

Contents

	<i>Prologue</i>	7
I	<i>The Two Narcissuses</i>	17
II	<i>Alice's Mirror</i>	43
III	<i>Pygmalion in Westworld</i>	69
IV	<i>The Environmental Image</i>	103
V	<i>The Subject in Question</i>	135
VI	<i>In/Out</i>	153
VII	<i>Empathy Machine?</i>	189
	<i>Epilogue</i>	217
	<i>Acknowledgments</i>	219
	<i>Notes</i>	221
	<i>Index</i>	267

CHAPTER ONE

The Two Narcissuses

The Naive and the Self-Aware

“It is sheer folly to suppose that a person who has reached the age of falling in love should be unable to distinguish between a man and his reflection.”¹ Thus, bluntly, Pausanias branded the legend of Narcissus as folly — a story that perhaps is folly, yet has been capable of deeply molding the imagination of the West for many centuries: a myth in which at stake is not only the question of the origin of the image, but also the transgression of the boundaries between reality and representation. This is how Leon Battista Alberti evokes it in a famous passage from *De pictura*, a treatise that marks the beginnings of modern reflection about the image:

I have taken the habit of saying, among friends, that the inventor of painting was, according to the opinion of poets, that [famous] Narcissus who was transformed into a flower. As the painting is in fact the flower of all the arts, thus the whole tale of Narcissus perfectly adapts to the topic itself. To paint, in fact, is what else if not to catch with art that surface of the spring?²

Returning today to this myth on which so much has already been written may allow us to unleash its unexpected potentialities: regarding not so much the origins of painting (many times proclaimed dead, and yet in some ways more alive than ever), but its extreme outcomes, which we experience today in the form of

immersive virtual environments — in the form, that is, of environments in which the transgression of the boundaries between reality and representation is configured, as we will see, as a peculiar kind of narcissism.

In its most famous variant, as popularized by Ovid's *Metamorphoses*, the handsome young man, born of the violence perpetrated by Cephisus on the nymph Liriope — first indefatigable in rejecting the amorous offers of persistent suitors and then exhausted from failing to possess the object of his own unquenchable desire (himself) — “On the green grass / He drooped his weary head, and those bright eyes / That loved their master's beauty closed in death.” Even death could not end his passionate scopic obsession: Ovid points out, “Then still, received into the Underworld, / He gazed upon himself into the Styx's pool.”³ From the decomposition of his body on the bank of the spring sprang the beautiful white and yellow flowers that bear his name.

Several variants have developed around the figure of Narcissus and his tragic end. Before Ovid, Konon had preferred the suicide version.⁴ After Ovid (and this is the solution that most interests me for the argument I intend to develop), Plotinus will opt for drowning: without even naming him explicitly, in his treatise on the beautiful, in accordance with Neoplatonic ontology, he warns those who rush after bodily beauty without understanding the actual nature of bodies as mere “images, traces, shadows”:

For if a man runs to the image and wants to seize it as if it was the reality (like a beautiful reflection playing on the water, which some story somewhere, I think, said riddingly a man wanted to catch and sank down into the stream and disappeared) then this man who clings to beautiful bodies and will not let them go, will, like the man in the story, but in soul, not in body, sink down into the dark depths where intellect has no delight, and stay blind in Hades, consorting with shadows there and here.⁵

The variant of the fatal immersion would later be revived by Severus of Alexandria: “He was a beloved without a lover, but casting himself

upon the spring he took to loving his shadow as if it were his beloved, and, seizing himself from himself, he plunged into the waters. Thus, seeking comfort from passion, he found death.”⁶

In an interesting article, Pierre Hadot⁷ compares the version of Plotinus — later revived in the modern age by Marsilio Ficino⁸ — to other variants, noting that Ovid’s is the only one that introduces the element of self-recognition in the transition from naive falling in love with another who mirrors the gestures he himself makes to the realization that that young man is none other than himself reflected in image. At first, in fact, Narcissus addresses the object of his love as an otherness to whom he first speaks in the third, then in the second person:

“My joy! I see it [*et placet et video*]; but the joy I see
I cannot find (so fondly love is foiled)
.....
Come forth, whoever you are! [*Quisquis es, huc exi!*] . . .
.....
My looks, my age — indeed it cannot be
That you would shun. . . .”⁹

This is an equal and opposite error to what would catch Dante in Paradise (3, 17–18) and make Beatrice smile: “I fell into the contrary error to that which kindled love between the man and the fountain.” While Dante looks at souls, mistaking them for “mirrored faces”¹⁰ of bodies and turns to see their flesh-and-blood models, Narcissus mistakes the mirrored reflection for a real person.

But then the bitter awareness of the reflected self takes over, and the discourse, completing the “game of pronouns,”¹¹ switches to the first person: “Oh, I am he! [*iste ego sum*] Oh, now I know for sure / The image is my own; it’s for myself / I burn with love; I fan the flames feel.”¹² After all, the reader already knew this, because Ovid had pointed it out (today, we would call this a spoiler) about thirty verses earlier, calling Narcissus naive [*credula*]: “You see a phantom of a mirrored shape [*imagineis umbra*].”¹³ Such self-recognition decrees his

death, reversing the prophecy that the seer Tiresias, when asked by Narcissus's mother, utters: "and of him she asked the seer, / Would he long years and ripe old age enjoy / Who answered 'If he shall himself not know.'"14

The *self-aware* Narcissus who ends up recognizing himself in the reflection (and thus at the same time recognizing that he is facing the image of himself, thereby becoming aware of the medium water-as-mirror) is contrasted with a *naive* Narcissus who, as Pausanias sums it up, grasps neither that he is the object of his own desire nor that he is the object of an image: "Narcissus looked into this water, and not perceiving that what he saw was his own reflection, fell in love with himself unaware."15 By branding such naivety as "folly," however, Pausanias shows that he no longer understands (when he writes in the second century AD) that Narcissus's inability to distinguish image and reality is not a defect, so to speak, in his perceptual and cognitive abilities, but a dulling caused by Eros, who thus takes revenge for the conceit of a young man who had rejected all his suitors out of *hybris*.

In terms of contemporary media theory, we could reformulate the polarity between the naive Narcissus and the self-aware Narcissus as the antithesis between the *transparency effect* and the *opacity effect* of the medium.¹⁶ The naive person fails to grasp the aqueous mirror as a material medium that allows the image to manifest itself as precisely an image and therefore believes that he is in front of a presence. By contrast, in the moment of self-recognition the self-aware person takes note of precisely the relation between that support and that image, simultaneously realizing that he is in front of a representation, an image that represents him, that is, that makes a sign, unveiling the dimension of semiotic reference: "After many frustrations," notes Julia Kristeva, "Narcissus gathers that he is actually in a world of 'signs.'"17 In the transition to image consciousness, the importance of tears should not be overlooked, and this Ovid promptly emphasizes:

Distraught he turned towards the face again;
His tears rippled the pool, and darkly then
The troubled water veiled the fading form,
and, as it vanished, "Stay!", he shouted, "stay!
Oh, cruelty to leave your lover so!"¹⁸

The perturbation of the watery mirror caused by the tears makes clear the opacity of the medium, exposing its function as a support for the image and consequently the iconic nature of the love object.

Iconographic Polarities

In a Warburgesque study focusing on the language of gestures, Paul Zanker effectively shows how the antithesis between the naive type and the self-aware type is also reflected in a specific modulation of bodily postures peculiar to one and the other, accurately documented by ancient and modern iconography (with the chronological priority of the naive type and the predominance of depictions of the self-aware mode from late Hellenism onward).¹⁹ The naive type is often depicted in the act of raising an arm, marveling at the gesture that the "other" repeats in the reflection. The self-aware type is frequently associated with the depiction of the naked body of Narcissus, corresponding to the gesture of stripping himself naked described by Ovid immediately after the handsome young man's realization that he is both object and subject of the mirror reflection: "Then in his grief he tore this robe and beat / His pale cold fists upon his naked breasts."²⁰ In the development of this iconographic line, the intensely dramatic moment of Ovid's verse is softened into a quiet pose of complacent self-contemplation of the naked body, not infrequently depicted in the posture with arms raised and crossed above the head: what Zanker designates as the *Narzißgebärde*, Narcissus's gesture. Hence it is possible to pursue a history of the effects of this gestural pattern, which, passing through depictions of the Callipygian Venus, reaches the twentieth-century representations (e.g., in Matisse or Picasso) of the painter's model, who displays her body in all its beauty to herself and to her portrait painter.

Among the most consciously narcissistic artistic genres, it is of course the self-portrait that stands out. Those who have reconstructed its cultural history observe that “it seems perfectly justified to regard Alberti’s advocacy of the ‘Narcissus-painter’ as the seminal celebration of self-portraiture.”²¹ The use of the mirror and catoptric reflection as a condition of possibility for this representational practice is evidently constitutive, as we will see more fully in the next chapter. The modern genesis of the self-portrait would be made possible by a narcissistic process of separation and autonomization of the individual from the supraindividual sphere of the sacred,²² a process in which the process of self-awareness is fundamental. Paradigmatic of this line, because it makes it patently explicit, is *Portrait of the Artist as a Weeping Narcissus*, a life-size polyester sculpture made by Olaf Nicolai in 2000 (fig. 1.1). The artist, kneeling in casual clothes and sneakers, leans weeping over the mirror of water that reflects his image to him — his tears soon reveal the transparent medium in all its opacity.

If, as has been aptly observed, “every age forms its own Narcissus,”²³ it would be impossible to do justice here to the history of his iconography, which from the paintings in Pompeii, through the medieval miniatures of the *Ovide moralisé* and the Renaissance, mannerist, and baroque variations, is indeed characterized by the prevalence of the self-aware type, but will never definitively erase the polarity between naivety and image consciousness: the naive *Narcissus at the Fountain* (ca. 1600) leaning fatally deceived by the reflection of his beloved, attributed by Roberto Longhi to Caravaggio and preserved at Palazzo Barberini in Rome, and the *Narcissus* sculpted by Benvenuto Cellini (ca. 1548–1565) in full awareness of his beautiful nudity, preserved at the Museo Nazionale del Bargello in Florence, eloquently represent this polarity in the art of the second half of the sixteenth century. Later, Nicolas Poussin, Claude Lorrain, Bertel Thorvaldsen — to name but a few major masters — would engage with the figure of the scornful youth indifferent to love, and nor would he be spared the desecrating irony of Honoré Daumier

published in *Le Charivari* in 1842. In the second half of the nineteenth century, Gustave Moreau stands out among the artists obsessed with Narcissus; Claude Monet's passion for watercolor reflections (think of the cycle of some two hundred and fifty *Water Lilies* painted during the last thirty-one years of his life) has also been read in the light of the myth of the immersive young man.²⁴ Among the surrealists, André Masson repeatedly returned to this motif, and Salvador Dalí even wanted to show his oil painting *Metamorphosis of Narcissus* (1936–1937) to Sigmund Freud at their first meeting in London on July 19, 1938, hoping to spark a discussion with the father of psychoanalysis about narcissism and his own “paranoiac-critical” method.²⁵

Even in contemporary art, as a whole characterized by a high level of reflexivity, the type of the self-aware Narcissus seems to predominate unchallenged: body art could be interpreted as an incessant and tireless commentary on self-aware narcissism: “Narcissus protests (and thus finds gratification) through the agency of himself.”²⁶

In his polymorphous masquerades of self in guise of other, Luigi Ontani has very often varied his interpretation of the topos of Narcissus: in *tableaux vivants* such as *NarciGiuda* (1993–1995) or in ceramics such as *BellimBusto NarcisEco* (2018). The work that inaugurates the series in 1970, *NarcisOnfalOnan alla SorGente Del NiEnte* (fig. 1.2), makes clear from the title its place in the self-aware typology: omphalocentrism and onanism, concentration on one's navel and autoeroticism.

