

# 1 COLOR FIELD PAINTINGS (BROWSER)\*

*Michael Demers*

**Key Words:** Browser, Formalism, Hexadecimal Color, HTML, Javascript, Markup Language, Modernism, Modernity, Source Code

## Project Summary

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*Color Field Paintings (Browser)* are online artworks created when website visitors click a link to generate a series of browser windows, each with a randomly assigned color based upon a palette established for the piece. These “paintings” reference the color field paintings that emerged in the late 1950s, but in a digital format.



Figure 1.1 *Color Field Paintings (Browser)* by Michael Demers.

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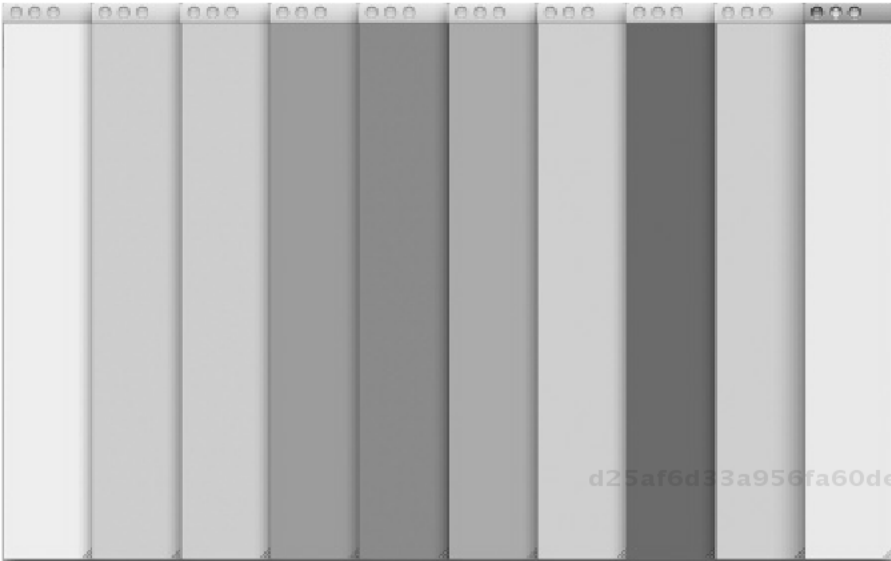


Figure 1.2 *Color Field Paintings (Browser)* by Michael Demers.

### Project Developer Background

Digital art is a tricky field to endorse. Sharing many of the same biases against it as photography endured in its time, digital art is often viewed as a process too new and unfamiliar for many connoisseurs of art and academia to support. Often sacrificing the physical object for a conceptual and technical approach, digital art, like the digital file, finds itself somewhere in the ether, formless and too varied to place into a typical art-historical framework. However, digital art does not have to be ambiguous. One often finds it manifest in mundane and overly familiar territory, such as the personal computer, the browser window, or the inkjet print.

If the great Formalist experiment of the 1950s and 1960s both pointed to and justified an exploration of the most fundamental elements of painting, and presented these findings visually in the form of large canvasses of line, shape, and color, I wondered if there was a parallel to be found for digital art? Could one use the ideas of Formalism's greatest proponent, Clement Greenberg, to justify and ground the objectless digital object?

For the student of digital art these are vital questions, stimulating answers which may determine both success academically as well as in the realm of one's own artistic practice. As a painting student, these were questions that engaged my own work; and as a digital artist, especially within traditional academic circles, these questions remain. What are the fundamental characteristics of digital art, and more specifically, of net art? Can we strip these formless objects down to their most basic elements and still see them function as art objects? If so, what would those objects look like? And is there a way to escape the familiarity of our daily interaction with mundane digital technologies to produce art that speaks to those familiar and mundane characteristics in new ways?

### Introduction to *Color Field Paintings (Browser)*

In the summer of 2009 I became interested in the idea of creating a randomly generated online digital work that utilized color as its main focus. Initially I thought of using

javascript (a programming language used to add interactivity to websites) to create a webpage that would cycle through a series of colors that changed depending upon the time of day. Further, I wanted the range of colors to shift within a predetermined array, so that these digital “paintings” would rarely replicate themselves, even if viewed at the same time each day. It didn’t take long for me to realize that the code to make such a site work was not only widely available, but was rather mundane. Some code could be used to randomly load an array of colors, other code could recognize the user’s time of day, and another line of code could automatically refresh the browser window after a set period of time. How was this work advancing the medium of digital art? Why am I bothering to make such a work, I wondered, if all I am doing is producing the technical and conceptual equivalent of a colorful screensaver?

