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META-DESIGN, FIGURE AND STYLE BETWEEN DRAWING AND GENERATIVE AI

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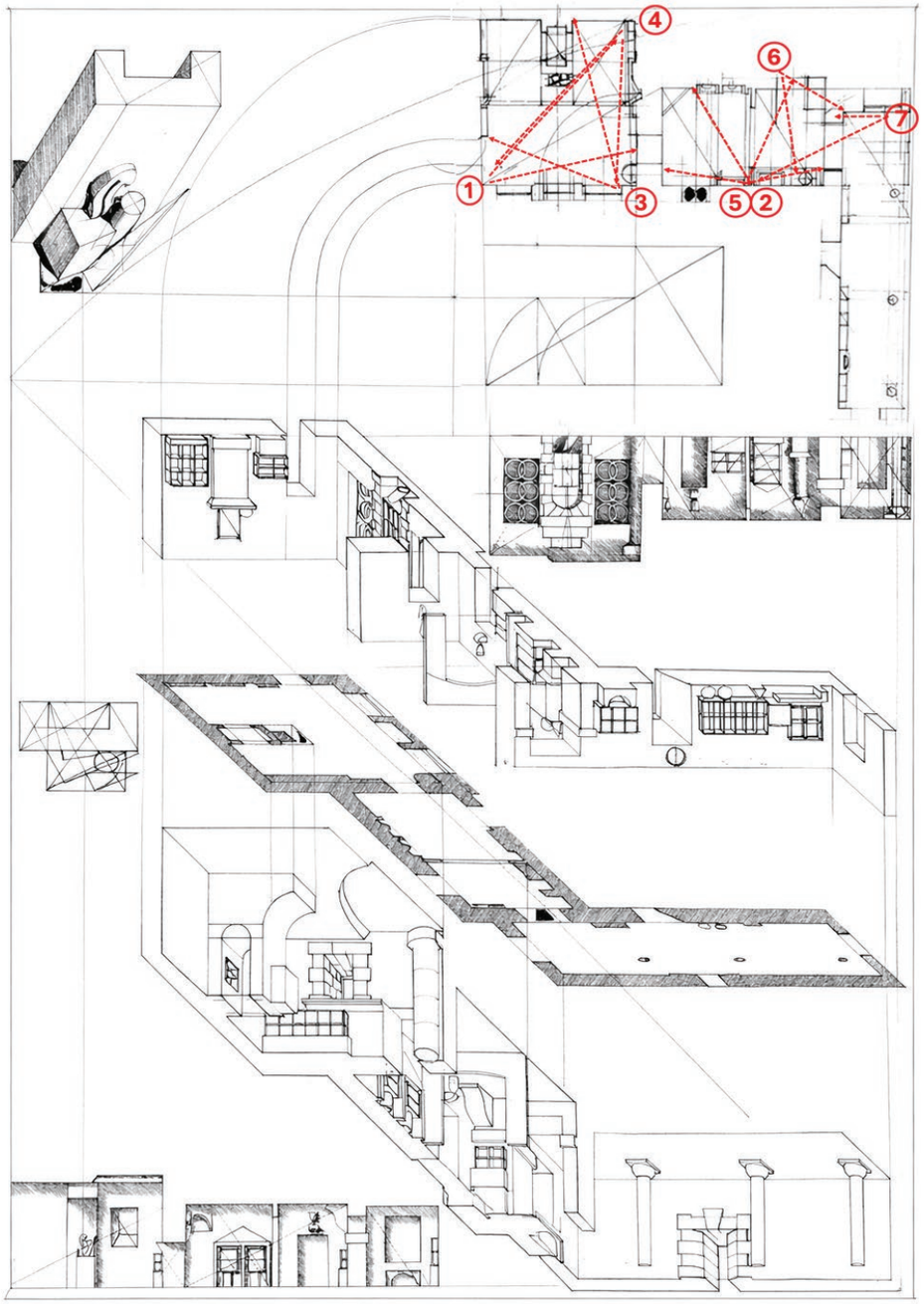
The use of generative AI in design today complements established modes of ideation through Drawing, understood in its traditional sense as "meta-design". In text-to-image, image-to-image, and image-to-model pipelines, ideation takes the form of a chain of transductions across media and codes (sketch, plate, text/prompt, image, model, render), where each step redefines pertinences and thresholds of "figurability". Within this framework, the "question of figure" concerns the stabilization of readings: which conventions, competences, and procedures turn a trace into a figure that can be shared, discussed, and verified across different actors.
The paper advances a semiotic theory of Drawing as meta-design, conceived as a form of "writing" capable of governing the alternation between an iconic pertinence (recognition of objects, scenes, actions) and a plastic pertinence of images (topological, eidetic, chromatic, and textural differences). This distinction allows "style" and "character" to be treated as outcomes of finite grids and Type/Token regimes. In its computational counterpart, drawing relies on explicit image description: predominantly "plastic" descriptors (edge statistics, Gabor, Haralick/GLCM, Radon, moments/histograms) build feature vectors on which profiles of recurrence and difference can be learned.
By retracing a genealogy of the architectural still life, we exemplify three modalities of abstract figuration - Sironi/Muzio (Monza, 1930), the Purism of Le Corbusier/Ozenfant, and the meta-avant-gardes (Hejduk) - showing how Drawing can operate today as meta-design at the junction between traditional ideation and generative AI.

Keywords: Intersemiotic Translation, Metasemic Writing, Architectural Still Life, Figuration and Interpretants, Generative AI Workflows.

