorised.

This paper has made three contributions to the development of the principle in Indian law. It has demonstrated that the existing framework already

operates on a *numerus clausus* basis. It has identified the doctrinal incoherence generated by the absence of an explicit framework. And it has proposed the Digital Property Eligibility Matrix — the first systematic taxonomy of novel property claims in Indian law — as a practical instrument for applying the *numerus clausus* principle to the digital economy.

The DPEM identifies two categories of immediate legislative priority: cryptocurrency, which satisfies the excludability and transmissibility criteria and is de facto treated as attachable property in enforcement proceedings, but lacks the in rem recognition and formal legal recognition that would complete its property status; and carbon credits, which have legislative foundations and a trading infrastructure, but require statutory specification of their civil law property incidents. For both, the appropriate legislative vehicle is a short, precise amendment to the relevant statutes — the Reserve Bank of India Act and/or a bespoke Digital Assets Act for cryptocurrency, and the Energy Conservation Act for carbon credits — specifying that the instruments are personal property with defined incidents of transfer, security, and priority.

For the remaining categories — domain names, databases, NFTs, and virtual real estate — the appropriate responses differ. Domain names require statutory recognition modelled on the registered trademark framework. Databases require a sui generis right modelled on the EU Directive 96/9/EC framework. NFTs require the creation of a third category of personal property, as the Law Commission of England and Wales has recommended, adapted to the Indian constitutional context. Virtual real estate, until the platform-dependency problem is resolved, cannot satisfy the requirements of property recognition and should not be treated as such by courts.

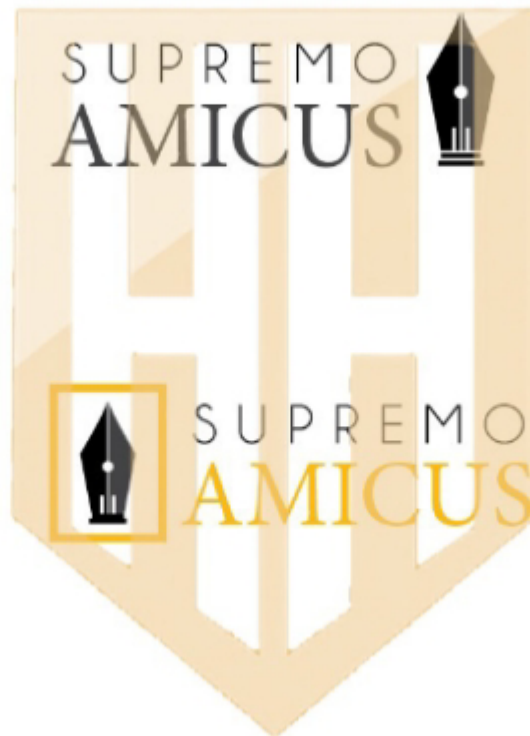
The *numerus clausus* principle, read together with Article 300A of the Constitution of India, demands that the forms of property be defined clearly enough to attract constitutional protection and generate the systemic notice that in rem rights require. The digital economy will not wait for the law to catch up; but the



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law must catch up in a principled way. This paper has attempted to provide the doctrinal architecture for doing so.<sup>63</sup>

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<sup>63</sup>Merrill & Smith, 'Numerus Clausus' (n 1) 68–70.