But the naive type endures, peeping out for example in Roy Lichtenstein's *Look Mickey* (1961) (fig. 1.3): rod in hand, Donald Duck looks excitedly at the mirror of water, convinced that he has caught a big fish, not realizing that the hook is snagged in the back of his jacket and that — making a self-aware Mickey Mouse snicker — it is his own reflected body that he mistakes for a fine catch.²⁷

The element of water plays a fundamental role in the art of Bill Viola: consider the series of “water portraits” (e.g., the 2013 self-portrait *Submerged*, donated by the artist to the Uffizi Museum, which



Figure 1.2. Luigi Ontani, *NarcisOnfalOnan alla SorGente Del NiEnte*, blowup/enlarged color photograph, Tuscan-Emilian Apennines, 1970 (courtesy of Collezione Ontani).



Figure 1.3. Roy Lichtenstein, *Look Mickey*, oil on canvas, 1961 (courtesy © Board of Trustees, National Gallery of Art, Washington, and © Estate of Roy Lichtenstein, by SIAE 2021).

received it as the first animated work in its permanent collection), or the videotape *The Reflecting Pool* (1977–1979), all playing on the paradoxes of the reflected image. But it is especially in the video diptych *Surrender* (2001) that the call of Narcissus is most strongly felt (fig. 1.4). Part of the *Passions* series, which explores emotional extremes, the work consists of two vertical plasma screens placed one above the other. On the top screen, a man dressed in red appears, while on the bottom, a woman is shown dressed in blue. Both are seen in half-length, positioned as if they are each other's mirror image. They bow toward the edges of their respective screens, seemingly attempting to kiss. However, as they move closer, their faces meet the surface of a mirror of water. When they rise, drops of water — evoking the tears of Ovid's Narcissus — fall back, distorting the figures. At this moment, it becomes clear that the figures are merely reflections. The embrace they seek is unattainable; ultimately, they must surrender, as the title suggests.²⁸ This diptych seems to allude to the transition from the naive type to the self-aware type: the difference in the colors of the clothes and of gender emphasizes the naive falling in love with the Other. In contrast, the dripping of water on the liquid mirror, which reveals (as was the case in Ovid's version with the tears of the handsome young man) both the medium of reflection and indeed the mirrored nature of the object of love, embodies the self-aware type.

On that note, we may recall that lesser-known variant of the legend of Narcissus according to which the handsome young man is said to have fallen in love not with himself, but with a twin sister, who resembled him in every way, both in appearance and in the way she wore her hair and clothes. This is how Pausanias reports it, pointing out that in this variant, Narcissus was not so idiotic as not to recognize that the object of his vision was an image but nevertheless wished to contemplate it as a representation commemorating his beloved: “Narcissus loved his sister, and when the girl died he used to haunt the spring, knowing that what he saw was his own reflection, but finding solace in imagining that he was looking, not at his own reflection, but at his sister's likeness.”²⁹



Figure 1.4. Bill Viola, *Surrender*, 2001, color video diptych on two flat panel displays mounted vertically, one over the other on wall, 204.2 × 61 × 8.9 cm, 30:51 minutes; performers: John Fleck, Weba Garretson (photo: Kira Perov © Bill Viola Studio).

Narcissisms

The polarization between the naive type and the self-aware type is, moreover, not the exclusive preserve of the Narcissus myth. For the naive mode, we recall the legend of the madwoman Acco, reported in the collection of Greek proverbs attributed to the philosopher Zenobius, who taught rhetoric in Rome in the second century under the emperor Hadrian: “Acco was a woman renowned for insanity, and it is said that in looking in the mirror she spoke to her own image as if to another person. Hence the saying ‘To be mad as Acco.’”³⁰ As is shown by the comparative exploration of the European tradition and the Chinese and Persian, Indian and African folk traditions undertaken by fairy-tale historian Albert Wesselski,³¹ numerous cross-cultural examples can be found regarding the lack of self-recognition in mirror reflection. To recall but one instance, we can cite a story included in the commentary to the *Dhammapada*, one of the canonical Buddhist texts of the Theravadan school. In preparing to attack the palace of the treasurer Jotika, Ajātasattu sees the image of himself and his own escort reflected by the jewels set in the palace walls and mistakes it for the enemy army: “Seeing his own reflection and that of his retinue in the jeweled walls, he concluded, ‘The householder has armed himself for battle and has come forth with his host.’ Therefore he did not dare approach the palace.”³² In the authoritative treatise *De re rustica* (6.35), Columella also considered an animal version of the same theme: mares afflicted with rabies, “if they have seen their reflexion in the water, they are seized with a vain passion and consequently forget to eat and die from a wasting disease due to love. . . . This delusion is dispelled if you cut off her mane unevenly and lead her down to the water; then beholding at length her own ugliness, she loses the recollection of the picture which was formerly before her eyes.”³³

As for the self-aware mode, it appears in the form of an ancient superstition, found in numerous cultures, that holds that those who look at themselves and recognize their image reflected in a mirror or pool of water are destined to an imminent demise. In *The Golden*

Bough, James George Frazer collected many instances in which the reflection in the mirror is equated with the soul: according to the Zulu and Basuto in Africa and equally to some Melanesian peoples, mirroring oneself in a pool of water exposes one to the risk that ferocious beasts or evil spirits may take possession of one's soul: "We can now understand why it was a maxim both in ancient India and ancient Greece not to look at one's reflection in water. . . . This was probably the origin of the classical story of the beautiful Narcissus."³⁴

In a fascinating pioneering investigation at the intersection of anthropology and psychoanalysis taking into account Frazer's reflections, and with extensive references to the myth of Narcissus, Géza Rohéim parallels the notion of removal and that of taboo, examining a wide range of instances from European and non-European folklore relating to the prohibition of looking into the mirror and the fear of one's own mirror reflection (eisoptrophobia or spectrophobia) as a fear of self-recognition.³⁵

The type of the self-aware Narcissus, as originating with Ovid, has almost unilaterally fed into the mainstream story of the effects of this myth,³⁶ decisively reinforced by the psychoanalytic conception of narcissism, which then became the standard in common parlance.³⁷

The psychoanalytic elaboration of narcissism is preceded by psychological and psychiatric literature in which references, albeit marginal, to the figure of Narcissus occasionally crop up. This is the case, for example, with Alfred Binet, who in a note to an article on fetishism calls to mind the "fable du beau Narcisse" about "ces tristes perversions" in which the fetish consists of one's own person.³⁸ The explicit elaboration of the concept, however, is mainly due to the studies of Havelock Ellis and Paul Näcke, exponents of the intense period of research on sexuality, *psycopathia sexualis* (according to Richard von Krafft-Ebing's famous designation) and the so-called perversions (exhibitionism, autoeroticism, coprophilia, fetishism, and, of course, homosexuality . . .) that flourished in the second half of the nineteenth century. As early as 1898, Ellis had sketched

out a predominantly female type of autoeroticism, designating it as “Narcissus-like”: “I may briefly mention that tendency which is sometimes found, more especially perhaps in women, for the sexual emotions to be absorbed, and often entirely lost in self-admiration. This Narcissus-like tendency, of which the normal germ in women is symbolized by the mirror, is found in minor degree in some feminine-minded men.”³⁹

Taking a statistical approach to the subject of sexual deviations in a sample of more than fifteen hundred male and female patients admitted to the Heil- und Pflgeanstalt Hubertusburg in Leipzig, Näcke adds the suffix “-ismus,” adopting the term “authentic narcissism [*echter Narcissmus*]” to denote the extreme (albeit in his opinion rare) form of “auto-eroticism” described by Ellis, that is, the form that includes full sexual satisfaction resulting in orgasm, while reserving the notion of “Pseudo-Narcissmus” for less intense forms, mostly consisting of self-admiration and intensive contemplation of one’s body in the mirror.⁴⁰

In the more properly psychoanalytic context, with an approach that combines the examination of clinical cases together with ancient and modern literary and philosophical references, it is to Isidor Sadger whom we owe the first clinical discussion of what he calls “Narzismus”: an attempt to turn toward one’s own body those attentions and care devoted to it by one’s mother during childhood, ultimately therefore a kind of “Identifikation” between maternal and filial instance.⁴¹

According to the interpretation, later to become canonical, finally offered by Freud in the 1914 essay “Introduction to Narcissism” (which draws on the work of Ellis, Näcke, and Sadger), “an antithesis between ego-libido and object-libido” is produced that corresponds to a relationship of inverse proportionality: “The more of the one is employed, the more the other becomes depleted.”⁴² While primary narcissism is consubstantial to infant life, in which the child (from the womb onward) assumes itself as a love object before investing in external objects, secondary narcissism consists of a later adult

regression to that stage, successive to withdrawal of object investment. The possibility of directing one's libido toward an other and external support (i.e., anaclitic attachment: for the child, typically the mother as the original source of pleasure) is replaced by the choice directed toward one's own self. Which version of the myth Freud was referring to, that of Ovid, is clearly revealed not by this major essay, but by a passage from the famous study "Leonardo Da Vinci and a Memory of His Childhood" four years earlier in which the male homosexual is described as having slipped back into the autoeroticism of early childhood:

The boys whom he now loves as he grows up are after all only substitutive figures and revivals of himself in childhood—boys whom he loves in the way in which his mother loved him when he was a child. He finds the objects of his love along the path of narcissism, as we say; for Narcissus, according to the Greek legend, was a youth who preferred his own reflection to everything else and who was changed into the lovely flower of that name.⁴³

This consolidates the general idea that narcissism consists of a general ineptitude for libidinal object investment, resulting in regression to early stages of undifferentiated autoeroticism and mother-child identification processes, together with homosexual inclinations. The issue crucial to our argument of the beclouding of image consciousness (i.e., the inability of the naive Narcissus to realize the iconic nature of what he perceives in the mirror reflection) fades into the background.

For this very reason, on the other hand, the analysis of a narcissistic dream elaborated in 1911 by Otto Rank appears to be particularly significant precisely because it addresses the image experience. It bears recalling here in its basic outline. A young woman, once infatuated with a man who initially reciprocated her attentions and then gradually distanced himself from her, dreams that she receives three letters. The first is a love letter in which "W" (an initial that during analysis the patient would later actually refer to the name of her lover) declares that he is always thinking of her and constantly

looking at the oil painting of her that she had given him as a memento, envying the man who can instead look at her in the flesh. He also confesses that he is already married and encloses a photo of his wife. The second letter is entitled “In a dream” (thus a kind of *mise en abîme* in which the oneiric planes seem to split): the intensely poetic tone of the writing makes her think of a reverie, a daydream. The third and final letter contains only images: leafing through it, she first comes across half-length portraits, then the image of a very beautiful woman (it is not, however, his wife, since the surname written below is different: a surname known to the dreamer, who cannot, however, recall it), and finally the picture of his spouse, complete with surname. Her unattractiveness makes her realize why the man confessed to always thinking of the protagonist of this dream adventure. The patient then returns in the dream to the image of the more beautiful woman, and here it is opportune to report the account in detail:

I go back flipping backwards until I find the beautiful image again, sinking [*vertieft*] into her gaze. . . . Above all, I am struck by her face, and primarily by her hair and hairstyle, with a ribbon running through it: I thought it was just the way I style myself. Her eyes reminded me of my own as they appear in my own portraits, and so the shape of her face looked like mine. Then I noticed her beautiful legs and lower body, which also reminded me of my own. I liked this image very much, and I immersed myself [*versenkt*] in its vision as if falling in love with it. I looked at it again and again for a long time, thinking that maybe Rubens might have painted it (maybe he actually painted it). Then it occurred to me that maybe I had talked to W., but I don’t know for sure whether I really did and in what way: whether I was there or he was here. I could only see his face, his head in front of me.⁴⁴

The dream scene reported by Rank appears particularly suggestive because it seems to eschew the stark alternative between self-recognition and nonrecognition, opting for a strong *resemblance* (and not a simple identity, precluded according to Rank by self-censoring intervention) between the dreamer and the image of the beautiful

woman portrayed. For the rest, the experience of deepening and immersion (suggested by the verb forms *vertieft* and *versenkt*, respectively) and the dulling of proprioception (her uncertainty regarding the position of her body: “whether I was there or he was here”) appear as unmistakable signs of that transgression of the threshold between image and reality that the legend of Narcissus in its naive type articulates as a mythological topos.

