

## Obsessive Observations – The Cult of Looking

### Introduction

For the inhabitants of nineteenth-century Paris, the navigation of personal life through rapidly changing social and physical relations was accomplished by a conspicuous reliance on their optical faculties. A novel dominance of visual impressions over other modes of perception and communication arose due to several distinct, yet compounding developments in social interaction, urban development, and scientific discovery. To cope with the dissolution of previously fixed class and community structures and the resulting frequent forced interactions with individuals outside of their own social standing, Parisians resorted to inferring beliefs and attitudes of the unknown Other from superficial appearances. Additionally, the urban transformations introduced by Baron Haussmann reconstituted Paris in distinctly visual terms. Finally, a series of innovative publications about the physiology of human perception alongside the development and commercialization of photography strengthened the interest in optical systems and led to a fundamental reorganization of the understanding of vision. Together, these disparate developments suggested that the world was to be interpreted through its image, and its image alone. At a moment when the dogma of modernity stipulated for artists to “be of their own time,”<sup>1</sup> it should not come as a surprise that these currents were quickly represented in artistic works. The preferential focus on opticality found its expression in the choice of subject matter, choice of medium, and choice of formal methods. It is the goal of the present exhibition to identify the sources of the peculiar shift towards the visual and catalog its

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<sup>1</sup> adapted from Daumier's motto “il faut etre de son temps,” for example quoted in Stephen Eisenmann, *Nineteenth Century Art* (London: Thames & Hudson, 1994), 211.

expression in the visual arts of the time.

### **Social Upheaval and Class Uncertainties**

Richard Sennet concisely characterizes the cities of the nineteenth century as “landscapes of the unknown.”<sup>2</sup> The combined effects of the French Revolution(s) and industrialization rapidly and radically changed the make-up of urban populations in a way that was intimidating to many and at least uncomfortable to most. A stable, if repressive, social climate was forcefully abolished and replaced with an uneasy melange of previously separate groups and a new uncertainty about class identities.

After the French Revolution of 1789 tipped the balance of power towards the Third Estate and cracked the foundations of the existing rigid class system, additional revolutions and uprisings instilled a general feeling of social instability. While the Bourgeoisie emerged as the general center of power in the 1830s, its position was perpetually contested by restorative royalist forces on one side of the political spectrum and the *classes dangereuses* on the other side. In fact, the historian Jerrold Seigel argues that the Bourgeoisie was defined at its very core by its struggle with other classes.<sup>3</sup> At the same time that class identities became unstable, class borders became permeable for the first time.

One reason for this new permeability was that social status was no longer derived from birth alone, but also from one's occupation, while the nature of that occupation underwent a fundamental shift. Industrialization and the rise of capitalism created a new class of service workers with bourgeois aspirations. In the absence of other safe status indicators, these *petits bourgeois* could successfully pose as members of the middle class by simply imitating dress and behavior of the

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<sup>2</sup> From the introduction to Judith Wechsler, *A Human Comedy* (London: Thames and Hudson, 1982), 7.

<sup>3</sup> Jerrold Seigel, *Bohemian Paris* (New York: Viking, 1986), 7.

better-off; hence the choice of garb became an important social issue. But industrialization also had a much broader and more blunt influence on social life: because of the change in traditional supply and demand chains, rural farm labor was devalued and a massive migration from the countryside towards urban areas took place. Between 1800 and 1840 alone, Paris' population doubled from 500,000 to one million people – and most of this growth was attributable to the influx of low-income factory workers.<sup>4</sup> The sheer magnitude of this demographic shift must have made Paris seem like unknown territory to the staid citizenry, not just to the new arrivals. Never before had there been a comparable agglomeration of diverse groups of people in such a limited geographical space.

Within the limits of Paris itself, Haussmannization destroyed many neighborhood structures and made contact between members of different classes all but inevitable. Shelley Rice notes that, by emphasizing uninhibited circulation, “Haussmann also opened up the whole city to the poor.”<sup>5</sup> New systems of mass transportation, trains and omnibuses, provided for additional encounters between strangers that were predominantly of a restricted, visual nature. Faced with uncertainty about how to judge this unknown Other, Parisians resorted to a coping strategy of visual classification. Before we shall start our examination of the particular Parisian psyche, the analysis of a tangentially related painting will help to situate our argument about Paris in the larger picture of French identity.

