

# Negotiating Seamlessness in Gallery Spaces:

Imagining Conflict as a Possibility in Social  
Participation

By

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# Abstract

*Seamlessness* in traditional airbrush aesthetics reflects a desire to pursue technical excellence and perfection. The digital revolution has pushed airbrush practice from a popular art form to a niche discipline. Today, airbrushing survives in customization and subculture aesthetics. The retreat of airbrushing from the mainstream, poses questions of how to extend this art form into contemporary art practice: an important consideration given its potential to redefine the social and cultural meaning of *seamlessness* in our current digital age.

My research examines the meaning of *seamlessness* in our contemporary, social and technological contexts. By shifting traditional airbrush practice into an interactive and installation-based platform, I use participatory strategies to investigate the social implications of relational artforms to challenge the notion of seamlessness as an idealized pursuit of perfection. Inspired by the debate between Nicolas Bourriaud's concept of relational art and Claire Bishop's critique of Bourriaud's micro-utopian concept of relational aesthetics, this paper investigates how participatory and interactive art functions within gallery spaces to gain a deeper understanding of Chantal Mouffe's concept of radical democracy.

Using art galleries as an arena to engage theory and praxis, my thesis project employs a research-creation method with a participatory approach that intends to trigger conflicts and negotiations in the domain of galleries. It investigates the blurred boundaries between consensus and conflict, controllability and unpredictability, inclusion and exclusion. Lastly, through theorizing and redefining the meaning of *seamlessness* from an aesthetic concept towards social agency, this research questions the inclusivity of art institutions and their role in relation to social and cultural production.

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# Part 1: Introduction

## Seamlessness in Airbrushing and Social Dynamics

Whether technology provides more opportunities or challenges, it certainly has changed many disciplines in the last two decades. Amongst many declining professions, airbrushing struggles to survive in today's fast-paced creative industry as the aesthetic and technical advantage of producing seamless rendering is replaced by digital media.

Airbrush is a mechanical technology that many creative disciplines have used. It peaked in creative and cultural production between the 1960s-1980s and was embraced as a highly technical discipline with a wide range of applications and diverse aesthetic styles. Airbrush art was regarded as a synthesis of art and technology of the modern time.

Since the 1990s, the digital revolution has changed the status of airbrushing in creative industries; professional airbrushing falls behind in competition with digital media. On the contrary, other forms of airbrush applications arise serving the demand for interactive events, DIY activities, and public art. As airbrushing declines from the mainstream, the practice is shifted to a form of interactive entertainment or niche in everyday applications. Body art, airbrush tattooing, and custom airbrush appeals, frequently appear on both everyday occasions and in social media spotlights.

Changes to airbrush practice are obviously determined by changes in technology and market demand. However, beneath these inevitable changes lies a fundamental issue in which the power and criticality of art practices are reduced by technological monopolies and material

dominance. Under the hegemonic control of the economy and materialism, the independence and autonomy of art practices are limited by increasing economic constraints. Strengthening connections between art production and social practice is urgently needed to challenge material dominance in cultural production.

The purpose of this thesis is not to discuss the aesthetic and technical aspects of airbrush work, but to use airbrushing as a lens to investigate how art and technology can be used to explore the in-between spaces of social and capital systems. The interest of this research is to explore how conflicts in social interactions could generate new possibilities, and how artists can use gallery spaces as the arena to challenge the boundaries between freedom and constraints.

The first section of this research introduces the concept of *Seamlessness* in the context of airbrushing aesthetics and expands the meaning of Seamlessness into social dynamics of consensus and democracy. It investigates the disciplinary shift in ideology from the pursuit of utopian perfection to DIY culture and participatory methodology.

The second section of the investigation brings the inquiries of seamlessness into Nicholas Bourriaud's contemporary art theory *Relational Aesthetics* and Claire Bishop's *Antagonism* to touch on Chantal Mouffe's conception of *Radical Democracy*. The theoretical framework of this research is to emphasize conflict, incompatibility, and failure as the necessary components in art-making and the democratic process in social dynamics. It echoes Mouffe's concept that communities without conflict, incompatibility and failure is not a fully functional democratic society.

The final section of this thesis is reserved for a discussion of the research-creation of an interactive airbrush artwork that aims to create participatory experiences in the exhibition. Using Arduino and sensor technology, the research-creation explores ways of creating a participatory artwork that amplifies conflict between controllability and incompatibility. Through the interaction



between people and technology in the airbrush painting process, the exhibition challenges the consensual ambience of the gallery space, invokes our imagination about the social world, and questions the meaning of inclusiveness in our understanding of democracy.