Drawing as a Metonymy of Ideation

In technical usage between the late Middle Ages and the Renaissance, "*disegno*" names an ideative practice and a competence shared by the arts: translating among gestures, materials, rules, and images. What English now condenses in "to design" (and in expressions such as "by design") was originally "*Disegno*"; the Accademia del Disegno (1563) formalized its metonymic scope, establishing it as the name for the whole process of ideation.
Cennino Cennini's well-known advice - «praticando il disegnare di penna [...] ti farà aperto, pratico e capace di molto disegno entro la testa tua»[1] - states an operational fact: drawing constructs the mental image, making it manipulable, comparable, and corrigible. Ideation is thus defined as a technical–imaginative discipline and as a transduction between inner images (εἴδη) and external inscriptions (εἰκόνες)[2].
Today the disciplinary separation between "drawing" and forms of "design" (increasingly fragmented into specialisms) tends to obscure the fact that the "morphologies" (geometric categorizations) through which artifacts are described and produced – types, models, patterns, functions, variability – are conventional and situated systems. Style, character, canon, and the "scripturality" of the image depend on how such systems become commensurable and transferable.
From this perspective, Drawing functions as "meta-design": a form of writing that organizes and connects other "writings" of the project (standards, diagrams, plates, models, simulations). Text-to-image, image-to-image, and

1 Cennini, *Il libro dell'arte*, ch. XIII, "come si de' praticare il disegno di penna".
2 For an overview of forms of ideation through *drawing*, see Gay, *A ragion veduta: immaginazione progettuale, rappresentazione e morfologia degli artefatti*, passim.



1 | *Low-angle oblique axonometric reconstruction of the installation design for the Exhibition of Graphic Arts at the Fourth Triennale of Modern Decorative and Industrial Arts (1930); from: Gay, Tra forma e figura, p. 33.*

image-to-model pipelines make this function immediately visible: the project is arranged as a chain of intersemiotic translations across supports (sketch, text, prompt, image, model, render), and each passage redefines thresholds of figurability and criteria of proof. The "question of figure" therefore concerns the reconfiguration of these thresholds when the production of variants becomes rapid and reversible. The paper argues that a semiotic theory of Drawing – grounded in plastic/iconic pertinences, writing as a finite grid, and the generative levels of expression – provides operational tools for describing and governing these translational chains in the age of AI.

Theoretical Framework. Plastic/Iconic Pertinences and Drawing as Writing

Plastic and Iconic: Two Opposed Pertinences of Figurativity

The point of departure is Greimas's seminal contribution to the semiotics of images[3]: the definition of "figurativity" (fig. 9) as a semantic category (i.e., of "con-

[3] Greimas, *Sémiotique figurative et sémiotique plastique.*

2 | *Seven photographs of the Exhibition of Graphic Arts preserved in the Muzio Archive, Milan. The corresponding planimetric angles of view are indicated in fig. 1.*

tent") articulated between "iconization" and "abstract thematization", where "iconization and abstraction" are variable degrees of figurativity.

Methodologically, the consequence is that the same image-surface can signify through an iconic pertinence – when it groups traits into recognizable figures and stabilizes a "world" (referential illusion) – or through a plastic pertinence – when it treats the surface as an autonomous organization of forms and contrasts capable of producing meaning in the sense of a pure-visual aesthetics[4], that is, through homologations between categories of expression and categories of content (the semi-symbolism formulated by Floch)[5].

On the plastic plane, semiotic analysis proceeds through families of categories that appear as salient differences in visual expression: topological (high/low, center/periphery, inside/outside, continuity/closure, enclosing/enclosed…); eidetic (linear/curvilinear, continuous/segmented, symmetric/asymmetric); chromatic (light/dark, saturated/unsaturated, tonal relation/complementary opposition…); and textural (smooth/rough, compact/porous, self-similar/chaotic pattern…).

The plastic versus iconic distinction does not separate "abstract" and "figurative" as genres of artifacts, nor does it depend on iconicity scales typical of information aesthetics (e.g., Abraham Moles)[6].

Rather, it describes two opposed semiotic modes that coexist and modulate each other. A formula, a photograph, or a diagram can yield iconic effects or abstract effects depending on the reading grid activated: figurativity concerns how a content is made perceptually dense or conceptually rarefied, not the expressive substance that conveys it.

Iconic and plastic pertinences can of course coexist within the same act of reading.

A typographic character, for instance, activates alphabetic recognition (iconic in the sense of a culturally stabilized "figure of the world") and, at the same time, brings into play plastic differences (stroke, modulation, rhythm, contrasts) that become decisive in graphic, calligraphic, and logotypic genres.

This "double register" helps explain how traditions of Drawing have given substance to aesthetological concepts – "style", "character", "canon", "writing"… – which involve regimes of repetition and variation that belong to the plastic level while producing recognition effects legible at the iconic level.

The operational value does not lie in measuring an absolute resemblance, but in recalling that different representational devices (model, projection, photograph, topographic scheme, formula, verbal description) impose different thresholds of figurability. Greimassian semiotics moves beyond such taxonomies by showing that "figurativity" concerns the plane of content alone; this plane is always constructed and made readable in multiple ways, which explains how an image can migrate across devices without losing coherence of sense.