### **Parisian Physiognomies – “Your gaze hits the side of my face”**

The first work in the exhibition, Anne-Louis Girodet's Portrait of Jean-Baptiste Belley, predates our main period of focus by half a decade, and its theme is not specifically urban. The painting was chosen consciously, though, to demonstrate that the developments addressed in this essay arose out of a more general context that extended geographically and temporally beyond its conspicuous peak

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<sup>4</sup> Jerrold Seigel, Bohemian Paris (New York: Viking, 1986), 22.

<sup>5</sup> Shelley Rice, Parisian Views (Cambridge: MIT Press, 1997), 35.

in the Paris of the second half of the nineteenth century. Jean Baptiste Belley held a seat in the French National Convention for the colony of Saint-Domingue and was a well-known abolitionist. A first reading suggests that Girodet's portrait is a thoroughly positive and sympathetic depiction of a heroic public figure, who is depicted as continuing the legacy of philosopher Guillaume-Thomas Raynal by the inclusion of the latter's bust in the image.<sup>6</sup> However, as Silvia Musto has argued, a closer analysis of the painting reveals how choices about the superficial conventions of clothing and posture undermined the subject's respectability and authority for contemporary audiences<sup>7</sup>. The overly elaborate attire of Belley with its too-lively colors alludes to the dress code of the so-called *Incroyables*, a marginalized group known to contemporaries for their frivolity and sexual license. A negative sexual tone is continued in the languid pose of the character and his less than subtle manual emphasis on his genitalia. Such sensual and sexual undercurrents were fundamentally at odds with the idealized stoic hero of sober civic virtues as exemplified in the paintings of J.L. David. Girodet thus managed to portray Belley at once favorably while at the same time undermining the sitter's authority through modification of his outward appearance and accoutrements.<sup>8</sup>

Similar mechanisms of ascribing character traits based on appearances were at work within the Parisian microcosm and again the methods for classification were based on dress and physicality. By inferring the interior from the exterior, people sought to disambiguate encounters with the unknown Other and to thus impose some order onto the chaos of daily chance encounters. By characterizing the Other into types, their behavior became predictable. Furthermore, this practice was not only safe, since no tangible interaction had to take place, but it was also wholly consistent with scientific

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<sup>6</sup> This essentially is Thomas Crow's interpretation as presented in Stephen Eisenmann, *Nineteenth Century Art: A Critical History* (London: Thames & Hudson, 1994), 37.

<sup>7</sup> Silvia Musto, "Portraiture, Revolutionary Identity and Subjugation: Anne-Louis Girodet's Citizen Belley," *Revue d'Art Canadienne* (1993): 62,65

<sup>8</sup> In this respect, the image prefigures much of the later Oriental work where a claim of cultural superiority of the Colonizer over the Colonized is expressed by reducing the latter to the merely visually fancy, ornamental, or picturesque.

beliefs of the time. Johann Kaspar Lavater argued in the widely disseminated work *Physiognomische Fragmente* (partial title) that geometrical measurements of the human skull structure could wholly reveal a person's nature, as each individual actually shaped their own head's structure through the activities of the brain from within and the muscles from without over the course of their lives.<sup>9</sup> The French version of Lavater's opus was published between 1781 and 1803, and its hold on people's imagination is hard to overstate. Theories about judging others by their appearance date back to Aristotle, and in the eighteenth century, Charles Lebrun's *tetes d'expression* had particularly influenced the visual arts by supplying students of the *Academie* with formulas for transcribing character traits into visual expressions, but it was Lavater who elevated the practice to the level of science and thus ensured its widespread adoption as it played into the times' preoccupation with scientific methods for classification and categorization.<sup>10</sup>

An artist who made ubiquitous use of these categories, while at the same ridiculing their overstated importance, was Honore Daumier. A caricaturist for Philipon's political paper *Le Charivari*, Daumier turned to ironic classifications of French professions by means of physiognomies after being barred from political caricature by stringent censorship laws. In the series entitled *French Types* from 1835, Daumier sought to “[reproduce] the types of physiognomy, the bearing, and the costume particular to the different classes that form the ornament of society.”<sup>11</sup> The lithograph featured in this exhibition, entitled The Banker, shows a bloated figure with small eyes set in a puffy, sagging face. The character exudes an air of arrogance while self-importantly counting his finances in the wallet set on top of his sizable stomach. By comparing the description accompanying this print with an original text by Lavater, Judith Wechsler has shown that the banker's physiognomy was

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<sup>9</sup> Joan Stemmler, “The Physiognomical portraits of John Caspar Lavater,” *Art Bulletin* 75 (1993): 153, 157.