Media Narcosis

We said: *beclouding* of image consciousness, *dulling* of proprioception. This is a further reason that warns us against quickly dismissing the naive Narcissus as an idiot, as Pausanias would have it. It is again Hadot⁴⁵ who reminds us of the crucial role played by the narcissus flower, the etymology of whose name has been traced by several authors to *narkè*, numbness, narcosis: we read, for example, in Pliny that “it has received its name, from *narkè* [torpor], and not from the youth Narcissus, mentioned in fable”⁴⁶ or in Clement of Alexandria that “there is the narcissus, a flower with heavy perfume, whose name itself suggests that it acts as a narcotic [*narkan*] on the nerves.”⁴⁷ It is thus its narcotic power that establishes that dimension of consciousness at once auroral and crepuscular through which the failure to distinguish between image and reality, between the body and its representation, is made possible.

Marshall McLuhan did not fail to note the connection between the legend of Narcissus and the effects of *numbness*, making explicit its mediological repercussions in a way that is crucial to our discussion. In chapter 4 of his landmark work *Understanding Media*, significantly titled “The Gadget Love: Narcissus as Narcosis,” the Canadian mediologist evokes from the outset the etymology that would see the young man’s name derived from *narkè*. And he advances in his own way a critical reflection around the Ovidian question of self-recognition, which, as mentioned earlier, has become mainstream:

The wisdom of the Narcissus myth does not convey any idea that Narcissus fell in love with anything he regarded as himself. Obviously he would have

had very different feelings about the image had he known it was an extension or repetition of himself. It is, perhaps, indicative of the bias of our intensely technological and, therefore, narcotic culture that we have long interpreted the Narcissus story to mean that he fell in love with himself, that he imagined the reflection to be Narcissus!⁴⁸

The recourse to this myth is not ornamental; on the contrary, it appears crucial in the economy of McLuhan's argument, aimed at describing the essential ambivalence of the media as *extensions of man*: "When the spell of the gimmick or an extension of our bodies is new, there comes *narcosis* or numbing to the newly amplified area."⁴⁹ The enhancement of the organic-natural performance of the human body is inseparably accompanied by a corresponding numbing of the corresponding organ: presumably to preserve a state of balance between the hyperstimulation caused by the prosthetic extension and the numbing that compensates for it. The invention of the wheel (this is McLuhan's own example) exponentially increases human capacities for movement and transportation, but this prosthesis ends up causing an atrophy of the foot, which has delegated to the wheel a whole range of functions that it was previously performing itself. In the case of the handsome young man at the spring, the prosthesis constituted by the reflecting mirror of the water offers him an extension of the self, except that it then (in the non-Ovidian variants) prevents him from recognizing himself since the extension of the sense of sight constituted by the mirrorlike medium entails at the same time a dulling or, as McLuhan sometimes prefers to put it, a *self-amputation*: "Self-amputation forbids self-recognition."⁵⁰

Esthesiology is the study of sensations, and proposing an analogy between the human being's central nervous system and the electricity-based technology that extends and externalizes it into the world, McLuhan advances an esthesiological reading of this correlation, believing that the introduction of each new technical device entails an overall redevelopment of the relationships among the particular senses and of the human sensorium as a whole: "Any invention or

technology is an extension or self-amputation of our physical bodies, and such extension also demands new ratios or new equilibriums among the other organs and extensions of the body.”⁵¹ By serving the machine, the human being becomes in turn — dialectically — its relative servomechanism.

Returning to what he calls the “Narcissus narcosis” syndrome in an interview with *Playboy* a few years later, McLuhan significantly associates this syndrome with the question of media awareness and the relationship between the transparency and opacity of the medium, resorting to a metaphor destined to become famous, that of the rearview mirror. As long as they are immersed in a medium, the human beings are as little aware of it as is the fish of the water in which it swims. Only at the moment that medium is superseded by a later medium can it be retrospectively focused on and grasped precisely as the medium in which the experience took place: “Thus we are always one step behind in our view of the world.”⁵²

A similar categorical framework also seems to be referred to by the historian of ideas with a sociological orientation, Christopher Lasch, in a series of works published between the late 1970s and the 1980s dedicated to the analysis of the narcissistic personality of contemporary American man. Directly tying such a style of behavior to the phenomena of media spectacularization, Lasch is among the first to identify the “imaging” of existence in its every minimal and private recess as one of the fundamental causes of this process of the overall narcissification of life, due to the uncontrollable proliferation of images intended for recording and broadcasting: such pervasive iconic mediation means that “we cannot help responding to others as if their actions — and our own — were being recorded and simultaneously transmitted to an unseen audience or stored up for close scrutiny at some later time.”⁵³

Returning to these themes in a subsequent essay in *The Minimal Self*, Lasch is keen to distinguish the narcissistic personality from the concepts of egocentrism and egoism with which it is often and willingly confused: “As the Greek legend reminds us, it is this confusion

of the self and the not-self — not ‘egoism’ — that distinguishes the plight of Narcissus.” The minimal or narcissistic self presents itself as a self uncertain of its own boundaries (those that determine the typically contemporary preoccupation with individual “identity”), which originates from a radical transformation: “The replacement of a reliable world of durable objects by a world of flickering images that make it harder and harder to distinguish reality from fantasy.”⁵⁴

As was already the case for McLuhan, for Lasch, what essentially constitutes the essence of the Narcissus fable (insofar as it can help illuminate the pervasive transformation of the contemporary world into an image) thus has nothing to do with self-recognition and self-eroticism at all, but rather with “naivety,” that is, the difficulty or rather impossibility of distinguishing between reality and its iconic representation: “Narcissus drowns in his own reflection, never understanding that it is a reflection. He mistakes his own image for someone else and seeks to embrace it without regard to his safety. The point of the story is not that Narcissus falls in love with himself, but, since he fails to recognize his own reflection, that he lacks any conception of the difference between himself and his surroundings.”⁵⁵

Slightly subsequent to Lasch’s reflections, Régis Debray’s mediological considerations, also engaged in an attempt to reconstruct the history of the Western gaze, identify in the media narcissism of the contemporary technological stage designated as “visual” a self-reflexivity and circularity of referrals between media that is sealed in a self-referential bubble devoid of effective connections to the real: “In a culture of subjectless gazes and virtual objects, the Other becomes a species in danger of extinction, and the image, an image of itself. Technological narcissism, that is, corporate ‘communication’ as mere navel-gazing . . . The visual communicates itself, no longer desires anything but itself. Vertigo of the mirror: more and more frequently the media tell us about the media.”⁵⁶

Apnea

In the light of these considerations, which we might well call dialectical mediology, we are now in a position to assign to Narcissus a fundamentally archetypal role in the genealogy of immersive environments that we propose to delineate: a role that is all the more crucial insofar as it is rooted not in the chronology of prehistory, but in the undefined mists of myth. The reconstructions of media archaeology that have attempted a history of the precursors of such environments — discerning them, as we will see, in the illusionistic paintings of Pompeian villas, in panoramas, in iMax cinemas — have not gone as far as Narcissus, who instead can be included in the genealogy of immersivity and indeed must be recognized as its eponymous hero: Narcissus is the proto-immersive, the archetypal *experiencer* who grasps the image as if it were reality itself and not a mediation of it (immediateness), relates to it as a presence relates to another presence, and not to a mere iconic representation (presentness), and finally, corresponding to a specific *affordance*, immerses himself in it (unframedness) traversing its threshold.

And it is precisely by turning to the timeless past of this proto-immersive myth that we can begin to glimpse the sense of the seemingly ineluctable drive toward immersiveness that distinguishes our contemporary media landscape and seems to direct its near future.⁵⁷ Although, as we will see more extensively in later chapters, while “immersion” refers *lato sensu* to an experience of total involvement in an iconic environment, its meaning *stricto sensu*, which ties it literally to the liquid element, exhibits its status in a paradigmatic way.

Early cinema had already made a pact with this literal sense of immersiveness:⁵⁸ the shot from the train of the Whirlpool Rapids in *Panorama of Gorge Railway* (Edison, 1900), which seems to want to draw the viewer into the swirling waters, offers an early example of this. The pact would later be reaffirmed and strengthened by subsequent developments in a cinematography aimed at what has been called a true “enwaterment” (water + embodiment) of the viewer, who is incorporated into a liquid and fluid dimension.⁵⁹ Think — to

mention but a few successful titles — of the cases of *Cape Fear* (Martin Scorsese, 1991), *Titanic* (James Cameron, 1997), *The Truman Show* (Peter Weir, 1998), and *Saving Private Ryan* (Steven Spielberg, 1998).

In the context of video art, the video environment *The Swimmer (going to Heidelberg too often)* (fig. 1.5), made in 1984 by Studio Azzurro (a group of artists who were among the first to experiment with digital technologies), appears particularly significant for our discussion since it stages in an exemplary way the dialectic between framing and unframing. Arranged side by side, twenty-four monitors scan separate spaces horizontally. But this discontinuity is systematically negated by what the monitors themselves display: a swimmer who, gliding from one screen to the next, bursts, as it were, from their frames and imposes the establishment of a continuous space.

Nowadays, when immersiveness seems to have become a buzzword, we should ask ourselves whether the future of virtual reality will be underwater. In 2020, Pierre “Pyaré” Friquet, an artist who creates immersive virtual environments, presented at the Sundance Film Festival the work *Spaced Out*, to be experienced by swimming underwater with a waterproof VR headset designed by Ballast Technologies, a liquid journey from the Earth to the Moon that, as the press release states, allows for full immersion: “Floating in the water with VR goggles becomes a space simulation as the absence of gravity immerses all the senses.”⁶⁰

With *Aquaphobia*,⁶¹ a 2017 VR installation, Jakob Kudsk Steensen stages a watery world in which nature has now taken over from humans, uniting the post-Anthropocene future with an archaic, prehuman Brooklyn. The title makes direct reference to psychotherapeutic treatments aimed at curing water phobia and alludes to a perspective in which, due to climate change and rising sea levels, the submerged condition promises to become not the exception, but the rule of existence (the perspective foreshadowed by the film *Waterworld*, directed by Kevin Reynolds and released in 1995).

Immersion in a virtual reality environment that simulates a world alternative to the real world could well be compared to a condition



Figure 1.5. Studio Azzurro, *The Swimmer*
(*going to Heidelberg too often*), video environ-
ment, 1984 (courtesy of Studio Azzurro).

of apnea, in which the so-called breathing rhythm that governs our usual interactions with the real world is suspended and replaced with a different rhythmic pattern in which we must learn new gestures and new sensorimotor performance.

*Apnea*⁶² is a VR video game published by MephistoFiles in 2015 in which the player embodies a Soviet diver who must retrieve the prototype of a nuclear missile from the US submarine *Scorpion*, which sank in the waters of the Atlantic in May 1968. But *Apnea* (fig. 1.6) is also an immersive installation combining virtual reality and interactive documentary, created in 2016 by Vanessa Vozzo and dedicated to the tragic shipwreck in the Mediterranean off Lampedusa on October 3, 2013, in which at least 368 migrants perished: passing through three distinct moments (an exhibition room where photographs, videos, and documentation related to the shipwreck can be viewed; an interactive projection; and a 360-degree video that immerses the viewer in the waters off the coast of Sicily), the viewer is invited to share a disturbing threshold experience: “In *Apnea* the sea is a boundary where everything disappears, a real border, but also a representation of the limit that separates life from death, from solitude, from void.”⁶³

We will have to return later to the (controversial) use of virtual reality in humanitarian documentary filmmaking as a device capable of triggering in viewers feelings of empathy and proactive participation. For now, we can observe that this installation leads us directly back—uniting history and myth—to the figure of Narcissus as proto-immersive and in particular to the watery death that we have seen reserved for him in the version embraced by Plotinus. By immersing himself in the image, Narcissus dies by drowning: the deadly danger of immersion. By immersing themselves in the image, the viewers of *Apnea* are invited to identify themselves, albeit asymptotically (like the famous parallel lines that meet, yes, but only in infinity), with those drowned in the Mediterranean: through such an immersive experience of identification, users are urged to empathize with the victims and to develop a prosocial attitude toward



Figure 1.6. Vanessa Vozzo, *Apnea*, interactive and immersive documentary about migrants and the sea, 2016 (courtesy of Vanessa Vozzo [Officine Sintetiche]).

the migrant crisis and a participatory understanding of this tragic phenomenon.