There are possible and impossible reading grids – infra-linguistic, intersemiotic, and so forth. Beyond alphabetic scripts, the history of semasiographic writings makes the topic of grids and reading practices concrete. The rongorongo of Easter Island, Andean quipu, or Sioux "winter counts" (pictogrammatic sequences that mark years along spiral paths) show texts whose units do not point to words but to enunciations and narratives supported by communal practices. In such cases writing functions

4 For a discussion of the semiotic translation of pure-visualist aesthetics, see Lancioni, *Il senso e la forma: il linguaggio delle immagini fra teoria dell'arte e semiotica.*

5 On the notion of a "semi-symbolic system," see Floch, *Petites Mythologie[s] de l'œil et de l'esprit: pour une sémiotique plastique.*

6 See, in particular, Moles, *Théorie de l'information et perception esthétique.*

7 ee, e.g., Calabrese, *Lezioni di semisimbolico: come la semiotica analizza le opere d'arte.*

both as memory support and as a device of selection: it decides what counts as an "event", which figure indexes the year, which reading order is pertinent. Project drawing shares this logic when it institutes series of views, schedules, typological repertoires, or diagrams: it produces readable units that operate within a practical scene, and their "truth" coincides with their usability across project phases and actors.

Drawing as Writing: Reading Grids, Type/Token, Transduction

Speaking of "writing" in relation to drawing does not mean reducing the visual to the verbal. To read is to correlate different finite reading grids: each grid determines which traits are pertinent, which variants are tolerable, and which oppositions are discriminant. The same material sign can belong to multiple grids: the grapheme "O" may signify as an alphabetic letter, a digit, a logical symbol, an element of a logo, or a plastic formant within a composition; its content depends on the grid that takes it in charge. Drawing lives precisely from this controlled passage among reading grids. In Hjelmslev's terms, "monoplanar" systems (such as chess, mathematics, music…) possess a regulative content that coincides with their combinatorial rules. Semiotic systems instead distinguish expression and content, and analysis concerns "the outcomes on the plane of expression of the major procedures for constructing of sense"[7]. In drawing, this regulativity appears in the selection of traits, scales, conventions, and operative units. It can also be reconstructed a posteriori – especially via deep-learning systems – by moving from tokens to types (for example an arch, an axis, a module, a letter, a pattern), understood as a class of invariants inferred from multiple variable occurrences (spellings, deformations, contexts). Project drawing exploits this double pertinence: it condenses information when it stabilizes shareable types; it reopens possibilities when it works on occurrences, i.e., on expressive variants (stroke, rhythm, relations).

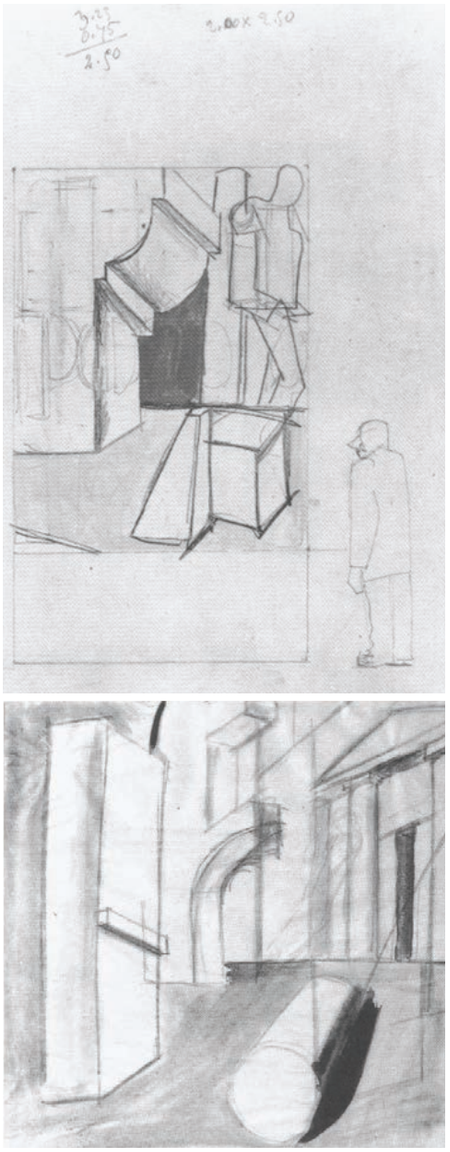
Project drawing is an ensemble of infra-semiotic transductions (expressive conventions – sketch, diagram, normative text, parametric model, render, simulation) undertaken for the sake of an intersemiotic translation – i.e., across different semiotic substances (textual, visual, kinetic, material…) – that culminates in realized or possible objects. When Drawing is explicitly understood as "meta-design", it makes the reading grids at stake explicit and keeps transformations comparable along the chain of heterogeneous supports, thereby modifying thresholds of figurability, margins of ambiguity, and validation criteria. This has been especially evident in the twentieth-century history of drawing, where it was variously formulated as a form of intersemiotic translation among the arts, particularly between painting and architecture.

Three Examples of "Abstract Figuration": The Architectural Still Life

From a Drawing to an Ethos (Levels of Expression)

Every "translation" always occurs between "texts": intersemiotic translation happens between texts of different substances (visual, verbal, gestural, computational…) inscribed in objects that belong to different interpretive practices (novel→film, painting→building…), not at the level of isolated "signs" or "figures". Jacques Fontanille's model of the "generative process of the plane of expression"[8] describes a stratification in which each level integrates the previous one: traits and figures become signs; signs acquire coherence in texts; texts incorporate into objects; objects function within practices; practices realize strategies and stabilize an ethos – a form of life.