<sup>10</sup> Arthur Krystal, “About Face: Relationship between facial characteristics and character in art,” *Art & Antiques*, 16 (1994): 74.

<sup>11</sup> as quoted in Judith Wechsler, *A Human Comedy* (London: Thames and Hudson, 1982), 92.

informed, if not determined, by Lavater's original description of the traits of an exploitative character.<sup>12</sup> That Daumier's use of physiognomic theories was apparent to contemporary audiences is made clear by the following characterization of the artist by Charles Baudelaire: "Daumier is a moralist with the suppleness of an artist and the accuracy of Lavater."<sup>13</sup>

The above quote may as well have been applied to Baudelaire himself, as the writer was a master of evolving elaborate character studies out of brief encounters with strangers. In a prose poem entitled "Widows" he implicitly delivers a justification for the technique applied by himself and his peers:

"A practiced eye is never wrong. In those rigid or dejected features, in those hollow and dull eyes, or eyes shining with the battle's final flares, in those deep and numerous wrinkles, in those so slow or spasmodic gaits, it immediately deciphers innumerable legends of love deceived, of unrecognized devotion, of unrewarded efforts, of hunger and cold humbly, silently, endured."<sup>14</sup>

More than just endorsing the judgment of his peers through observation, Baudelaire declared it to be the very nexus of modernity: to create truly modern art, the artists had to directly engage with contemporary society to experience the immediate sensations of contemporary life. For Baudelaire, this observation was best conducted in the guise of the flâneur, the "mobile consumer of a ceaseless succession of illusory commodity-like images."<sup>15</sup>

Like no other figure, the flâneur embodied an obsessive, fetishized opticality. Dressed in the inconspicuous uniform of a black frock coat and top hat - to avoid attracting specific attention to his own person - he would stroll the Parisian streets in search of the "heroic displays" of modernity, which he would observe, but not participate in. Edgar Degas' Place de la Concorde captures the quintessence of the flâneur's detached experience: Vicomte Lepic, the painting's main subject,

<sup>12</sup> Judith Wechsler, A Human Comedy (London: Thames and Hudson, 1982), 94.

<sup>13</sup> Baudelaire, 'Some French Caricaturists', *Selected Writings on Art and Artists*, London, 1972, p.219, as quoted in Judith Wechsler, A Human Comedy (London: Thames and Hudson, 1982), 132.

<sup>14</sup> Charles Baudelaire, The Parisian Prowler (Le Spleen de Paris). 2d ed. translated by Edward A. Kaplan. (Athens: University of Georgia Press, 1997), 23.

<sup>15</sup> Johnathan Crary, *Techniques of the Observer* (Cambridge: MIT Press, 1999) 21.

appears more interested in the aloof observation of his environment than in personal interaction with his family. None of the figure's gazes and directions of movement match, which creates the impression that each character is inhabiting its own solitary sphere. Furthermore, through the use of a seemingly accidental viewpoint and the uncomfortable lack of distance between the canvas surface and the depicted scene, the viewer becomes an accomplice of the situation. Drawn into the picture, he is ultimately committing the act of flâneurie himself: attentive of every little detail of the scene, he must remain but a passive observer.

### **Gender Roles in the Observational Discourse**

Thus far, the discussion of the observer has been conducted in distinctly male terms. This was not done accidentally as public life in nineteenth-century France was overwhelmingly gendered as masculine. “Decent” women were expected to remain at home, safe from the probing views of other males. If women were encountered in public without proper male company, their morality was quickly called into question. A rare counter-example of a female subject as the source of a forceful, possessive gaze is Mary Cassat's Woman in Black at the Opera, from 1879. Reversing mainstream gender roles, Cassat's subject is projecting her gaze through a pair of opera glasses, an implement Linda Nochlin has termed “that prototypical instrument of male specular power.”<sup>16</sup> But at the same time that the subject is seizing control of the scene, she becomes the object of a male opera goer's view who is investigating her, and indirectly the viewer, though his set of glasses from another loge located around the circumference of the concert hall. Charles Garnier's opera was the natural place for such games of mutual objectification - completed a few years prior to the execution of the painting, it was conceived of as a house of music as much as an interiorized boulevard. Many of its spaces were explicitly designed to promote mutual observation – all spectators had to meet on the

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<sup>16</sup> Linda Nochlin in Stephen Eisenmann, Nineteenth Century Art (London: Thames & Hudson, 1994),

grand staircase and Garnier specifically added upper-story spaces from which impressions of the crowd from unique perspectives could be gleaned.