What my project lacked was conceptual rigor based on an art-historical dialogue. I knew that I wanted to use a particular kind of technology to do something visually specific while recognizing the possibility for variation. This in turn led me to think about what I was originally seeking to explore: color. I thought about the idea of color in Western representation, and the use of color both historically (in Modernist painting and sculpture), and contemporarily (in diverse forms of digital output). More specifically, I thought about color as represented through a browser window, and how that use of color served as a reference to and further investigation of the use of color in Formalist paintings of the 1950s and 1960s.

## Technical Description

Browser windows, like Microsoft’s Internet Explorer, Apple’s Safari, or Mozilla’s Firefox, provide the user with a visual representation of what is provided in the webpage’s source code. This code is a list of data that tells the browser what content to display (text, images, videos, and so on), and where to place that content. The most basic source code for a webpage looks like this:

```
<html>
<head>
<title> The page title is inserted between the title tags. It is visible to the user at the
top of the browser window. </title>
</head>
<body>
The main content of the page is inserted between the body tags. Content that is
added here will be displayed on the web page.
</body>
</html>
```

The content of the entire page is situated between the <html> and </html> tags, or the open and close HTML tags. Important instructions to the browser are contained within the <head> and </head> tags. In the example above, instructions for the page title was inserted here. This area is also used to add keywords or meta tags, which make the page easier to catalog for search engines. The main content of the page, including text, images, videos, or other media content, are inserted in the code between the <body> and </body> tags.

Each of the pages in *Color Field Paintings (Browser)* follow this structure, though no media content, in the typical sense, has been included between the body tags. What one

sees in each of these pages is a color based upon instructions given to the browser using javascript, which has been inserted into the <head> and <body> areas. As mentioned earlier, that javascript is both widely available and simple to produce. My aim was to use basic javascript to make the browser display certain colors within the framework and structure of a standard webpage.

There are three main technological aspects to the making of *Color Field Paintings (Browser)*: (1) opening individual browser windows in a specific location, at a specific size; (2) assigning one random color, selected from a specified array of predetermined colors, to load in each window; and (3) automatically closing each browser window in the order that it was initially opened. All of this is accomplished with various lines of javascript code.

## 1. Opening the Browser Windows

Asking a browser to open windows is basically like asking it to open pop-up advertisements. Given the plethora of junk pop-ups for various sundry services, many users have turned off pop-ups in their browser preferences. My first reaction was to research how to get around this browser security issue. Since the browser has no way of distinguishing between my artistic pop-ups and malware, I later decided that instead of inserting code to break the browser pop-up detection, it would be more ethical if I simply asked the user to allow pop-ups from my domain.

Creating pop-ups is easy, especially when using the Behaviors panel in Adobe's Dreamweaver. The Behaviors panel allows the user to add page events and interactivity from a list of menu options. Dreamweaver adds the javascript code to the HTML page represented by these choices. My code ended up looking like this:

```
<a href="javascript: void(0)" onclick="MM_openBrWindow('1r.htm','width=100,height=800,top=50,left=100')">
```

In this example, a href="javascript: void(0)" is associated with the phrase "Click here to generate the Color Field Painting." I have multiple paintings available on one page, including red, green, and blue options, so I needed to give the user a way to make her choice. Hence the need to make this particular behavior occur after a link was clicked, as opposed to when the page was opened (as most pop-ups do). This code allows me to create a link to a specific destination, directing the browser to open one of a number of possible windows.

onclick="MM\_openBrWindow commands the browser window to open when the user clicks the link, and ('1r.htm','width=100,height=800,top=50,left=100') dictates which file to open (1r.htm is the first of the windows for the red color field painting), the width and height of the browser window, as well as its position on the screen from the top and left margins.

Of course, this just opens the first window in the series. The code for the remaining windows is not that different, however:

```
<body onload="MM_openBrWindow('2r.htm','width=100,height=800,top=50,left=300')">
```

Here, the only substantial difference is that instead of opening the defined window upon clicking the link (onclick), the window opens when the page housing the code is

loaded (onload). This is how typical pop-up advertisements are coded. Thus, the user opens the first window in the painting by clicking a link on the homepage and the remaining nine windows of the painting open automatically.