We are here faced with what Walter Benjamin calls “telescoping [*télescopage*] of the past through the present,” a telescoping or collision of different levels of temporality (like a spyglass closing up on itself) by which the contemporary reactivates the meaning of a past, a past so archaic that it blurs into the mists of myth, leading it to new “legibility” and “recognizability.”⁶⁴

Thus, the ambiguous profile of immersiveness as a true two-faced Janus begins to emerge: on the one hand, as a destiny of death and loss of the boundaries of the self in the indistinguishability that fuses together reality and image and nullifies the experiencer’s ability to assume a critical distance from the situation that envelops him or her.⁶⁵ (The *hikikomori*, who practice an almost total social withdrawal and isolate themselves from the world by sealing themselves inside a digital bubble, could be contemporary embodiments of this form of narcissism.)⁶⁶ On the other hand, as an opportunity of involvement in and participation in the situation, which transcends the traditional position of the subject standing in front of the object and opens up unprecedented experiential and cognitive horizons: an occasion that, just like a free-diving experience, is delimited in time and destined to resurface but that also promises to transform those who experience it.

Index

Images are indicated by italic page number

- ABSTRACT ART, 13.
- Acco legend, 28.
- Acconci, Vito, 59; *Air Time*, 60; *Centers*, 60.
- Admonitor, 135, 136.
- Aerial views, 200–201.
- Affordances (Gibson), 8, 37, 105, 205.
- Agalmatophilia, 75. *See also* Pygmalion.
- Agamben, Giorgio, 70–72, 83, 204.
- A-ha (synth-pop group), “Take on Me,” 162, 163.
- Aitken, Doug, *Mirror*, 64.
- Ai Weiwei, 190, 194, 199; *Omni*, 190.
- Ajātasattu, 28.
- Alberti, Leon Battista: on mirrors, 44; on Narcissus, 17, 22; *De pictura (On Painting)*, 17, 120, 135–36; visual pyramid, 120–21, 122; “window” of, 120, 191.
- Alice (Lewis Carroll heroine), 46, 52–54, 65–68. *See also* Carroll, Lewis: *Through the Looking Glass*.
- Alice Through the Looking Glass* (James Bobin, 2016), 54.
- Alien vs. Predator* (2004), 213.
- Alter ego, 93, 147. *See also* Avatars.
- Anaglyphic glasses, 174, 182.
- Anamorphic lenses and displays, 133, 181.
- Anders, Günther, 90.
- Andersen’s fairy tales, 91.
- Anderson, William, 153–54.
- Andréides*, 86–87, 90, 97. *See also* Androids.
- Andriyevsky, Aleksandr, *Robinson Crusoe*, 174.
- Androids, 72, 76, 93–97, 99–101. *See also* *Andréides*; Robots.
- An-icons, 11–12, 13, 15, 105, 110.
- Animals: bats, 201–203, 213; elephants, 190; flying, 199–200, 203, 207; in horror films, 211; response to images, 105–107; subjectivity of, 203–205; visual perception, 211–13. *See also* Birds.
- Animation and comic books, 162.
- Animation of the inanimate, 75–80, 92, 101; inanimation of the animate, 80–86, 101. *See also* Pygmalion.
- Anselmo, Giovanni, 151; *Entering the Work*, 134, 138.
- Anthropocentrism, 38, 205–206, 209, 213.
- Anthropomorphism, 96, 218.
- Anti-anthropocentrism. *See* Anthropocentrism.
- Antonello da Messina, 110.
- Apelles, 107.
- Aphrodite (Venus), 21, 70, 73, 78, 86, 233 n.7.
- Apnea, 40.
- Apnea* (installation, Vanessa Vozzo, 2016), 40–42, 41.
- Apnea* (VR video game), 40.
- Aquila Bird Flight Simulator*, 207.
- Arbuckle, Fatty, 144.
- Aristophanes, 141.
- Aristotle, 58, 76.
- Armstrong, Jesse, 187.
- Arnheim, Rudolf, 116, 241 n.19.
- Arnobius, 73.
- AromaRama, 184.

INDEX

- Arrivée d'un train en gare de La Ciotat, L'* (Lumière Brothers, 1895), 167, 168, 169, 170, 171, 256 n.39; 3-D remake, 173; in Ultra HD, 171.
- Artcock collective, 84.
- "Art Distance Sharing," 148.
- Art movements, 119.
- Asimov, Isaac, 99, 101.
- Augmented reality, 9, 117–18, 180. *See also* Virtual reality.
- Augustus, 81.
- Autoeroticism, 23, 29–31, 97. *See also* Narcissism.
- Automaton motif, 86–87, 93–96. *See also* Androids; Robots.
- Autopsy, 198; depictions, 136.
- Avant-garde, 113, 116–17, 118, 170.
- Avatar* (James Cameron, 2009), 150.
- Avatar* (video game), 150.
- Avatars, 14, 47, 117, 146–47; canine, 148; eagle's beak in VR game, 208; and empathy, 146, 147, 190; Hindu tradition, 150; historical precedents, 138, 148–51; and image environmentalization, 146; LaTurbo Avedon, 148; in new media arts, 147–48; scene from *Second Life*, 149; social life of, 148.
- BAILEY, THERESE "BUNTY," 162.
- Balázs, Béla, 153, 160, 253 n.11; *Theory of the Film*, 158–59; *Visible Man*, 59; "Wan Hu-Chen's Book," 155–56.
- Balla, Giacomo, 116, 117, 118.
- Baltrušaitis, Jurgis, 44.
- Balzac, Honoré de, *Old Man Goriot*, 127.
- Barjavel, René, *Cinéma Total*, 88, 178–81, 183.
- Barker, Robert, panorama device, 126, 127.
- Baroque ceilings, 126.
- Barron, Steve, "Take On Me" video clip, 162, 163.
- Barthes, Roland, 75, 141, 197.
- Bats, 201–203, 213.
- Battleship Potemkin* (Sergei Eisenstein, 1925), 171, 172, 175, 176.
- Baudrillard, Jean, 51, 90, 111.
- Baudry, Jean-Louis, 59, 151.
- Baum, Paull Franklin, 74.
- Bava, Mario and Lamberto, 74.
- Bayle, Pierre, *Dictionnaire historique et critique*, 78.
- Bazin, André, 88, 181–83; "The Myth of Total Cinema," 181.
- BeAnotherLab, *The Machine to Be Another*, 188, 189–90.
- Beauty, 13, 18, 21, 155, 166. *See also* Narcissus.
- Bednar, Ryan, Down the Rabbit Hole, 67.
- Beecroft, Vanessa, 84.
- Beer, Theodor, 205.
- "Being there," 8, 126, 191, 193, 197–98.
- Belting, Hans, 138.
- Benglis, Lynda, 59; *Now*, 61.
- Benjamin, Walter, 13, 153, 167; "Berlin Childhood," 157, 254 n.15; and the Chinese legend of Wu Tao Tzu, 156–58, 159, 254 n.15; on the panorama, 127–28; telescoping of temporal dimensions, 42, 87; "The Work of Art in the Age of Its Technological Reproducibility," 157.
- Berger, Henning, *The Deluge*, 142.
- Berkeley, Bishop, 87.
- Bête humaine, La* (Jean Renoir, 1938), 169.
- Bethe, Albrecht, 205.
- Bigelow, Kathryn, 190, 194, 199; *The Protector*, 190; *Strange Days*, 186, 187, 209.
- Binet, Alfred, 29.
- Biotechnology, 8, 187. *See also* Technological prostheses.
- Bioy Casares, Adolfo, *La invención de Morel*, 183–86, 259 n.75.
- Birdly, 208–209; user experiencing, 210.
- Birds, 199–201, 203; aircraft named for hawks and falcons, 200; Danto's pigeons, 107; flight, 201, 207–209, 210; Kurosawa's "Crows," 164, 170; pigeon photography, 201.
- Bird's eye view, 200–201, 203.
- Bishop, Claire, 64–65.
- Björk, "All Is Full Of Love" video clip, 96–99, 98.
- Black Mirror* (series), 67–68, 186–87.
- Blade Runner* (Ridley Scott, 1982), 72, 93–96, 101; film still, 95.
- Blanchot, Maurice, 86.
- Blindness, 213–14, 215, 265 n.67.
- Bloch, Ernst: *Durch die Wüste*, 156; "The Motif of the Door" in *Traces*, 156, 157.
- Boccioni, Umberto, 116, 118; "Technical Manifesto of Futurist Sculpture," 118.
- Body art, 23, 116, 119.

INDEX

- Body camera, 146.
 Body image disturbance, 147.
 Body input, 93, 209.
 Body transfer illusion, 189–90.
 Boehm, Gottfried, 10.
 Bonnardot, Claude-Jean, *The Invention of Morel* television film, 259 n.75.
 Bonnot de Condillac, Étienne, *A Treatise on the Sensations*, 78.
 Borges, Jorge Luis, 58; “Animals of Mirrors,” 51–52.
 Borrell del Caso, Pere, *Escaping Criticism*, 111, 112.
 Boschetti, Isabella, 122.
 Boureau-Deslandes, André-François, *Pigmalion, ou la statue animée*, 78.
 Brain-computer interfaces in cinema, 186–87.
 Brainstorm (Douglas Trumbull, 1983), 186.
 Brecht, Bertolt, 140; “The Fourth Wall of China,” 141.
 Bredekamp, Horst, 138.
 Brewster, David, 128.
 Bridge, 164–66, 217; cinema as, 167.
 Brogi, Giulio, 184.
 Brolin, James, 99.
 Brooker, Charlie, *Black Mirror: Bandersnatch*, 67–68.
 Brynner, Yul, 99.
 Buber, Martin, 155.
 Buddhism, 28; *nētra pinkama* ceremony, 77.
 Burch, Noël, 197–98.
 Burckhardt, Jacob, 81.
 Burj Khalifa skyscraper (Dubai), 201.
 Butterfield, Asa, 170.

 CAGE, NICOLAS, 58.
 Callipygian Venus, 21.
 Callistratus, 76; *Ekphraseis*, 69–70, 103.
Camaïeu, 110.
Camerae pictae, 13.
 Camera techniques, 126, 138, 143–45, 201. *See also* Stereoscopy; 360-degree shooting.
 Cameron, James: *Avatar*, 150; *Strange Days*, 186, 187.
 Candy, Stuart, *NurturePod*, 6.
 Cao Fei, *i.Mirror*, 147–48.
Cape Fear (Martin Scorsese, 1991), 38.