## **The City as Spectacle**

Beyond the obsession with interpersonal exchanges, the general focus on ocularity was surely enhanced by the fact that the new city offered many fascinating new sights. The building endeavors of Baron Haussmann in the middle of the century were of an unprecedented scale and the “piercing” of the new boulevards was a spectacle few could avoid watching – Blake and Frascina quote Haussmann's own estimates that 350,000 out of the city's 1,053,000 inhabitants were directly affected or displaced by the construction.<sup>17</sup> Moreover, not only the process of construction, but also its outcome bore immense visual interest – after all, Haussmann had designed the new city in visual terms, centered around sweeping vistas anchored by disengaged monuments. The boulevards were thus not only a space for the observation of others; oftentimes the urban architecture itself occupied the viewer's attention. In this context, Camille Pissarro's Avenue de l'Opera; Soleil, Matin from 1882 serves as a painted pamphlet of how Haussmann imagined his city to be viewed. Pissarro's main object of interest is not the Parisian population – while they inhabit the scene, their bodies have been sketchily indicated at best and lack modeling that would lend any specificity to their identities. Focus is placed instead on the ordered regularity of the linearly receding space defined by the newly erected apartment buildings that line the sides of the grand boulevard. The view is terminated by the hulking dome of Garnier's opera, even though it's blurry execution in desaturated colors deemphasizes the enormity of its presence.

Beyond the streets, entire landscapes were invented just to provide visual gratification. The

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<sup>17</sup> Francis Frascina and others, eds. Modernity and Modernism (New Haven: Yale University Press, 1992): 97.

most decadent of these public works was probably the Parc des Buttes-Chaumont.<sup>18</sup> For pure spectacle, a fantastic landscape complete with two artificial streams, a lake and a 300 meter high waterfall was created, ironically, on the site of a former sewage dump. Why would the government expend such large sums of money for what seemed nothing more than eye-candy? While some of the official spectacle was meant to simply project a positive image of the state to its constituents and visitors, it would not be too far-fetched to ascribe a “bread and games” function to these displays: they were to hold the citizenry quiet and occupied and keep their minds off future revolutions.

Next to architecture and parks, another kind of visual novelty, an invention of the industrial revolution, held a particularly strong fascination for contemporary observers and artists alike: the railroad. Turner, Monet, Manet and Caillebotte all painted images that contrasted the fleeting quality of steam engine exhaust with the stark rigidity of riveted steel that was characteristic of the engines as well as their supporting structures. Paris' Gare St. Lazare was one of the major transportation hubs connecting the city to its periphery. To allow for easy foot and carriage access to the station, a large six-spoked bridge connected streets roughly 5 meters above the train tracks.<sup>19</sup> While not necessarily elegant, the bridge possessed a similar attraction as an engineering feat as the railroad ways it was covering. Gustave Caillebotte's Pont de l'Europe offers visual testament of the appeal that the new technology held for contemporary observers from all classes. While the criss-crossing steel lattice prevents any entry into the image beyond the bridge<sup>20</sup>, the viewer is still incorporated into the scene in a way similar to Degas' Place de la Concorde. This time, the viewer has no option but to join the portrayed by-standers in their contemplation of industrial technology.

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<sup>18</sup> Francis Frascina and others, eds. Modernity and Modernism (New Haven: Yale University Press, 1992): 104.

<sup>19</sup> This discussion references the less publicized version of this painting at the Kimbell Art Museum in Fort Worth. A work of similar title that depicts a different viewpoint of the bridge is housed at the Musee d'art moderne in Geneva.

<sup>20</sup> Kirk Varnedoe's article in Norma Broude, ed., Gustave Caillebotte and the Fashioning of Identity in Impressionist Paris. (New Brunswick, NJ: Rutgers University Press, 2002) 8-21 describes the complex design of the bridge and its relationship to the Gare St. Lazare in detail.