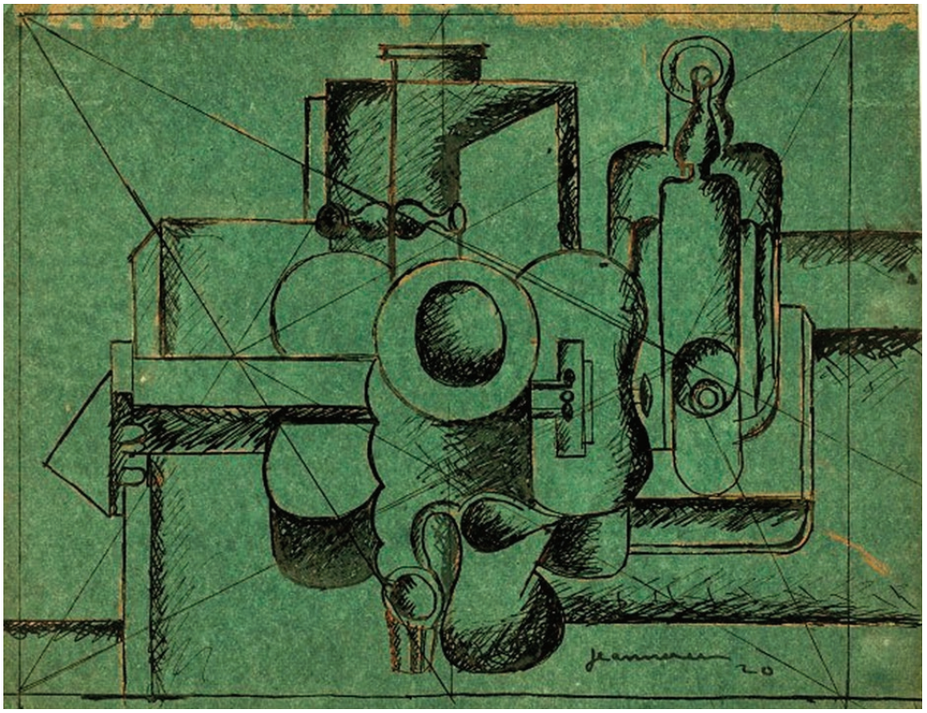
A graphic text – such as a drawing – when taken within an appropriate interpretive scene, can become emblematic by producing strong semiotic condensations. For example, a graphic-verbal device or a logo is made to emblematize a whole way of life or the ethos of an organization; it aims to produce a shortcut between intermediate levels of expression (object→practical scene→strategy→ethos). The traits of the emblematic image can inflect meaning at higher levels. In the drawing of an allegory of "justice", for instance, iconically connotative traits of the female figure – read as expressions



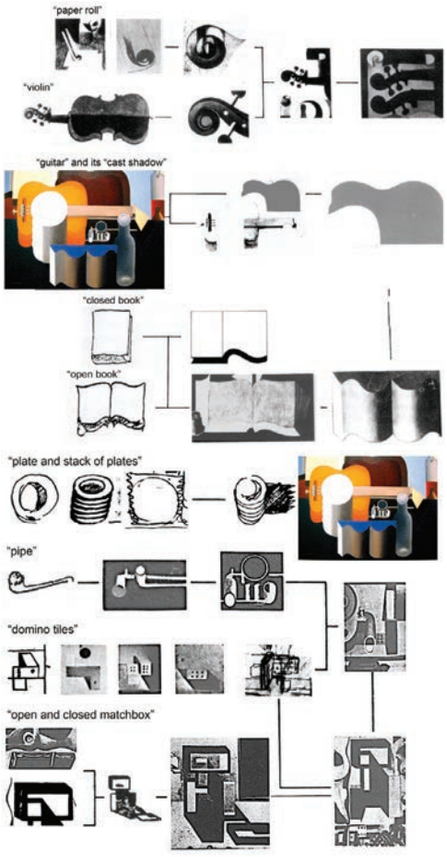
3 | *Mario Sironi, studies for the Exhibition of Graphic Arts, pencil and ink on paper, 1930; pencil and tempera on paper, 26.6 × 19 cm; India ink and pencil on paper, 20 × 20 cm; from: AA.VV., Sironi: il Mito dell'architettura.*

8 For a particularly clear formulation, see Fontanille, *Pratiques sémiotiques*.

4 | *Mario Sironi, studies for the Exhibition of Graphic Arts, India ink and pencil on paper: 25 × 20 cm, 25 × 20 cm, 18 × 17 cm, 17 × 28 cm, 12 × 18 cm; from: AA.VV., Sironi: il Mito dell'architettura.*



5 | *Charles-Edouard Jeanneret (Le Corbusier), preparatory study for Nature Morte à la pile d'assiettes et au livre, 1920, pen and ink with colored-pencil interventions on cardboard (verso of a sketchbook sheet), 24 × 26 cm; Galerie Kornfeld Auktionen, Bern.*



6,7 | *Roberto Mango, decomposition into figures of the final version of Nature Morte à la pile d'assiettes et au livre (1920) within the context of C.E. Jeanneret's early still lifes. From: AA.VV., C.E. Jeanneret–Le Corbusier.*

of passions – can reverberate onto the abstract concept itself; a graphic variant may reopen meaning without dissolving the identity of the type.

We illustrate historically how Drawing positions itself as meta-design through cases in which architectural ideation made use of the twentieth-century figurative genre of the "still life": from Le Corbusier to Muzio, from Rossi to Scarpa, through to Pop and Conceptual meta-avant-gardes of the 1960s and to the postmodern hybrids pursued by Luigi Serafini in parallel with the Memphis group, within Milanese contexts such as Studio Alchimia and radical design.

These episodes belong to the broader twentieth-century debate on "architecture and the arts"[9], which - from the Symbolist idea of the *Gesamtkunstwerk* to Arts and Crafts as an ethical–craft project of unity between art and labor, and through Art Nouveau as a theory of the total stylistic environment - remains on the agenda of the CIAM (*Congrès Internationaux d'Architecture Moderne*), of Bauhaus pedagogy, of the Moscow *VKhUTEMAS*, and later of the postwar *Hochschule für Gestaltung* in Ulm, reaching the Cooper Union in New York as a site of conceptual and meta-linguistic pedagogy, not entirely distant from practices now pursued with generative AI tools.