## 2. Assigning and Loading Random Colors

Asking the browser window to load a random color is like asking it to load a random image. Each time the browser window is opened or refreshed a new color (or image) can be pulled from an array established in the page source code:

```
var bgcolorlist=new Array("#bd2908", "#c13516", "#c64124", "#d05a40", "#db7962",  
"#e99c8c", "#f7c1b5", "#fed7ce", "#ffe4dd", "#f0d1ca", "#d9ada2", "#c08172",  
"#a75645", "#92331f", "#88210a", "#f23208", "#fff6f4", "#5f1505")  
document.body.style.background=bgcolorlist[Math.floor(Math.  
random()*bgcolorlist.length)]
```

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Using the red color field painting as an example, the code will load a variable (var) background (bg) color (color) from a list (list), with the colors listed as hexadecimal values. Colors used on the web must be coded in a language the browser can read. Notice these six-digit values as a specific series of letters and numbers preceded by the pound (#) character in the code. Each of three pairs of two-digit values translates one of three color channels used for display on a computer monitor (red, green, and blue) into hexadecimal code. Each time this window is opened in the browser, the background color inherits a different value. When this code is inserted into each of the ten windows constituting the red painting, each panel of the overall painting is assigned a randomly determined shade of red.

## 3. Automatically Closing Each Browser Window

Once I had each browser window opening in a specific location, and the background colors were loading randomly, I had to address what exactly would happen to the painting after it was produced. Left alone, the user would have to close each window individually (an annoying proposition for the user, to say the least). I researched code that would enable the browser to close itself, which not only took the chore of closing the windows away from the user, but had the added bonus of also keeping the work in an ephemeral and temporary state. With respect to the nature of the medium in which these works were being created, this offered a coherent relationship between form and process. The javascript for this feature is easily defined:

```
setTimeout("self.close();",8000)
```

When inserted into each page, this code tells the browser to close itself (self.close) after a defined duration of time. For this work, the windows would remain open for 8,000 milliseconds, or 8 seconds, before automatically closing.

I produced three versions of the color field paintings: red, green, and blue, representing the computer monitor display mechanics. Computer monitors add various amounts of red, green, and blue light to produce the range of colors visible on the screen. Televisions, projectors, and mobile phone screens all use this additive process for RGB display.

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## Historical Perspectives

During the height of Modernism in the 1950s, trends in art and painting included degrees of visual abstraction in lieu of realistic representation. A critical theory developed in which the material and technical nature of artistic practices would become of paramount concern. This attitude became known as Formalism, and the American art critic Clement Greenberg would become one of its staunchest supporters.

Greenberg wanted to address the most primal elements in the work of art, its most basic structure. It was only in this way, he surmised, that the work of Modernist art could escape the confines of taste and elevate itself to the respectable level of the Old Masters.

Part of Greenberg's technique for justifying this kind of art was to utilize Immanuel Kant's self-reflexive idea of immanent criticism, a system or process used to investigate that very system or process. "Kant," wrote Greenberg in his seminal essay "Modernist Painting," "used logic to establish the limits of logic, and while he withdrew much from its old jurisdiction, logic was left in all the more secure possession of what remained to it."<sup>1</sup> Greenberg sought to ask questions about the foundational (or formal) elements of a painting by looking to painting itself.

It quickly emerged that the unique and proper area of competence in a work of art coincided with all that was unique to the nature of its medium. The task of self-criticism took root in eliminating the effects on an art work that might conceivably be borrowed from or by the medium of any other work of art. Thereby each artistic medium would be rendered "pure," and in its "purity" find the guarantee of its standards of quality as well as of its independence. "Purity" meant self-definition, and the enterprise of self-criticism in the arts became one of self-definition with a vengeance.<sup>2</sup>

In the case of painting, "Flatness, two-dimensionality, was the only condition painting shared with no other art, and so Modernist painting oriented itself to flatness as it did to nothing else."<sup>3</sup> Important in Greenberg's argument is not just the physicality of flatness but the illusion of representation as well. Traditional painting created the illusion of three-dimensional space through realistic depictions that distract the viewer from what the painting fundamentally is: a flat surface with applied pigment. "Whereas one tends to see what is in an Old Master before seeing it as a picture," Greenberg states, "one sees a [Formalist] painting as a picture first."<sup>4</sup>

Color field paintings emerged in the late 1950s and 1960s within this Formalist context. Consisting of flat fields of color with no discernible representational elements, these were paintings that adhered to the purest Formalist sensibilities. Examining the nature of painting by referencing the most primal elements of painting technologies, these images would "test ... all theories about art for their relevance to the actual practice and experience of art."<sup>5</sup>

*Color Field Paintings (Browser)* references both the conceptual framework of the original color field paintings, while investigating the formal aspects of internet-based artworks. This web project answers similar questions to those posed by Greenberg in the 1960s.