## Subjective Vision and the Transformation of the Observer

Industrialization provided more than the object of the viewer's gaze – it fashioned a completely new process to generate and consume visual images. The invention and subsequent mass-marketing of photography had a profound influence on the conception of reality in visual terms. The apparent objective and unconditioned truth of photographic prints surely strengthened the belief that the world was to be understood through its image.<sup>21</sup> Additionally, the sheer ubiquity of photographic prints also ensured that enough source material existed to keep the viewer engaged. At the same time, photography's influence on nineteenth-century visual culture has to be qualified. Kirk Varnedoe argues that while the development of photographic techniques co-occurred with some of the most striking Impressionist innovations in representation, its actual influence on artistic practice has been largely overrated.<sup>22</sup> In its infancy, photography merely replicated traditional pictorial techniques, while the creative impulses in art pushed visual representation beyond the limits of volumetric verisimilitude and linear perspective.

The principle accomplishment of the single-lens photographic camera was its success in permanently fixating images produced by the long-known *camera obscura* (pin-hole camera) onto a surface. For Jonathan Crary, though, the defining characteristic of the visual culture of the nineteenth century was a shift *away* from this Renaissance mechanism and metaphor that posited optics as an instantaneous objective process in which the lens or the human eye captured a perfect replica of the outside world.<sup>23</sup> Crary argues that, starting with investigations by Kant, Goethe and Schopenhauer, vision in the early nineteenth century begins to be interpreted as a subjective process,

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<sup>21</sup> John Berger, in Ways of Seeing (London: BBS, 1972) 10-16, points out that the creation of an image always implies the presence of a particular type of observer directing his attention at some aspect of the world. Hence the concept of viewer-independent objectivity is highly problematic.

<sup>22</sup> Kirk Varnedoe, "The Artifice of Candor: Impressionism and Photography Reconsidered." Art in America (January 1980) 68,72.

<sup>23</sup> Jonathan Crary, Techniques of the Observer (Cambridge: MIT Press, 1999) 27-29.

with its own deficiencies and particularities. Put differently, seeing was no longer considered a direct and self-evident way of gathering knowledge from the outside world; it became rooted in imperfect physiology rather than abstract, geometrical thought.<sup>24</sup> The philosophical paradigm shift came about as scholarly research about the biological functions of the human retina was published. Thomas Young was the first scientist to propose a rudimentary version of the now accepted three-receptor theory of human color vision. Published in 1802 and 1807, the trichromacy hypothesis posited that the perception of color is due to different responses of three distinct receptor types in the retina to light at various wavelengths.<sup>25</sup> Largely ignored at first, Young's writings were rediscovered by Hermann von Helmholtz, one of the principal physiologists of the era, and James Clerk Maxwell, who applied Young's theory to formulate the first color photographs in 1861.

The reinvigorated public discourse about biological bases of perception soon impacted artistic production in the form of practical new methods of color application. Michel Eugene Chevreul's *De la loi du contraste simultane des couleurs*, published in 1839, was known to have influenced Delacroix who in turn was the main inspiration for the Impressionists.<sup>26</sup> Taking as its basis the persistence of visual impressions over time, Chevreul's writings about simultaneous contrast asserted that a mixture of neighboring or successively presented simple colors *combined in the retina* to result in uniform color perception of a much more vibrant nature than what was achievable through the traditional mixture of pigments *on the canvas*. It is indicative of the spirit of the times that Chevreul was neither an artist nor a professor, but a Chemist working for a textile dye company.

Expanding on Helmholtz' writings, Ogden Rood, an American Physicist working at Columbia University, accepted Chevreul's concept of simultaneous contrast while challenging the Frenchman's

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<sup>24</sup> Jonathan Crary, *Techniques of the Observer* (Cambridge: MIT Press, 1999) 67-72.

<sup>25</sup> A succinct summary of Young's theory can be found in Martin Kemp, *Science of Art: optical themes in western art from Brunelleschi to Seurat*. (New Haven: Yale University Press, 1990) 320-321.