 Caravaggio: *Narcissus at the Fountain* (attrib.), 22; reenactments of, 84.
 Carrà, Carlo, 118; “Painting of Sounds, Noises, Smells” manifesto, 118–19.
 Carroll, Leo G., 144.
 Carroll, Lewis: *The Hunting of the Snark*, 67; “Jabberwocky,” 67; “Phantasmagoria,” 131; *Through the Looking-Glass*, 46, 52–54, 53, 57, 65, 67–68, 154, 227 n.15. *See also* Alice.
 Cassirer, Ernst, 43, 204.
 Castaing-Taylor, Lucien, *Leviathan*, 211.
Catacomb 3-D (video game), 145.
 Catoptrics. *See* Mirrors.
 Cattelan, Maurizio, installations, 84–86, 85.
 Cave Automatic Virtual Environment (CAVE), 151.
 Cave paintings, 151, 218.
 Celant, Germano, 118, 119, 242 n.27; *Ambiente/arte*, 116–17.
 Cellini Benvenuto, *Narcissus*, 22.
 Cephisus, 18.
 Chamber of the Giants (Sala dei Giganti, Mantua), 123–25, 124, 192.
 Chamisso, Adelbert von, “Peter Schlemihl,” 48.
 Chaplin, Charlie: *The Circus*, 58; *The Knockout*, 144.
 Chekhov, Michael Aleksandrovič, 142.
 Cheng, Ian: *Bad Corgi*, 148; *Emissary Forks at Perfection*, 148.
 Chinese and Japanese legends, 153–56.
 Chinese calligraphy, 156.
 Chopin, Frédéric, *Drop of Water* prelude, 166.
 Christina of Lorraine, 81–82.
 Christus, Petrus, *Portrait of a Carthusian*, 107–108.
 Chuang Tzu, 58.
 CIA, 201.
 Cimabue, 107.
 Cinema: American, 143, 144, 159; automaton motif, 93–96; avant-garde, 170; as bridging, 167; camera techniques, 138, 143–45; contrasted with theater, 142–43, 160; direct interpellation, 143–44; doppelgänger theme in, 48–50; Eisenstein on, 142, 143–45, 173–77, 178; expanded cinema, 64, 189; filmic framing, 177–80; first screening, 167–70, 171; horror films, 211; immersiveness in, 37–38;

INDEX

- inanimation theme, 79; influence of video games, 146; in/out movement in, 160, 164–67; interactive, 67, 159; and the legend of Wu Tao Tzu, 158–59; and mirrors, 54–57, 58–59; Narcissus theme, 48; phantom rides, 169; railroads in, 166–71; “rube films,” 169–70; *Rückenfigur* in, 138; science fiction, 99–101, 186, 211–13; screen as threshold, 158–64, 170–71; stereoscopic techniques, 13, 150, 173–78, 182–83; synesthetic, 88, 189; *tableaux vivants* in, 83; and 360-degree shooting, 143, 178; total cinema, 119, 178–81; virtual reality, 40, 68, 170, 213–14; widescreen, 182. *See also* 3-D cinema; Immersive virtual environments: installations.
- Cinerama and Cinemascope, 181, 182.
- Circus, The* (Charlie Chaplin, 1928), 58.
- Cirincione, Janine, 66.
- Citizen Security Law (“Gag Law,” Spain), 132.
- Clement of Alexandria, 33, 73, 233 n.7.
- Clooney, George, 162.
- Clouds over Sidra* (Chris Milk, 2015), 191, 262 n.31.
- Cocks, Jay, *Strange Days*, 186, 187.
- Cocteau, Jean, 54–57; *Le Sang d’un poète*, 56, 57; *Orphée*, 57.
- Columella, Lucius Junius Moderatus, *De re rustica*, 28.
- Comédie Française, 139.
- Compassion machine, 194. *See also* Empathy.
- Constitute, The, EYEsect project, 211, 212.
- Corpses, 84–86, 198.
- Cosmos within Us* (Tupac Martir, 2019), 214.
- Countryman’s First Sight of the Animated Pictures, The* (Robert W. Paul, 1901), 169.
- Cratinus, 141.
- Crichton, Michael, 99.
- Crivelli, Carlo, *Catherine of Alexandria*, 108–110, 109, 111, 241 n.18.
- Cronenberg, David, *Videodrome*, 160, 161, 255 n.24.
- Cunningham, Chris, 96–99; “All Is Full Of Love” video clip, 98.
- Cybersickness, 208.
- DADA AND NEW DADA, 54, 119.
- Daedalus, 76.
- Dali, Salvador, *Metamorphosis of Narcissus*, 23.
- D’Amato, Brian, 66.
- Damisch, Hubert, 221 n.2.
- Dante Alighieri, *Paradise*, 19.
- Danto, Arthur, 107.
- Daumier, Honoré, 22–23.
- Davis, Decontee, 191.
- De Benedetto, Franco, 84.
- Debray, Régis, 36.
- Degrees of freedom, 65, 195.
- Délassements-Comiques, 139.
- Delaunay, Robert, 116.
- Deleuze, Gilles, 204.
- Della Porta, Giambattista, *Natural Magick*, 131.
- Dementia, 214–15.
- Depero, Fortunato, 117.
- Der Sturm gallery, 116.
- Descartes, René, *Traité de l’homme*, 77.
- Descola, Philippe, 227 n.15.
- Dhammapada*, 28.
- DiCaprio, Leonardo, 58.
- Dick, Philip K., *Do Androids Dream of Electric Sheep?* 94.
- Diderot, Denis: *D’Alembert’s Dream*, 79; and the fourth wall, 139, 140, 141–42, 143.
- Didi-Huberman, Georges, 135.
- Dircks, Henry, 131.
- Direct interpellation, 143–44.
- Disney’s Magical Mirror Starring Mickey Mouse*, 54.
- Di sotto in su* (worm’s eye view), 200.
- Displaced Working Elephants in Myanmar* (video), 190.
- Documentaries, 40–42, 190–95, 198–99.
- Doppelgängers, 47–50, 83, 90, 147, 228 n.19; doubling in Björk’s “All Is Full Of Love” video clip, 97; robots as doubles, 93.
- Down the Rabbit Hole* (immersive diorama dir. Ryan Benar, 2020), 68.
- Dreams*, 31–32, 47, 50, 52, 54, 159; and mirrors, 51, 57–58; and VR, 68.
- Dreams* (Akira Kurosawa, 1990), 164–67, 165.
- Drones, 200, 211.
- Duchamp, Marcel, *Etant donnés 1° la Chute d’eau 2° le gaz d’éclairage*, 122.
- Dürer, Albrecht, *Draughtsman Making a Perspective Drawing of a Reclining Woman*, 121–22, 122, 243 n.40.
- EAGLE FLIGHT (VIDEO GAME), 207–208.

INDEX

- Echo (nymph), 60, 69.
 Echolia, 60.
 Echolocation, 202.
 Eco, Umberto, 45–46, 59.
 Eco-iconological plexus, 133.
 Ecological niche, 207.
 Edison, Thomas, 86–87.
 Effigy magic, 76.
 E-Health, 213.
 Eichendorff, Joseph von, “The Marble Statue,” 74.
 Eight Beautiful Views of Lake Ōmi, 154.
 Eisenstein, Sergei, 88, 139, 183; *Battleship Potemkin*, 171, 172, 175, 176; “Diderot Talked about Cinema,” 142; and the fourth wall, 141–42, 143; *Nonindifferent Nature*, 171; on pathos and ecstasy, 176; “Stereokino,” 173–75, 178; on modulating the gaze in American cinema, 143–45.
 Ekphrasis, 79, 103, 241 n.18; of Callistratus, 69–70, 103.
 Electronic music, 64.
 Elephants, 190.
 Eliasson, Olafur, *The Weather Project*, 64.
 Elizabeth, Saint, 84–86.
 Elkins, James, 138.
 Ellis, Havelock, 29–30.
 Elsaesser, Thomas, 178.
 Embodiment, 37, 79, 126, 141, 145; embodiment virtual reality, 189–90.
 Emersiveness, 133, 135; devices, 128–31; immersion and emersion dialectic, 128, 1333, 153.
 Empathy, 94, 261 n.17, 262 n.31; avatars and, 146, 147, 190; in human/nonhuman interaction, 93; interspecies, 199–200, 203; self-empathy, 147; virtual reality as catalyst for, 189–91, 194, 195, 196–99, 262 n.26.
Empire of the Ants (Bert I. Gordon, 1977), 211.
 “Entering the painting,” 115–16, 134, 137, 138, 144, 153–58, 186. *See also* Immersion; In/out movement.
Enter the Void (Gaspar Noé, 2009), 146.
 Environmental art, 119–20.
 Environmentalization of the image, 101, 119, 133, 135, 177; avatars and, 146, 147; Celant’s *Ambiente/arte*, 116–18, 119; Kaiserpanorama, 127–28; *Milk’s Clouds over Sidra*, 191. *See also* Unframing.
 Enwaterment, 37.
 Erdoğan, President, 133.
 Eros, 20.
 Erotic and pornographic images, 128.
 Esthesis, 13; esthesiology, 34.
 Estrangement effect, 44, 140.
Evolution of Verse (Chris Milk, 2015), 170.
 Ewers, Heinz, 48.
 Exhibitions, 65, 66, 116, 232 n.71; exhibition spaces, 40, 92, 148.
 Expanded Cinema, 64, 189.
 Experiments in Art and Technology, Pepsi Pavilion (Expo ’70), 62, 63–64.
 EYEsec project (The Constitute), 211, 212.
 FACEBOOK AS METAVERSE, 14.
Face/Off (John Woo, 1997), 58.
 Fairy tales, 28, 91, 154, 155.
 Falconet, Étienne-Maurice, *Pygmalion at the Feet of His Statue*, 79.
 Feast of the Pheasant, 81.
 Festivals, 81–82.
 Fetishism, 29.
 Ficino, Marsilio, 19.
 Field of vision, 7, 142, 193.
 First-person shot, 145–46.
 Flagg, James Montgomery, “I Want You for the U.S. Army” poster, 139.
 Fletcher, Louise, 186.
 Flight, 201–203. *See also* Flight simulators.
 Flight simulators, 207–209, 210.
 Ford, Harrison, 94, 95.
 Forster, Kurt W., 125.
 Foucault, Michel: on the mirror, 43–44; reading of Velázquez’s *Las Meninas*, 137.
 Fourth wall, 139–41, 175.
 Frame: deconstruction of, 113, 116, 118, 177; “dictatorship” of, 194–95; filmic framing, 177–78; Kant on, 113; picture, 7, 113, 135, 177; in sculpture, 80; Simmel on, 115–16, 164; stepping out of, 111–13, 114; theoretical study of, 113–16; and trompe l’oeil depictions, 108; in video art, 38, 39; in VR, 8, 180, 194–96. *See also* Entering the painting; Environmentalization of the image; Unframing.
 Frazer, James George, *The Golden Bough*, 28–29.
 Freedberg, David, 76–77, 138.

INDEX

- Freud, Sigmund: “aim of all life is death,” 83; “Leonardo Da Vinci and a Memory of His Childhood,” 31; on narcissism, 23, 30–31; on Pygmalion, 75, 91; on the uncanny, 44–45, 91–92.
- Freud, Dalí and the *Metamorphosis of Narcissus* (exhibition, 2018–2019), 223 n.25.
- Fried, Michael, 139.
- Friedrich, Caspar David, 137.
- Friquet, Pierre “Pyaré,” *Spaced Out*, 38.
- Frontality, 137, 141.
- Fuhrmann, August, 128.
- Full body ownership illusion, 147.
- Futurism, 116, 118, 119, 120, 242 n.32; in opera, 140.
- GALATEA, 78, 79, 80; in Weinbaum’s “Pygmalion’s Glasses,” 88–90.
- Galeen, Henrik, 50.
- Gance, Abel, *Napoléon*, 181.
- Garamba National Park (Congo), 190.
- Gautier, Théophile, *Avatar*, 150.
- Gaze: emanating from images, 135–37, 144; exchanged between devotee and idol, 138; of the filmmaker, 198; in immersive virtual environments, 7, 191, 195, 197, 199; in theater and cinema, 143–45; in Velázquez’s *Las Meninas*, 136–37.
- Gell, Alfred, 138.
- Geminoid project, 93.
- Gender swap, 190.
- Gestures: in the mirror, 19, 21; in paintings, 135–36; of robots, 93, 97; in *tableaux vivants*, 83; in theater, 142; in virtual environments, 190, 197.
- Gibson, James J., “affordances,” 105, 205.
- Giles, Herbert A., 58, 154.
- Gioni, Massimiliano, 84.
- Giotto, 107, 241 n.18.
- Godard, Jean-Luc, *Passion*, 83.
- Goethe, Johann Wolfgang von, 218; *Italian Journey*, 82.
- Gombrich, E. H., 108, 125.
- Gonzaga, Federico II, 122–23.
- GoPro camera, 146, 211.
- Gordon, Bert I., *Empire of the Ants*, 211.
- Graham, Dan, *Performer/Audience/Mirror*, 63.
- Grau, Oliver, 226 n.65.
- Great Train Robbery, The* (Edwin S. Porter, 1903), 144.
- Greco, Emidio, *Morel’s Invention*, 184, 185.
- Greenaway, Peter, *The Mysteries of Compton House Garden*, 83.
- Greimas, Algirdas Julien, 10.
- Grisaille*, 110.
- Grosse Berliner Kunstausstellung, 116.
- Groupe µ, 116.
- Groys, Boris, 120.
- Gunning, Tom, 256 n.39.
- HADOT, PIERRE, 19, 33.
- Hagen, Charles, 232 n.71.
- Halley, Peter, 66.
- Hallucinations du Baron de Münchhausen, Les* (Georges Méliès, 1911), 54, 55.
- Hamilton, Sir William, 82.
- Hand, David, 54.
- Handprints, 151.
- Hannah, Daryl, 94, 95.
- Haraway, Donna, 66–67.
- Hardcore Henry* (Ilya Naishuller, 2015), 146.
- Harket, Morten, 162.
- Harnett, William, 110.
- Hauer, Rutger, 96.
- Head, James H., *Home Pastimes, or Tableaux Vivants*, 82–83.
- Headsets and helmets, 7–8, 126–27. *See also* Virtual reality headsets.
- Hearn, Lafcadio, 154.
- Hegel, Georg Wilhelm Friedrich, 156, 177.
- Heidegger, Martin, 204.
- Heil- und Pflegeanstalt Hubertusburg (Leipzig), 30.
- Hein, Jeppe, *Mirror Labyrinth*, NY, 64.
- Helmholtz, Hermann von, 205.
- Hephaestus, 76.
- Herder, Johann Gottfried, *Sculpture*, 79–80.
- Hikikomori*, 42, 226 n.66.
- Hirata, Oriza, 93.
- Hitchcock, Alfred, 182; *Spellbound*, 144.
- Hoffmann, E. T. A.: “A New Year’s Adventure,” 48; “The Sandman,” 86.
- Hohokam people, 200.
- Holloway, Josh, 259 n.75.
- Hollywood, 144, 159.
- Holmes, Oliver Wendell, 128.