The basic components of a webpage are the HTML, head, and body tags, within which media content is placed. To state this more essentially, a webpage consists of data placed in the source code. The browser displays content based on this source code. Color, in this context, becomes the one visible source of data that does not

present the viewer with representational media (as would text, images, or video). To bring the color into a useable form by the browser, it must be converted into hexadecimal values. The argument made by *Color Field Paintings (Browser)* is that data, represented by hexadecimal values, is the most basic form of visual representation found on a webpage, the most elemental aspect to the Internet web-based artwork.

Conceptual art, perhaps not surprisingly, continued the Formalist experiment in intellectual investigation, if not the assumed visual aspect. Developing during the mid- to late-1960s, conceptual art used Formalism as an art-historical antecedent to further investigate what constituted the art object, while distancing itself from Formalism in the way objects were constructed and the contexts in which they were viewed. "One of the recurring characteristics in much art that is referred to as conceptual," wrote Alexander Alberro, "is the consideration of every one of the constituting elements of the artwork as equal components."<sup>6</sup> This consideration directly relates to the Formalist critical investigation of each element that comprises a painting or a sculpture, using those elements toward a "self-reflexivity . . . that systematically problematizes and dismantles the integral elements of the traditional structure of the artwork."<sup>7</sup> Alberro continues:

the conceptual in art means an expanded critique of the cohesiveness and materiality of the art object, a growing weariness toward definitions of artistic practice as purely visual, a fusion of the work with its site and context of display, and an increased emphasis on the possibilities of publicness and distribution.<sup>8</sup>

Conceptual art walked a fine line between an art-historical tradition and the object-based aspects of fine art (such as visual concerns, the object in the museum or gallery context, and the exclusive nature of art institutions). How, then, are *Color Field Paintings (Browser)* positioned in this history?

## 1. The Cohesiveness and Materiality of the Art Object

This is the point most closely associated with Formalism, where the materiality of the object is called into question and put to the task of investigating the object itself. In *Color Field Paintings (Browser)*, the materiality of the virtual object exists in the form of browser code. The object and method of display, the browser window, are cut from the same cloth (digital amalgamations of code). Both are visual representations of data, organized in particular ways.

## 2. Definitions of Artistic Practice As Purely Visual

While there are undeniable visual aspects to *Color Field Paintings (Browser)*, one could argue that the visual aspects serve a subservient display role to the main content of the work (the hexadecimal values found in the source code), and as such the work is not "purely visual." But when visual art is the subject, the visual must be considered. As Lucy Lippard and John Chandler state in their collaborative essay on conceptual art, "As visual art, a highly conceptual work still stands or falls by what it looks like . . . Intellectual and aesthetic pleasure can merge in this experience when the work is both visually strong and theoretically complex."<sup>9</sup> In reference to Alberro's criteria, it is important to stress the phrase "purely visual" recognizes the theoretical basis of the work as a *more significant* concern than the aesthetic details of the work of art.

### 3. The Work Within Its Site and Context of Display

Whereas conceptual artists were concerned with the context of the art museum or gallery and the impact this context had on the art object, *Color Field Paintings (Browser)*, like many web projects included in this book, rejects this paradigm by existing completely on the web. There is no object in the traditional sense, and the material that comprises the project exists as visualized data (the webpage) within another set of visualized data (the web browser). The conceptual artists of the 1960s (for whom the Internet would have been a fanciful idea) would have been attracted to moving the art object out of the physical art museum or gallery and into a virtual data-based realm. Devoid of an institutional context, the work could finally be viewed on its own terms.

### 4. Possibilities of Publicness and Distribution

Because this work exists on the web, the nature of distribution far surpasses the potential traditional methods of distribution (the art museum or gallery) previously made available to works of art. According to the International Telecommunication Union, there were 1,587,419.8 global Internet users in 2008. In the United States, the total was 230,630.0.<sup>10</sup> This creates an undeniably greater potential for viewership when the number of visitors to art museums in the United States was 59,822 during the same year.<sup>11</sup> Clearly, the web poses advantages to the distribution of content when compared to analog viewing or distribution practices.