<sup>26</sup> Again, Kemp provides a good introduction to Chevreul's color system in *Science of Art: optical themes in western art from Brunelleschi to Seurat*. (New Haven: Yale University Press, 1990) 306-307.

particular color system implementation. Rood's treatise *Modern Chromatics*<sup>27</sup>, subtitled *Student's Text-Book for Color with Application to Art and Industry*, was the strongest effort to date to transcribe rigorous scientific principles into everyday rules for artists and practitioners. And the artists eagerly absorbed his lessons as advancements in science were interpreted as constituent of modernity in the same way that artistic creation was.<sup>28</sup> Next to Camille Pissarro, George Seurat was most strongly influenced by Rood's writings, and his pointillist technique which he termed *Chromo-Luminarism* is directly based on the principle of optical mixtures of primary and complementary colors, as opposed to the duller pigment mixtures. In Seurat's grand-scale work *A Sunday Afternoon on the Island of the Grande Jatte*, local color throughout the image is dissolved into dense dot-and-dab patterns of discrete pure hues. The shape of objects becomes illegible when, upon close inspection, the scene dissolves into its constituent mosaic pieces that live flatly on the surface of the canvas. Through his technique, then, Seurat flatly rejected the notion of a painting as a window into a three dimensional space and replaced it instead with a reflection of the essentially flat sensory surface our own visual system uses to interpret the outside world.

Besides influencing color synthesis methods, physiological experiments also produced new ways to perceive depth and motion. Binocular disparity, the fact that the two human eyes see slightly different views of the same scene because of their distance from each other, was first exploited by Sir Charles Wheatstone in 1832 in his stereoscope.<sup>29</sup> By presenting to each eye separate images of a common scene taken from different viewpoints, Wheatstone exploited the visual pathway's mechanism to extract depth information from interocular mismatches. The artifice of the machine was glaring, since the two images were actually placed in opposed orientations along an axis

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<sup>27</sup> Ogden Rood, *Modern Chromatics: Students' Text-Book of color, with Applications to Art and Industry*. Facsimile of 1<sup>st</sup> ed. (New York: Van Nostrand Reinhold, 1973)

<sup>28</sup> Anthea Callen, *The Spectacular Body* (New Haven, Yale University Press, 1995): 1.

<sup>29</sup> Martin Kemp, *Science of Art: optical themes in western art from Brunelleschi to Seurat*. (New Haven: Yale University Press, 1990) 215.

orthogonal to the normal viewing direction. Modified versions developed by Brewster and Holmes-Bates simplified the design into a mirror-less portable apparatus that proved to be highly successful. Within five years of the commercialization of the stereoscope, half a million units had been sold, which theoretically meant that every other Parisian took part in the consumption of illusionistic diversions. Since stereographic prints were omnipresent, it is fitting to end the exhibition with a popular binocular print. Without a known artist or a fixable date of creation, the view entitled Pont Neuf in Paris, is characteristic of the tens of thousands of image sets circulating throughout the 1850s. An elevated viewpoint ensures maximal visibility of the scene. However, not much care seems to have been taken with respect to composition or viewing angle -the camera appears to have simply been pointed straight ahead to capture the simple appearance, instead of the essence, of a Parisian landmark. The anonymous stereograph then represents a triumph of mass production and commodification over individual artistic conception – after all, no painting had ever enjoyed an audience nearly as large that of these common prints.

## **Conclusion**

Over the course of this exposition, arguments have been presented that simultaneous revolutions of science, industry and politics acted together to shape the experience of a few generations of Parisians in predominantly visual terms. It is of interest, then, to examine how these societal currents continued into the twentieth century. Some of the peculiar constellations outlined above where short-lived fads and exited soon after first appearing on the public stage. While the pointillist technique created impressions of previously unknown vibrancy and luminosity, its inability to convey surface texture or apparent movement soon led to its demise after Seurat's death.<sup>30</sup>

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<sup>30</sup> Martin Kemp, Science of Art: optical themes in western art from Brunelleschi to Seurat. (New Haven: Yale University Press, 1990) 319.

Similarly, the eerie tangibility of the stereograph prints made them a lucrative medium for pornographic production, which in turn rendered public use of the device socially unacceptable for the conservative middle classes.<sup>31</sup> The Parisian metropolis continued to fascinate inhabitants and visitors, but to a lesser degree once its primary attractions lost their sense of novelty. Moreover, the traumatic incision of World War I literally and figuratively extinguished the illumination of the *City of Light*. However, the relativization and subjectification of vision laid the groundwork for the radical developments of Modern visual arts in the following decades. And last but not least, scientific insight into the persistence of vision soon led to the development of machines simulating pictorial motion, prefiguring the moving image that was to become the dominant form of mass communication of the twentieth century (for better or worse).

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<sup>31</sup> Jonathan Crary, Techniques of the Observer (Cambridge: MIT Press, 1999) 127. Crary also argues that the exposed mechanism of the apparatus was undesirable in an age that shifted its preferences more and more towards fantastic and surreal diversions.

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