Sironi and Muzio (1930): Typography of an Architectural Myth

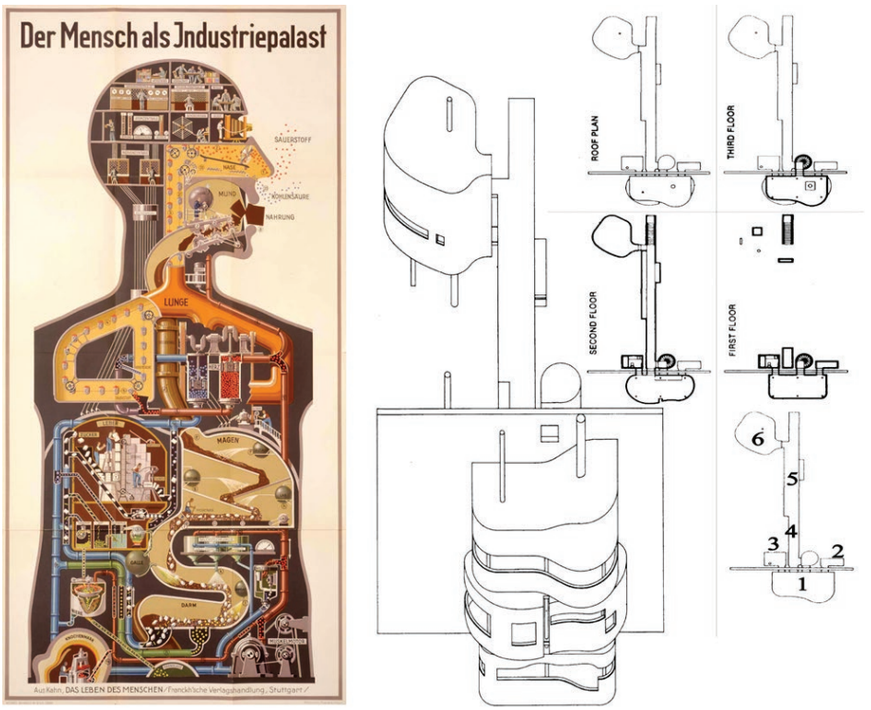
A clear example of translation from painting to interior design is the Mostra delle Arti Grafiche at the Villa Reale in Monza[10] (figs. 1–2), designed by Giovanni Muzio and Mario Sironi in 1930. It is not the three-dimensional version of a painting; rather, Sironi's entire pictorial spatiality is translated – through a long series of sketches – into three rooms in which Agnoldomenico Pica saw: «[...] capitelli delle colonne larghi e gonfi come tuscanici echini... [che] sono di vetro e sono luminosi; le sagome salde e piene che improvvisamente si spezzano e rimangono così tagliate[...]; le prospettive disegnate sul bianco del muro – uscite dai trattati del Quattrocento – paiono qui cabalistici geroglifici di un mondo conosciuto e meraviglioso»[11]. Evidently, architect and painter produce an "environment-page": a repertory of bodies that assume elementary Classicist figures – arch, pediment, column, portal, lamp – composed as typographic characters might be composed in visual poetry, in an Apollinaire calligram, or in comparable verbo-iconic scripts of Italian Futurism.

This expressive intensity is shown genetically in the preparatory drawings[12] (figs. 3–4), where Sironi tests the configuration of contested spaces "by views", as icono-plastic fields of forces, translating

[9] *See Gay, "Architettura e le Arti: verso una genetica degli artefatti," pp. 85–92.*

into an environment a highly charged figurative spatiality conceived in the climate of the "return to order" and of the Novecento movement.
In this climate, Novecento painters – Fossati[13] notes – appeal to architecture as an ideal of construction under the aegis of State Style, that is, as an ideal of abstract and meta-historical Classicism opposed to the Classicisms and Romanticisms of contingent stylistic conventions. On the architects' side, the most fertile moment of Italian architecture left the most significant traces in the twentieth-century heritage precisely by drawing on the principle of the "architectonicity of the painting", whereby Sironi conceived form as an abstract representation with a tectonic vocation[14].

Le Corbusier/Ozenfant: Purist Still Life as Architectural Pictography
Gabetti and Olmo[15] reconstruct the dense network of contextual and intertextual relations within which Jeanneret and Ozenfant, between 1920 and 1925, elaborated and propagated in "*L'Esprit Nouveau*" their Purist version of second Cubism, while the painter Jeanneret became the architect Le Corbusier, fixing the programmatic references of his architectural and urban doctrine.
This is not a matter of direct "transpositions" of iconic syntagms and figurative procedures of Synthetic Cubism into architecture; rather, Jeanneret's Purist painting functions as an "operational model" (pictorial plastic language → architectural writing) for Le Corbusier's formal/figurative elaboration.
Purism emerges with *Après le cubisme* (1918) as a reworking of the still life in Synthetic Cubism (Picasso, Braque, Léger, Gris): the perspectival–luministic decomposition is reformulated as a pictographic writing of type-forms (cylinders, parallelepipeds, elementary profiles) and of plastic relations (axes, orthogonality, equilibria of masses, chromatic contrasts). The painting functions as a "text" because it renders its own construction legible: figuration remains recognizable, but is subordinated to a system of invariants.
In *L'Esprit Nouveau* (1920–25), Jeanneret and Ozenfant reinforce this program through an experimental aesthetics with a positivist bent: perceptual equilibrium,