INDEX

- Holofans, 133.
Holograms, 131–33, 147; march of the holograms, Madrid, 132, 133.
Holt, Nancy, 59, 60.
Holzer, Jenny, 66.
Homosexuality, 29, 31.
Hopkins, Anthony, as Dr. Robert Ford in *Westworld*, 99, 100.
Horror films, 211.
Hugo (Martin Scorsese, 2011), 170.
Huizinga, Johan, *The Autumn of the Middle Ages*, 81.
Hull, John, 213–14.
Humanitarian documentary filmmaking, 40–42, 190–95, 199.
Husserl, Edmund, 9, 10.

ICONIC DOUBLING, 70.
Iconoclasm, 81.
Iconology, 9, 10; an-iconology, 12, 15; eco-iconology, 133.
Identity, 36, 215; and otherness, 45, 147.
Ikea Place app, 180.
Iliad, 76.
Illusionistic art, 9, 37, 105, 108–11, 122–26, 218.
Image: case of Narcissus, 20–21, 43; image making, 7, 43, 218; properties of, 7–14; and support, 10–11. *See also* Environmentalization of the image; Frame; Narcissus; Representation; Spectatorship; Unframing.
Immediateness, 7, 10, 11, 37.
Immersion, 37, 40–42, 226 n.65; and emersion dialectic, 128, 133, 153; water metaphor, 157–58.
Immersive dioramas, 68.
Immersive journalism, 191–92.
Immersive natives, 14.
Immersive theater, 141.
Immersive virtual environments, 18, 38, 189, 151; aesthetic and sensory value, 13–14; installations, 40–42, 192–94, 195, 198; precursors, 37–38, 92, 178; properties, 7–11, 37. *See also* Virtual reality.
Immigration. *See* Migrants.
Inanimation of the animate, 80–84, 101; corpses, 84–86.
Iñárritu, Alejandro G., 199; *Carne y Arena*, 125, 192–94, 195, 197–98.

Inception (Christopher Nolan, 2010), 58.
In/out movement, 128, 133, 144, 153, 159–60, 162, 169.
Insects, 107–108, 205, 211.
Installations, 84, 116, 119–20, 122, 242 n.27, 242 n.32; immersive, 38, 40; inanimating the animate, 84; *totale Installation*, 120. *See also* *Apnea*; Cattelan, Maurizio; Iñárritu, Alejandro G.
Intersubjectivity, 14, 47, 117, 198.
Invention of Morel, The (television film, Claude-Jean Bonnardot, 1967), 259 n.75. *See also* Bioy Casares, Adolfo; Greco, Emidio
Ishiguro, Hiroshi, 93.
Ishikawa, Kōsai, 154.
I/you theme, 137, 138.

“JABBERWOCKY” (CARROLL), 67.
Jackson, Michael, 133.
Jack Tilton Gallery, 66.
Japanese legends, 154–55.
Jensen, Wilhelm, *Gradiva*, 74–75.
Jentsch, Ernst, 91–92.
Jonas, Joan, *Mirror Pieces I and II*, 63.
Joy, Lisa, 99.
Juryfreie Kunstschau (1922 exhibition, Berlin), 116.

KABAKOV, ILYA, 120.
Kaiserpanorama, 127–28, 129.
Kandinsky, Wassily, 116.
Kant, Immanuel, 204; *Critique of Judgment*, 113.
Kapoor, Anish: *Cloud Gate*, 64; *Sky Mirror*, 64.
Kaprow, Allan, 120.
Karina, Anna, 184.
Keaton, Buster, *Sherlock Jr.*, 152, 159–60.
Kemp, Wolfgang, 138.
Keyser, Thomas de, *The Anatomy Lesson of Dr. Sebastiaan Egbertsz de Vrij*, 136.
Kinesthetic ensembles, 65, 108, 125.
Kino-Eye (Dziga Vertov, 1924), 169.
Kittler, Friedrich, 50.
Klüver, Billy, 63.
Knockout, The (Charlie Chaplin, 1914), 144.
Konon, 18.
Koukouti, Maria Danae, 227 n.15.
Kracauer, Siegfried, 50, 153, 158.

INDEX

- Krafft-Ebing, Richard von, *Psychopathia Sexualis*, 29, 75.
 Krauss, Rosalind, 59, 60, 61.
 Kris, Ernst, 76.
 Kristeva, Julia, 20.
 Kriszat, Georg, 264 n.48.
 Kručňnych, Aleksej, 140.
 Kubovy, Michael, 108–110.
 Kurosawa, Akira, *Dreams*, 164–67, 165, 170.
 Kurz, Otto, 76.
 Kusama, Yayoi, *Narcissus Garden*, 63.
- LACAN, JACQUES, 46–47, 151.
La Ciotat effect, 170. See also *Arrivée d'un train en gare de La Ciotat*.
Lady from Shanghai (Orson Welles, 1947), 58.
Lady in the Lake (Robert Montgomery, 1947), 144.
 Lagrenée, Louis-Jean-Francois, *Pygmalion and Galatea*, 80.
 Lamarck, Jean-Baptiste, 207.
 Lanier, Jaron, 66.
 Lasch, Christopher, 35–36.
 Lasko, Ann, 66.
Last Year at Marienbad (Alain Resnais, 1961), 259 n.75.
 LaTurbo Avedon, 148.
 Leibniz, Gottfried Wilhelm, 88, 203.
 Leonardo da Vinci: *Bird's Eye View of a Coast*, 200; *Treatise on Painting*, 44.
 Levi, Primo, “Retirement Fund,” 209.
Leviathan (Lucien Castaing-Taylor/Verena Paravel, 2012), 211.
 Ley Mordaza (Gag Law), 132, 133.
 Lichtenstein, Roy, *Look Mickey*, 23, 25.
 Lindqvist, Sven, 153.
 Linear perspective, 67, 120–22.
 Liriope, 18.
 Lissitzky, El, *Prounenraum*, 116.
 Literature, 48, 50, 80, 218; science fiction, 86.
 Localization, 202, 213.
 Long, Bryerly, 93.
 Longhi, Roberto, 22.
 Lorrain, Claude, 22.
 Lorris, Guillaume de. See *Roman de la rose*.
Lost (television series), 259 n.75.
 Lotze, Hermann, 205.
 Lucian of Samosata, *Eikones*, 73.
 Lum, Ken, *Pi*, 64.
 Lumière Brothers, 173, 180; *L'arrivée d'un train en gare de La Ciotat*, 167, 168, 169, 170, 171, 173, 181, 256 n.39; *La Sortie de l'Usine Lumière à Lyon*, 167–69.
 Lynch, David, *Twin Peaks*, 57.
- MACHINE TO BE ANOTHER, THE
 (BeAnotherLab, 2013), 188, 189–90.
 Macho, Thomas, 222 n.14.
 Mackenzie, David, *Perfect Sense*, 79.
 Malafouris, Lambros, 227 n.15.
 Malevich, Kazimir, 140.
 Manovich, Lev, 196.
 Mantegna, Andrea, Bridal Chamber of the Castle San Giorgio, 125.
Man with a Movie Camera (Dziga Vertov, 1929), 169.
 Marais, Jean, 57.
 Marin, Louis, 135.
 Marinetti, Filippo Tommaso, “Il tattilismo,” 119.
 Mart, the (Rovereto), 65.
 Martin, Tony, 64.
Mary Poppins (Robert Stevenson, 1964), 160.
 Masaccio, 125; *The Holy Trinity*, 121.
 Masson, André, 23.
 Matjušin, Mihail, 140.
Matrix, The (Wachowski, 1999), 57.
 Matt's Gallery (London), 65.
 McLuhan, Marshall, 97; rearview mirror, 35, 177, 257 n.57; *Understanding Media*, 33–35.
 Media: awareness, 35; metamedia, 164, 176; reflective and transparent, 61–63; spectacularization, 35; transmediality, 218. See also Transparency.
 Media archaeology, 12, 37, 182.
 Mediation, 10, 11, 35, 37, 63, 147, 171, 196. See also Immediateness.
 Medici, Ferdinand I de', 81.
 Mediology, 33, 36–37, 145.
Meeting You (VR documentary, 2020), 198.
 Mélenchon, Jean-Luc, 133.
 Méliès, Georges: *Les hallucinations du Baron de Münchhausen*, 54, 55; *La statue animée*, 83.
 MephistoFiles, 40.
 Mephistopheles, 48.
 Mérimée, Prosper, “The Venus of Ille,” 74.