### Conclusions and Outcomes

After the success of the first three digital color field paintings (red, green, and blue), I decided to reference the notion of Formalism and color field paintings from the 1960s more explicitly. I created online iterations of historically notable color field paintings following the same compositional arrangements observable in the original works. Two works came to mind immediately: *Where*, by Morris Louis (1960) and *Black Gray Beat*, by Gene Davis (1964). These two paintings consist of vertical bands of alternating color. For both online versions, I sampled color from the original works using Photoshop to determine the hexadecimal value, and placed those color values into the javascript code to generate the random color array.

This work was part of the *HTML Color Codes* exhibition curated by Carolyn Kane of Rhizome. As she stated in her introduction to the exhibition:

*Color Field Painting ("Where," after Morris Louis)* consists of a series of vertical browser windows that appear consecutively across the screen from left to right ... The piece plays on the codification of online color in the context of art history. Morris Louis' painting "Where" (1960), also consists of a series of multi-colored bands that run vertically on the composition, and all of Demers' color are digitally sampled from this palette. However, where Louis' composition consists of hand-painted lines, and fluid and continuous brush strokes that gently converge at the bottom, Demers' color bars are all formed according to the same rectangular dimensions and orientation. They are also animated in time; after all of the bars have appeared, they disappear after ten seconds, making his appropriation of the original a commentary on the grid-like structure of HTML code, and the ephemeral character of internet art.<sup>12</sup>



Finally, the digital color field paintings referenced the structure of the original Formalist paintings and the digital nature of the medium in which the new work was being presented. The work accomplished what I set out to do in my practice by meeting a conceptual rigor with a technological approach and paying historical homage to the original paintings while maintaining a reflexive understanding of the digital work. Much in the way that Greenberg justified Formalist painting by referencing painting itself, here I had been able to take a similar Kantian approach to the production of a digital object—dispelling, for the time being, traditional biases against emerging digital processes.

## Notes

- \* Images associated with this chapter should be viewed in color. See Routledge website, [www.routledge.com/textbooks/9780415882224](http://www.routledge.com/textbooks/9780415882224) or the artists' website, [www.michaeldemers.com/colorFieldPaintings\\_browser](http://www.michaeldemers.com/colorFieldPaintings_browser).
- 1. Clement Greenberg, "Modernist Painting," in *Art in Theory*, Malden, MA: Blackwell Publishing, 2003: 774.
- 2. Ibid.: 775.
- 3. Ibid.
- 4. Ibid.
- 5. Ibid.: 778.
- 6. Alexander Alberro, "Reconsidering Conceptual Art, 1966–1977," in *Conceptual Art: A Critical Anthology*, Alexander Alberro and Blake Stimson, eds., Cambridge, MA: MIT Press, 2000: xvi–xvii.
- 7. Ibid.: xvi.
- 8. Ibid.: xvii.
- 9. John Chandler and Lucy Lippard, "The Dematerialization of Art," in *Conceptual Art: A Critical Anthology*, Alexander Alberro and Blake Stimson, eds., Cambridge, MA: MIT Press, 2000: 49.
- 10. International Telecommunications Union, "Internet Indicators: Subscribers, Users and Broadband Subscribers" (2008). Online: [www.itu.int/ITU-D/ict/Reporting/ShowReportFrame.aspx?ReportName=/WTI/InformationTechnologyPublic&ReportFormat=HTML4.0&RP\\_intYear=2008&RP\\_intLanguageID=1&RP\\_bitLiveData=False](http://www.itu.int/ITU-D/ict/Reporting/ShowReportFrame.aspx?ReportName=/WTI/InformationTechnologyPublic&ReportFormat=HTML4.0&RP_intYear=2008&RP_intLanguageID=1&RP_bitLiveData=False) (accessed May 6, 2010).
- 11. American Association of Museums. Museums FAQ. Online: [www.aam-us.org/aboutmuseums/abc.cfm#visitors](http://www.aam-us.org/aboutmuseums/abc.cfm#visitors) (accessed May 6, 2010).
- 12. Carolyn Kane, "HTML Color Codes," Rhizome.org (2009). Online: [www.rhizome.org/art/exhibition/html\\_color\\_codes](http://www.rhizome.org/art/exhibition/html_color_codes) (accessed April 15, 2010).

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- Kane, Carolyn. "HTML Color Codes." Rhizome.org (2009). Online: [www.rhizome.org/art/exhibition/html\\_color\\_codes](http://www.rhizome.org/art/exhibition/html_color_codes) (accessed April 15, 2010).

## Links

[www.michaeldemers.com/colorFieldPaintings\\_browser](http://www.michaeldemers.com/colorFieldPaintings_browser)  
[www.rhizome.org](http://www.rhizome.org)

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