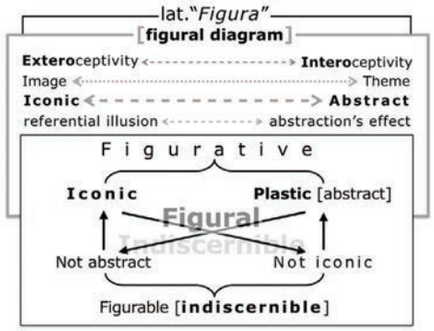


8 | *Left: Fritz Kahn, visualization of the digestive and cardiorespiratory system as an "industrial building," chromolithograph, Stuttgart, 1926. Right: John Hejduk, Bye House, axonometric drawing and plans: (1) first floor, bedroom; second floor, kitchen; third floor, living room; (2) storage room; (3) bathroom; (4) corridor; (5) archive; (6) study.*

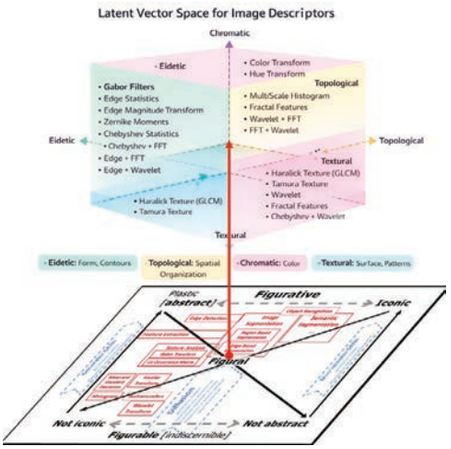
theories of contrast, analogies with musical harmony, and geometric models of color (e.g., Runge's color sphere), which treat chromatic relations as intervals and compositions as rhythms. In issue no. 15 the painting is defined as a *machine à émouvoir*; the result is an economy of means - few strokes, minimal high-information variations - dosed almost as a "musical posology" of figures.
This logic is later translated into architecture not as a transfer of figures but as a normative procedure: reducing arbitrariness through proportional and control rules (*tracés régulateurs*, later the *Modulor*) and orienting design toward types and type-functions. «L'architecture actuelle s'occupe de la maison, de la maison ordinaire… Étudier la maison pour homme courant, 'tout venant', c'est retrouver les bases humaines, l'échelle humaine, le besoin-type, la fonction-type…»[16].

Hejduk: Second-Order Parody of Drawing
By the 1950s–1970s, both the "mythic" (Roman) spatiality iconically impressed by Sironi (3.2) and the industrial plasticity of Purist architectural pictography (3.3) are absorbed by international artistic culture and canonized. The historical avant-gardes (Cubism, Constructivism, Neoplasticism) enter manuals, retrospectives, journals, and schools as reproducible repertoires of procedures:

10 For a more detailed treatment, see Gay, *Tra forma e figura: tre seminari sulla rappresentazione.*
11 Pica, "Mostra delle Arti Grafiche alla Villa Reale di Monza," in *Casabella* (Year III), no. 27, March 1930.
12 See Benzi, "Sironi e l'architettura," in AA.VV., *Sironi: il mito dell'architettura.*
13 See, in particular, Fossati, *Storie di figure e di immagini: da Boccioni a Licini.*
14 On the question of stylistic influence, see Gay, "A Pervasive Drawing: Mario Sironi Meta-Designer of a Lictorian Style".
15 Gabetti, Olmo, *Le Corbusier e «L'Esprit Nouveau».*
16 Le Corbusier, "Architecture d'époque machiniste," in *Journal de Psychologie Normale et Pathologie*, January–March 1926.



9 | *Analysis of the semantic category of "figurativity"; from: Gay and Cazzaro, Drawing the Indiscernible: Morphogenesis & Morphography of the Artefacts.*



10 | *Conceptual diagram of the "latent space" of low-level descriptors grouped into four regions of the plastic level: eidetic (shape, contours, edges), topological (spatial organization and global orientations), chromatic (colour and tonal contrasts), and textural (grain and surface patterns). Each descriptor may be understood as a numerical dimension: the value computed for an image (or for a tile) defines its position along that dimension, making images comparable on the basis of their plastic properties alone, rather than their iconic content.*

grids, tracings, chromatic planes, modules, seriality. At the same time, Pop Art and Conceptual art legitimize practices of citation and montage: condensation of already-given images and objects, varied repetitions, semantic displacement. In architecture, *meta-avant-gardes*[17] emerge; the architectural still life returns as a compositional schema whose rules can be isolated, transcribed, and reapplied.

John Hejduk, especially through the pedagogical context of the Cooper Union and his experimental projects, treats architecture as a readable object - not because it is "written" in a literal sense, but because it organizes interior and exterior places as devices that produce meaning within a situated and variable allegorical dimension. In *House 10* (1966), the *Diamond Houses* (1967–69), and the *Wall Houses* (1970s), this legibility is constructed through types (typologies: parts and relations that can be codified) and through traces of force (typographies: gestures, indices, spatial "calligraphies"), coordinated by a concept of writing that includes logographic and semasiographic forms – i.e., systematically organized series of significant configurations. In this frame, references to Purism and to pictorial avant-gardes operate as lexical citations and as stereotyped repertoires of syntactic procedures, giving the resulting building a status suspended between "image" and "writing" and imposing an increasingly theatricalized dimension of architecture.

Asemic Writings (Serafini): Postmodernism and Generative Drifts

The scriptural dimension of drawing intensifies when the meta-avant-gardes of the 1960s flow into postmodernism (and into its strand of radical design), where citation, montage, and "encyclopedias" of signs become ordinary procedures. A limit case is Luigi Serafini's *Codex Seraphinianus* (Franco Maria Ricci edition[18]): an encyclopedia with an invented and undecipherable alphabet, yet recognizable as a text thanks to stable pagination, chapter-based taxonomies, typographic coherence, and recurrent stylistic traits. Here writing functions as a system effect: it signals the existence of rules and classes while suspending access to linguistic content.