INDEX

- Merleau-Ponty, Maurice, 47, 228 n.16.
 Metamedia, 164, 176.
 Metaverse, 14.
 Metz, Christian, 59, 171.
 Meun, Jean de, *Roman de la rose*, 70–72, 71.
 Micker, Jan, *Bird's Eye View of Amsterdam*, 200.
 Mickey Mouse: Lichtenstein's *Look Mickey*, 23, 25; *Thru the Mirror*, 54; video game, 54.
 Microsoft Hololens 2, 133, 180.
 Middleton, Peter, 214.
 Migrants, 192, 193, 195, 197.
 Milk, Chris: *Evolution of Verse*, 170; VR documentaries with United Nations, 191–92, 194, 197, 199, 262 n.31.
 Miller, Lee, 57.
 Mimesis, 9, 43, 44, 52.
Minecraft, 145.
 Minsky, Marvin, “Telepresence,” 126–27.
 Mirror neurons, 59.
 Mirror people, 51–52.
 Mirrors: Alberti on, 44; bidirectional movement through, 52–54; child's experience of, 46, 228 n.16; in cinema, 54–59; dome of Pepsi Pavilion, 62, 63–64; and doppelgänger theme, 47–51; and dreams, 57–58; Eco on, 45–46; estrangement created by, 44–45, 47; as “in-between experience” (Foucault), 43–44; inversion, 45–47, 61; Lacan on, 46–47; Leonardo da Vinci on, 44; in literature, 51–54; and narcissism, 30; otherness of image, 19, 45, 51, 52; Plato on, 43, 45; rearview, 35, 47, 177, 257 n.57; and self-portraiture, 22; symbolism, 43; in visual arts, 59–65; water as, 16, 18–19, 20, 21, 22, 23–26, 28–29, 34, 58, 69–70, 103–104. *See also* Carroll, Lewis: *Through the Looking-Glass*; Narcissus.
 Mirror shots, 58.
 Mitchell, W. J. T., 138.
 “Mixed” reality devices, 133.
 Modi, Narendra, 133.
 Mondrian, Piet, *Madame B . . . , à Dresde*, 116, 117.
 Monet, Claude: *Le train dans la neige, la locomotive*, 167; *Water Lilies*, 23.
 Montgomery, Robert, *Lady in the Lake*, 144.
 Moreau, Gustave, 23.
 Moreau, Paul, 75.
Morel's Invention (Emidio Greco, 1974), 184, 185.
See also Bioy Casares, Adolfo.
 Moretz, Chloë Grace, 170.
 Mori, Masahito, 93.
 Morris, Robert, *Mirror Cubes*, 63.
 Moulin, Félix Jacques, *Female Nude Kissing Her Reflection stereograph*, 129.
 Mourey, Jean-Pierre, *L'invention de Morel*, 259 n.75.
 Munch, Edvard, 137.
 Munhwa Broadcasting Corporation, *Meeting You* (VR documentary), 198.
 Münsterberg, Hugo, *Photoplay*, 58–59.
My Mother's Wing (Chris Milk, 2016), 191.
Myst, 145.
Mysteries of Compton House Garden, The (Peter Greenaway, 1982), 83.
 NÄCKE, PAUL, 29, 30.
 Nagel, Thomas, “What Is It Like to Be a Bat?” 201–203, 213, 215, 263 n.44, 265 n.67.
 Naishuller, Ilya, *Hardcore Henry*, 146.
 Naivety, 23, 28, 36, 45–46, 169; naive Narcissus, 19–20, 22, 26, 31, 33, 72, 110.
 Nakaya, Fujiko, 63.
 Nanotechnology, 8, 187.
 Narcissism, 18, 22, 23, 29–33, 47, 75; distinguished from egocentrism, 35–36; and *hikikomori*, 226 n.66; and media, 35–36; video art as, 59, 61. *See also* Narcissus.
 Narcissus: Alberti on, 17; in Callistratus's *Ekphraseis*, 69–70, 103; in cinema, 48; compared with Pygmalion, 70–72; connection with numbness, 33–34; death of, 18–20, 40; and Echo, 60, 69; gesture of, 21; iconography, 16, 22–26, 103–104; Lasch on, 35–36; legend of, 12, 17–20, 29; McLuhan on, 33–34, 35; and the mirror, 59, 228 n.16; Pausanias on, 17, 20, 26, 33, 47; Plotinus on, 18, 19, 40; as precursor of immersivity, 37, 40, 63; in psychology, 29–33; in *Roman de la Rose*, 72; self-aware vs. naive, 20–21, 22, 23, 26, 28–29, 31, 33, 36, 110; variant legend of twin sister, 26, 47. *See also* Narcissism; Ovid: *Metamorphoses*.
Narcissus at the Fountain (attrib. Caravaggio), 22.
 Narcissus flower, 33.
 Nature, 97, 206.

INDEX

- Nauman, Bruce, 59; Corridor with Mirror and White Lights, 63; Revolving Upside Down, 60–61.
- Necrophilia, 75.
- Nespresso commercial, 162–63.
- Nētra pinkama ceremony, 77.
- Neubronner, Julius, 201.
- New media arts, avatars and, 147–48.
- Nicolai, Olaf, *Portrait of the Artist as a Weeping Narcissus*, 16, 22.
- Nielsen, Asta, 59.
- Nietzsche, Friedrich, 205.
- Noé, Gaspar, *Enter the Void*, 146.
- Nolan, Christopher, *Inception*, 58.
- Nolan, Jonathan, 99.
- Nonhuman perspective, 169, 209–11.
- Nonobjective art, 13.
- Notes on Blindness* (2016), 213–14.
- OBAMA, BARACK, 194, 261 n.17.
- O'Blivion, Professor Brian, 160.
- Oculus Rift, 207, 211.
- Odorama, 184.
- Onomarchus of Andros, “The Man Who Fell in Love with a Statue,” 73.
- Ontani, Luigi, 23; *NarcisOnfalOnan alla SorGente Del NiEnte*, 23, 24.
- Opacity, 10, 20–21, 22, 35, 111. *See also* Transparency.
- OpenVR, 207.
- ORLAN, 113; *Tentative de sortir du cadre à visage découvert*, 114.
- Orphée* (Jean Cocteau, 1950), 57.
- Osmoticity, 52, 59.
- Otherness: and empathy, 189–90; and identity, 45, 147; of mirror image 19, 51, 52; of the other, 196–97, 198.
- Ovid: on the fall of the giants, 123; *Metamorphoses*, 18, 19–21, 26, 33, 60, 69; Pygmalion myth, 70, 72, 75, 80, 86.
- Ovide moralisé*, 22.
- PAGE, ELLIOT, 58.
- Paintings: entering and leaving, 115–16, 134, 137, 138, 144, 153–58, 186; frames, 7, 80, 113, 135; immersion in, 157–58; mirror, 63. *See also* Alberti, Leon Battista; Environmentalization of the image; Trompe l’oeil.
- Palazzo Barberini (Rome), 126.
- Palazzo Te (Mantua), 122–25; *Fall of the Giants*, 124.
- Panofsky, Erwin, 9, 10, 43, 121, 241 n.18.
- Panorama of Gorge Railway* (Edison, 1900), 37.
- Panoramas and panopticons, 13, 37, 92, 125, 183, 206; devices, 126–28; Benjamin on, 127.
- Paravel, Verena, Leviathan, 211.
- Parenti, Neri, *Superfantozzi*, 170.
- Parmigianino, *Self-Portrait in a Convex Mirror*, 44.
- Pasolini, Pier Paolo, *La ricotta*, 83.
- Passion* (Godard, 1982), 83.
- Patchogue, Lord (Jacques Rigaut), 54.
- Pathos and ecstasy, 176.
- Paumgarten, Nick, 146.
- Pausanias, 17, 20, 26, 33, 47.
- Peirce, C. S., 9, 90.
- Pepper, John Henry, 131; “Pepper’s Ghost,” 131–33.
- Pepsi Pavilion (Expo ‘70), 63–64; mirrored dome, 62.
- Perfect Sense* (David Mackenzie, 2011), 79.
- Perrier, François, 57.
- Perspective: Alberti on, 120–21, 122; bird’s eye view and worm’s eye view, 200–201, 203; customization to, 67; grid device, 121; Panofsky on, 121; revolt against, 120.
- Perzeption*, 196.
- Peto, John, 110.
- Petroglyphs, 200.
- Phantasmagoria, 128–31, 130.
- Phantom rides, 169.
- Philidor, Paul, 128.
- Philip III, Duke of Burgundy, 81.
- Phillips Collection, 194.
- Philostephanus of Cyrene, 73, 233 n.7.
- Philostratus Major, 241 n.18; *Eikones*, 103–104, 111.
- Photography, 11, 90, 107; aerial views taken with carrier pigeons, 201; Barthes on, 197; Benjamin on, 13–14; camera techniques, 126, 138, 143–45, 201; used by Anselmo to enter work, 134, 138.
- Pietro da Cortona, 126.
- Pigeons, 107; photography, 201.
- Pirog, Jenna, 194.
- Pistoletto, Michelangelo, *Mirror Paintings*, 63.
- Plato, 9, 43, 45, 72–73, 76, 151.

INDEX

- Pliny the Elder, *Naturalis historia*, 33, 104, 105–107, 174.
- Plotinus, 18, 19, 40.
- Poe, Edgar Allan, “The Pit and the Pendulum,” 244 n.49.
- Point-of-view shot, 143–45.
- Pornographic images, 128.
- Porter, Edwin S., *The Great Train Robbery*, 144.
- Portraits, 9, 21, 136; self-portraits, 22, 23, 44, 63, 137, 138, 146, 147, 148.
- Postcinema, 178.
- Poulter, Will, 67.
- Poussin, Nicolas, 22, 113.
- Pozzo, Andrea, 126.
- Pozzo, Paolo, 125.
- Praxiteles, *Cnidian Aphrodite*, 73.
- Predator saga (John McTiernan), 213.
- Presence studies, 126.
- Presentness, 7–9, 11, 37.
- Profile/frontality antithesis, 137.
- Protector, *The* (Kathryn Bigelow, 2017), 190.
- Pu Songling, *Strange Stories from a Chinese Studio*, 154, 155.
- Public art, mirror in, 64.
- Puni, Ivan, 116.
- Purple Rose of Cairo* (Woody Allen, 1985), 160.
- Pygmalion: in aesthetic theory, 77; animation of the statue, 72, 78–79, 91; compared with Narcissus, 70–72; Freud on, 75, 91; intersection with automaton motif, 86–87, 96, 99; as king of Cyprus, 78; name of Galatea, 78, 89; Ovid’s tale, 70, 72, 80, 86; in painting, 80; Philostephanus account, 83, 233 n.7; in psychotherapy, 75; as simulacrum, 73; “Pygmalion’s Glasses,” 87–89; variations on theme, 73–75, 77–78, 86–87, 94. *See also* Animation of the inanimate.
- QUEST CAMPAIGN (McCann for Nespresso, 2018), 162.
- RAFMAN, JON, 148.
- Rama (suffix), 127, 135.
- Rancière, Jacques, 141.
- Rank, Otto, 31–33, 47, 50.
- Rauschenberg, Robert, 63.
- Reality media, 170–71.
- Rearview mirror, 35, 47, 177, 257 n.57.
- Reflective media, 61–63. *See also* Mirrors.
- Refugees, 190, 191.
- Rembrandt, *The Anatomy Lesson of Dr. Nicolaes Tulp*, 136.
- Renoir, Jean, *La bête humaine*, 169.
- Representation, 9–10, 20, 80, 92, 164; illusionistic, 181–83; in photography, 90; and reality for animals, 105–107; and trompe l’oeil, 110–11.
- Resnais, Alain, *Last Year at Marienbad*, 259 n.75.
- Rheiner, Max, 208.
- Richter, Gerhard, 137.
- Ricotta, La* (Pasolini, 1963), 83.
- Riegl, Alois, 136.
- Rigaut, Jacques (Lord Patchougue), 54.
- Rivero, Enrique, 57.
- Robertson, Étienne-Gaspard, 128–31; *Mémoires récréatifs, scientifiques et anecdotiques du physicien-aéronaute*, 130.
- Robinson Crusoe* (Aleksandr Andriyevsky, 1947), 174.
- Robison, Arthur, 50.
- Robots: Asimov’s First Law of Robotics, 99, 101; Björk’s “All Is Full Of Love” video clip, 96–97; in cinema, 93–96; research projects, 93. *See also* Androids.
- Rohéim, Géza, 29.
- Rohingya Refugees in Bangladesh*, 190.
- Roman de la rose* (de Lorris and de Meun), 70–72, 71.
- Romano, Giulio: *Fall of the Giants*, 124; Palazzo Te (Mantua), 122–25, 192.
- Rotoscoping, 162.
- Rousseau, Jean-Jacques, *Pygmalion*, 78.
- Rubin, Bruce Joel, 186.
- Rückenfigur*, 137–38.
- Russolo, Luigi, 118.
- Rye, Stellan, *The Student of Prague*, 48–51, 49, 52.
- SADGER, ISIDOR, 30, 47.
- Saints Michael and Francis rectory (Carmignano), 84.
- Samaras, Lucas, *Room No. 2*, 63.
- Samsung TV set ad, 105, 106.
- Sanderson, William, 94.
- Sandart, Joachim von, *Parrhasius velo*, 102, 105.
- Sang d’un poète, Le* (Jean Cocteau, 1930), 56.
- San Giorgio Castle, Bridal Chamber, 125.
- Sant’Ignazio di Loyola (Campo Marzio), 126.

INDEX

- Saramago, José, *Ensaio sobre a cegueira*, 214.
Saving Private Ryan (Steven Spielberg, 1998), 38.
Sayonara (play dir. Oriza Hirata), 93.
Schapiro, Meyer, 137, 144.
Schlemihl, Peter, 48, 51.
Schwitters, Kurt, *Merzbau*, 117.
Science fiction, 86–90, 94–96, 99–101, 186, 211–13, 218. *See also* Robots.
Scorsese, Martin, 166; *Hugo*, 170; *Taxi Driver*, 58.
Scott, Graeme, *Aquila Bird Flight Simulator*, 207.
Scott, Ridley, *Blade Runner*, 93–96, 95, 101.
Sculpture, 22, 79–80, 83, 117, 118, 218; wax, 77. *See also* Statues.
Second Life, 147–48; avatar scene, 149.
Selbstaufhebungen im Werk, 156.
Self-awareness, 22, 23, 28–29, 32–33. *See also* Narcissus.
Self-empathy, 147.
Self-portraits, 22, 23, 44, 63, 137, 138, 146, 147, 148.
Self-reflexivity, 36, 59–61.
Sensation, 34, 78, 87, 181, 186, 205, 109.
Serra, Richard, 59; *Boomerang*, 60.
Severini, Gino, 116, 118.
Severus of Alexandria, 18–19.
Shakur, Tupac, 133.
Shelley, Mary, *Frankenstein*, 86.
Sherlock Jr. (Buster Keaton, 1924), 152, 159–60.
Shiryaev, Denis, 171.
Shoulder shots, 138, 145.
Siegert, Bernhard, 255 n.24.
SimCity, 145.
Simmel, Georg, 115, 159, 164; “Bridge and Door,” 217.
Simulacra, 51, 73, 87, 111.
Skopas, 76.
Slade, David, 67.
Sloterdijk, Peter, 204.
Smell, 78–79, 88, 119, 184, 186, 193, 205.
Smithson, Robert, *Yucatan Mirror Displacements*, 63.
Soap bubbles, 203, 206, 207, 215.
Somatic effects, 126, 146, 186.
Somniacs, 208, 210.
Sortie de l’Usine Lumière à Lyon, La (Lumière Brothers, 1895), 167–69.
Space-time, 9, 135, 160, 169, 206, 217.
Spectatorship, 64, 118, 135–38; theatricality, 139. *See also* Gaze.
Spellbound (Alfred Hitchcock, 1945), 144.
Spinney, James, 214.
Split personality, 50.
Stalker (Andrei Tarkovsky, 1979), 57.
Stanislavsky, Konstantin, 142.
Star Wars, 200.
Statue animée, La (Georges Méliès, 1903), 83.
Statues: animation of, 57, 72, 76–80, 83, 91; attacks on, 81; as automata, 86–87; in Greek culture, 76; men who fell in love with, 70–74; Narcissus, 69–70; violation of, 75, 78. *See also* Pygmalion.
Steadicam, 145.
Steensen, Jakob Kudsk, *Aquaphobia*, 38.
Stereoscopy, 127–28, 129; in cinema, 13, 150, 173–78, 182–83; erotic, 129; glasses for, 174, 182. *See also* 3-D cinema.
Stoichita, Victor, 72, 89.
Strange Days (Kathryn Bigelow, 1995), 186, 187, 209.
Student of Prague, The (Stellan Rye, 1913), 48–51, 49, 52.
Stuhlbarg, Michael, 170.
Subjective biology, 203–206.
Sundance Film Festival, 38, 213.
Superfantozzi (Neri Parenti, 1986), 170.
Super Mario Bros (video game), 145.
Support, 10–11.
Surrealism, 54, 119.
Surround effects, 125, 209.
Sutherland, Ivan, 65–66.
Swimmer, The (Studio Azzurro, 1984), 38, 39.
TABLEAUX VIVANTS, 80–84.
Tactile dimension, 119, 125, 184, 193, 213; tactilization of the image, 13–14, 157–58.
Tales of the Parrot (*Śukasaptati*), 73–74.
Tarkovsky, Andrei, *Stalker*, 57.
Tatlin, Vladimir, *Corner Counter-Relief*, 116.
Taxi Driver (Martin Scorsese, 1976), 58.
Technophobes and technoenthusiasts, 15.
Technological narcissism, 34–36.
Technological prostheses, 8–9, 34, 174, 206.
Teleportation, 126, 131.
Temple, 140.

INDEX

- Tenniel, John, *Alice Through the Looking-Glass*, 53.
- Terao, Akira, 164.
- Theater, 81, 139–43; fourth wall, 139–41; immersive, 141; “theatricality” (Fried), 139.
- Thorwaldsen, Bertel, 22.
- 3-D cinema, 12, 170, 173–77, 181–83; contrasted with widescreen, 182; Elsaesser on, 178; forerunners, 128, 131; man watching sharks jump out of the screen, 179; as precursor of immersive virtual environments, 119, 178. *See also* Stereoscopy; 360-degree shooting.
- 3-D effects, 133. *See also* Holograms.
- 360-degree shooting, 143, 178, 183, 191, 195, 197–98. *See also* Immersive virtual environments.
- Threshold: in Chinese and Japanese legends, 153; dallying on, 171; door and bridge as, 164–66, 217–18; frame and, 115; between image and reality, 92, 101, 160, 217–18; penetration of, 101, 164, 176, 215; screen as passageway, 158–64, 174. *See also* In/out movement.
- Through the Looking Glass* (exhibition, Jack Tilton Gallery, 1992), 66.
- Titanic* (James Cameron, 1997), 38.
- Titian, reenactments of, 84.
- Tobler, Thomas, 208.
- Torec (Total Recorder), 209.
- Total cinema, 119, 178–81.
- Totale Installation*, 120.
- Touch screens, 14.
- Trains and railroads, 166–71, 173.
- Transmediality, 218.
- Transparency, 11, 198; and opacity, 10, 20–21, 22, 35, 111; and reflexivity, 61–63; transparent immediacy, 196.
- Travers, Jacques-Olivier, 201.
- Travolta, John, 58.
- Trompe l’œil, 12, 104, 110–11, 159; Baudrillard on, 111; with insects, 107–110; Kubovy on, 108–110.
- Troxler, Fabian, 208.
- Truman Show, The* (Peter Weir, 1998), 38.
- Trumbull, Douglas, *Brainstorm*, 186.
- Trump, Donald, 194.
- Tudor, David, 64.
- Tuttle, Richard J., 125.
- TV commercials, 162–64.
- Twin Peaks* (David Lynch, 1990–1991), 57.
- Twins, 26, 47, 93. *See also* Doppelgänger.
- UBISOFT, 207, 208.
- Uexküll, Jakob von, 213, 215; subjective biology, 203–206.
- Uffizi Museum, 23–26.
- Ultra HD, 171.
- Umwelt*, 194, 204.
- Uncanny effect, 44–45, 91–92; “uncanny valley,” 92–93.
- Uncle Josh at the Moving Picture Show* (Edwin S. Porter, 1902), 169.
- Uncle Sam, “I Want You” poster, 139.
- Unframing, 37–38, 80, 120, 125, 127, 139–40, 177, 183; unframedness property, 7–8. *See also* Frame.
- Unheimlich*, 91, 92.
- United Nations, 191, 192.
- US Border Patrol, 192.
- VALCOUR, PLANCHER, 139.
- Valéry, Paul, “The Conquest of Ubiquity,” 181.
- Van Gogh, Vincent, 116; *The Langlois Bridge*, 164, 166; letter to Theo, 166; *Wheatfield with Crows*, 166.
- Varallo, shrines of, 77.
- Vasari, Giorgio, 121, 123; *The Life of Giotto*, 107.
- Velázquez, Diego, *Las Meninas*, 136–37.
- Venice Biennale, 68, 116, 214.
- Venus (Aphrodite), 21, 70, 73, 78, 86, 233 n.7.
- Vertov, Dziga, *Kino-Eye and Man with a Movie Camera*, 169.
- Victoria and Albert Museum, 65.
- Victory Over the Sun* (Russian opera), 140.
- Video art, as mirror, 59–61.
- Videodrome* (David Cronenberg, 1983), 160, 161, 255 n.24.
- Video games, 67, 145; *Apnea*, 40; *Eagle Flight*, 207–208.
- Vienna School, 136.
- Vigo, Nanda, mirror performances, 63.
- Villiers de l’Isle-Adam, Auguste, *Tomorrow’s Eve*, 86, 90.
- Viola, Bill: *The Greeting*, 84; *The Reflecting Pool*, 26; *Submerged*, 23–24; *Surrender*, 26, 27; “water portraits,” 23.

INDEX

- Virgin Mary, 74, 84.
- Virtual exhibition spaces, 148.
- Virtual reality (VR): apps, 207, 214; as autopsy, 198; as catalyst for empathy, 189–91, 195, 196–97, 198, 199, 262 n.31; compared with augmented reality, 117–18; cybersickness, 208; and dream experiences, 68; embodiment virtual reality, 189–90; exhibitions, 65, 66, 68, 232 n.71; experiencing of, 192–93, 194–96, 197–98, 261 n.22; film, 170; and flight, 207–209; gloves, 117, 198; health-related, 213–15; in humanitarian engagement, 40–42, 41, 199; immersive journalism, 191–92; pioneers, 65–66; political implications, 11, 13, 14; research projects, 188, 189–90; in science fiction, 87–91; surreptitious ideological conditioning, 195–96; VR turn, 190. *See also* Augmented reality; Immersive virtual environments; Virtual reality headsets.
- Virtual reality headsets, 38, 65, 183, 186, 190, 211; and field of vision, 7–8; precursors, 126–28; used in flight simulation, 207, 208, 209.
- Vishnu, 150.
- Visual perception: field of vision, 7–8; human and animal, 211–13.
- Viveiros de Castro, Eduardo, 227 n.15.
- Voight-Kampff test, 93–94.
- Von Schlosser, Julius, 77.
- Vozzo, Vanessa, *Apnea*, 40.
- VPL Research, 66.
- WALDHAUER, FRED, 63.
- Walken, Christopher, 186.
- Walk Through Dementia, A* (Alzheimer's Research UK), 214.
- Warburg, Aby, 77, 81–82, 137; *Pathosformel*, 176.
- Water, 37–38, 70; immersion metaphor, 157–58; as mirror, 16, 18–19, 20, 21, 22, 23–26, 28–29, 34, 58, 69–70, 103–104.
- Waves of Grace* (Chris Milk, 2015), 191.
- Wegener, Paul, 48.
- Weinbaum, Stanley G., “Pygmalion's Glasses,” 87–90.
- Weiss, Josef, 48.
- Welles, Orson, *Lady from Shanghai*, 58.
- Wells, H. G., “Empire of the Ants,” 211.
- Welsh, Brian, 187.
- Wesselski, Albert, 28.
- Westworld*, 72; film dir. Michael Crichton (1973), 99; television series, 99–101, 100.
- Wheatstone, Charles, 128.
- Wheel, 34.
- Whitehead, Fionn, 67.
- Whitman, Robert, 63.
- Wilson, Richard, 20:50, 65.
- Within (production company), 170.
- Wolfenstein 3D*, 145.
- Wollheim, Richard, 10, 196.
- Wonderland, 54, 47, 65, 66, 67, 68. *See also* Carroll, Lewis.
- Woo, John, *Face/Off*, 58.
- Wood, Evan Rachel, 99.
- Woodman, Francesca, mirror self-portraits, 63.
- Woods, James, 160.
- World Economic Forum, 192.
- Worringer, Wilhelm, “longing to revert,” 83.
- Wright, Will, *SimCity*, 145.
- Wu Tao Tzu, legend of, 153–54, 156, 166; in film, 158.
- Wurm, Erwin, *One Minute Sculptures*, 83.
- XUAN ZONG, EMPEROR, 154.
- YELLOW EMPEROR, 51–52.
- Young, Sean, 96.
- Youngblood, Gene, 189.
- Yourcenar, Marguerite, *How Wang-Fô Was Saved*, 154–55.
- ZANKER, PAUL, 21.
- Zenobius, 28.
- Zeuxis and Parrhasius, 104–105, 110, 174.
- Zola, Émile, 169.
- Zöllner, Christian, 211.
- Zoophenomenology, 203.
- Zurbarán, Francisco de, 110.
- Zürcher Hochschule der Kunst, 208.