For this reason, the *Codex* allows a compressed "minimal" (graphematic) reading: one may assume that the signs belong to a finite and distinguishable inventory, and that "reading" first means deciding which differences are pertinent for separating types and occurrences (position on the line, stroke behavior, closures, repetitions). The decisive point, however, concerns the production of figurative hybrids: the plates place in continuity domains that ordinary repertoires keep separate (botany / objects / anatomy / machines / architectures), making them compatible through taxonomies and layout – i.e., through an editorial grammar that authorizes mutations and crossings.

The same principle describes the prevailing use of generative AI to construct hybrids. In text-to-image systems (e.g., DALL·E 2) the prompt does not "encode" an image; it specifies a bundle of constraints that guide generation toward a region of figurability where heterogeneous elements can be fused (for example: "architecture + organism", "object + animal", "material + anatomy"). The hybrid arises from controlling three practical parameters: (i) repertoire (which domains are invoked by text and image guides), (ii) compatibility (which traits must remain stable to preserve local recognizability), and (iii) degree of hybridization (which traits may migrate or be exchanged across domains). In this sense, *Codex* and AI share a technical point: the critical phase is not the final "resemblance", but the prior construction of pertinence grids that makes the hybridization legitimate and variation governable before the iconic stabilization of the output.

The "Figural" and "Style": From the Semiotic Square to Computational Descriptors

The Semiotic Square of Figurativity and Regimes of Figurativeness

As Goodman noted[19], since a painting resembles any other painting more than it resembles the subjects it depicts, all forms of figuration – including those proper to architecture – are "abstract" and can be so in different senses. To account for the variety of figurativities

17 Tafuri, *La sfera e il labirinto: avanguardie e architettura da Piranesi agli anni '70.*
18 Serafini, *Codex seraphinianus.*
19 Goodman, *Languages of Art: An Approach to a Theory of Symbols.*

discussed above – and which AI applications allow us to explore today – the semantic category of figurativity must be reformulated on the semiotic square (fig 9)[20]: alongside the contraries "iconic" and "abstract", the contradictories "non-iconic" and "non-abstract" are also articulated. At the center, where the contradictories intersect, a neutral regime emerges: the "figural" in the sense of Marin and Lyotard[21].

The figural is the regime in which an image appears as a nucleus of interpretive possibilities before a pertinence grid (iconic or plastic) stabilizes what is seen and how it is read. For this reason, the notion becomes especially evident in generative AI, almost didactically in diffusion models, where image generation starts from "indiscernible" noise. The reverse process constructs, step by step, a field of emerging structures: densifications, incipient contours, orientations, gradients, relations of scale and position. In this figural phase, the image begins to offer a polyvalent coherence, interpretable through Freud's notions of displacement and condensation in dream imagery.

Only when certain regularities cross thresholds of stability - for example, contours that close, distributions that become hierarchies, contrasts that organize into parts - does figurativity arise either in an iconic sense (recognition of objects and scenes) or as an autonomous plastic arrangement (rhythm, composition, texture). A textual prompt steers the reverse process toward *iconic* outcomes by selecting which differences must become invariants and which can remain variable, in a controlled transition from the figural to figurativity where meaning is produced by the progressive stabilization of pertinences.

Style as the Selection of Traits: "Plastic" Descriptors and Discriminant Scores

By mapping (natural and artificial) processes of iconic recognition and image generation, the semiotic square of figurativity allows more exact measures for traditional aesthetic categories: style, figure, character... To determine the visual "style" of an image via numerical descriptors (visual features) is, operationally, to assign it to a class on the basis of the statistical measurement of a stable configuration of pertinent differences.

In classical computer vision, extracting image characteristics (features) *f* proceeds by transforming the image through descriptors that, in human semiotics, correspond to "non-iconic" categories; specifically:

- The overall topology of a planar image can be described by subdividing it into regions (tiling) and computing multi-scale histograms of intensity or color; global directionality can be estimated with the Radon transform, which captures dominant orientations; distribution across scale can be modeled through fractal-dimension measures.
- The eidetics of contours can be measured via edge maps (Sobel, Canny) and statistics of density and orientation, or via invariant moments (Zernike) and polynomial decompositions (Chebyshev).

Chromatics can be described via color-space transforms and histograms of hue and luminance; the first four moments (mean, variance, skewness, kurtosis) summarize tonal structure. Texturality is captured by well-known families: Haralick co-occurrence matrices, Tamura measures (coarseness, contrast, directionality), and Gabor filters isolating oriented patterns at different frequencies; wavelet transforms or FFT describe periodicities and detail rhythms.

Once the features[22] have been extracted within a pattern-recognition framework, a classifier builds weights that maximize separation among the classes defining possible styles. A simple measure W_f of the "discriminativeness" of a given feature (descriptor) *f* with respect to *N* stylistic classes is the ratio between between-class dispersion and within-class dispersion:

$$W_f = \frac{\sum_{c=1}^{N} \left(\bar{T}_f - \bar{T}_{f,c} \right)^2}{\sum_{c=1}^{N} \sigma_{f,c}^2}$$

where $T_{f,c}$ is the mean of feature *f* within class *c*, $\bar{T}_f$ the global mean, and $\sigma^2_{f,c}$ the variance of *f* within class *c*.

W_f increases when class means are far apart and classes are compact: then the descriptor f expresses a salient characteristic and separates the style well. In semiotic terms, this formalizes a pertinence

> *Drawing functions as "meta-design": a form of writing that organizes and connects other "writings" of the project.*

20 On the semiotic square of figurativity, see Gay, Cazzaro, "*Drawing the indiscernible: morphogenesis & morphography of the artefacts.*"

21 On the notion of the "figural," see: Marin, "*Le concept de figurabilité, ou la rencontre entre l'histoire de l'art et la psychanalyse*"; Id., *De la représentation*, pp. 62–70; for the original theoretical framework, see also Lyotard, *Discours, figure*, esp. p. 202: «Le figural n'est pas le figuré. Il est le mouvement même par lequel une forme se défait, une énergie qui traverse les limites du sens».

22 A descriptor converts the image into a numerical vector (scalar features: bins, moments, energies, indices, etc.); in a pattern-recognition pipeline based on feature engineering, each vector component is treated by the classifier as an independent variable to estimate a class or score.

23 See Manovich and Arielli, *Artificial Aesthetics: Generative AI, Art and Visual Media.*

grid: it decides which plastic differences (and, at later levels, iconic or attributive ones) count as traits of a given style.
In the classical AI paradigm for style recognition (as in histopathological analysis or attribution studies), the operational definition of "style" (type) coincides with an explicit grid of pertinences: hand-designed descriptors are selected (edges, texture, palette, spatial distributions), the image is converted into a vector of interpretable features, and a separate classifier assigns the class. The chain image → features → decision remains decomposable: each measure has an operational meaning, and the classifier's weights indicate which differences are discriminant.
With the adoption of *Convolutional Neural Networks*, the same function is optimized end-to-end: the network learns transformation and decision jointly from data and a loss function.
Features are no longer an explicit list of named measures, but a set of latent representations distributed across many layers and channels; accordingly, style is encoded as a configuration of activations and as a decision boundary in the network's internal space.
The plastic/iconic distinction remains useful as a reading criterion across levels: early layers tend to capture plastic regularities (edges, orientations, grain, contrasts), while deeper layers combine them into more iconic configurations (parts, objects, scenes).
The correspondence, however, is not one-to-one and does not, as a rule, yield a finite inventory of explicitly declared traits.
In generative models, the image emerges as a passage from noise to a readable arrangement (fig. 10): diffusion models progressively stabilize traits; GANs select plausible regions of a learned latent space.
In both cases, we speak of "Drawing as meta-design" when the factors of the reading grids (dataset, prompt, constraints, criteria) are made explicit – i.e., when it becomes clear which differences count (for a human interpretive community) –so that the figure remains discussable, verifiable, and transferable along the chain of translations across supports and across high-dimensional models drawing on heterogeneous expressive substances (spatial, sonic, visual, kinesic, proxemic…).

Generative AI and Maps of the Figurable: Style Between Aesthetics and Computation

To define Drawing as meta-design is to relate it to the deeper notion of "style." Style is a persistent yet unstable category: in art history and aesthetics, it has served to describe expressive forms, identify periods, attribute authorship, define canons, mark deviations, and stabilize collective conventions. The cases discussed here show four historical modalities of this function: the primitivist and state-oriented myth of the arts under Fascism; the synaesthetic, industrial, and normative aesthetics of the modernist avant-gardes; the conceptual aesthetics of the neo-avant-gardes; and the postmodern wanderings of asemic writings. In each case, "style" does not designate an added ornament, but a grid of pertinences: it decides which traits count, which differences recur, and which variations remain recognizable.
The problem therefore divides into two inseparable sides. On the aesthetological side, style remains a critical device: it interprets relations among form, ethos, cultural genealogy, authorship, period repertoires, and social practices. On the computational side, in the age of artificial aesthetics[23], style becomes operational: pattern-recognition systems and generative AI models describe it through features, descriptors, latent vectors, and probabilistic classes; they can extract it, compare it, transfer it, hybridize it, and regenerate it in new images.
Yet making style and drawing retrospectively "computable" does not mean making them prospectively "predictable"[24]. It means translating some of their components into measurable variables-colour, texture, light, proportions, ornamentation, topology, composition, solid/void relations, materials, spatial organization, body–space relations, authorial or school-specific markers – while simultaneously grounding both their computation and their cultural interpretation.
For this reason, the image on which AI operates is no longer merely two-dimensional. The digital image-object may be a 2D image, a high-resolution IIIF image, RGB-D data, a panorama, a point cloud, a textured mesh, a BIM/CAD model, a neural field, or an archive of metadata and paradata. Each format makes different stylistic variables computable: palette and grain in a photograph, morphology in a mesh, spatial density in a point cloud, typology in an IFC model, cultural genealogy in a metadata graph. Style thus emerges from the encounter between datasets, descriptors, models, and interpretive frameworks.
To study Drawing in the age of generative AI - artificial drawing - therefore means asking how algorithmic systems operationalize style: how they encode it, manipulate it, transfer it across media, and return it in artifacts generated "in the style of."
Artificial Drawing can become a conceptual and methodological framework precisely because it holds together these two planes: the computational measurement of regularities and their aesthetic, historical, and cultural evaluation. Within this tension, a crucial part of the contemporary relation among cultural memory, creativity, authorship, and that elusive cultural entity called "taste" is now being decided.

[24] The aim of forecasting "artistic styles" through generative AI is highly suggestive and instructive, but it does not seem credible in light of simplifications such as those advanced, for example, by Lisi et al., *Modelling and Forecasting Art Movements with CGANs*, as already argued in Gay,*The Lightning and the 'Black Reaction': Natural and Artificial Pattern Drawing Between Golgi and Simondon*.

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