## The Concept of Seamlessness

From the seamless gradients of airbrush aesthetics to contemporary artists' practices that push the institutional boundaries, to the intellectual debate between the utopian consensus and radical social strategies, this thesis takes a departure from a disciplinary practice and expands to the discussion of participatory art practice in the background of liberal democracy and radical democracy. From investigating the historical context and the main topics in participatory and socially engaged practices in contemporary art, the understanding of my airbrush practices has broadened from the aesthetic and technical spectrum to the social-political-economic sphere. I realize that a disciplinary practice is not only a professional choice in material and economic production but also a social and cultural agent. Naturally, how to use my disciplinary experience and bring my creativity into contemporary social and cultural participation becomes a new challenge to my practice.

Airbrushing was a popular technical and aesthetic development in art and design disciplines in the pre-digital age. It was widely applied in many diverse creative areas such as visual art, architecture, industrial design, advertising, illustration, graphic design, and craft-making processes. Because airbrush does not directly contact the painting surface and uses air spray to apply seamless paint, it allows artists to paint almost anything from flat shapes to 3D forms.

Airbrush was primarily developed as a photo-retouching tool for improving the quality of photographic images. The mechanical advantages of spraying seamless color gradients allowing for smooth color coating have made airbrush an ideal tool for artistic rendering in many styles, especially in manipulating and altering high-quality images. The mechanically-produced, smooth-rendered effects turned images into the aesthetics of technological beauty and consumerist desires of the 20th century, exemplified by the glossy coating of airbrushed hot-rod car culture and hyper-realistic renderings of advertising illustrations between the 1950s-1980s.

(Hathaway & Salisbury, 2008)

Since the late 1990s, the technical advantage of producing seamless beauty was replaced by digital tools in the pursuit of productivity and system controllability. Gradually, airbrushing transformed into nostalgia associated with the pre-digital age and POP culture. (Kassaveti, 2019) Although there is some appreciation of airbrush application nowadays in subcultures, customization, and DIY, airbrushing is on the course of retreating from art and cultural production since the advantages of the seamless airbrush aesthetics have been reproduced by digital formats.

As a practitioner of commercial airbrushing since early 2000, I have become more and more aware of the passiveness and subordinate tendencies of commercial airbrushing. Although airbrush aesthetics and technique extended from fine art, advertising, and illustration, to the development of digital software and automation, airbrushing as an art form never claimed its importance or created a discourse in cultural and social production. In a market-driven economy airbrush practitioners took a compromised position to focus on commercial art that serves aesthetic and technical values within a competitive environment. Perhaps due to the technical nature and the subordinate position of commercial art, the popularity of airbrushing and its development was rarely studied in academic art history. However, the development of airbrushing is embedded with rich content from the industrial age to the digital revolution. Arguably, it is an important medium to reflect the social, economical, and technological changes from the modern to the postmodern world.

As a practitioner, I realized that artists need to have agency to look beyond the aesthetics and technical aspects of the medium. The seamless beauty of airbrush art is not only an aesthetic expression but also a representation of its relation to the world - in which a decorative attitude is

often taking the primary role to cover the imperfection with superficiality - there is a lack of depth and criticality in this type of seamlessness which is based on the avoidance of reality.

As our contemporary world is accelerating with digital technology, the seamless airbrush aesthetics of desire and passiveness have transferred into our everyday life. We are often inundated with hyperrealism created by images, merchandise, and celebrity lifestyles. The proliferation of the aesthetic of seamlessness contributes to the illusion that we live in a hyper realistic world. These everyday spectacles gloss over urgent social and environmental issues. As German-Korean cultural theorist, Byung-Chul Hann claimed in his book *Saving Beauty*, "The smooth is the signature of the present time." (Han & Steuer, 2017. p1.)

The real seamlessness in airbrush painting is *the process* of activating individual paint particles to work in the force of air, competing against each other to form a painting gradient on the surface. This seamlessness is a synthesis of air pressure, paint, surface texture, and the controllability in the desire of the artist. More often, imperfection and failure take precedent before success. In other words, seamlessness is the result of many conflicts and failures. The seamless beauty is only a representation of the utopian reality. However, the process of becoming smooth, which is the painstaking negotiation and mediation between the conflicts and failures during the painting process, is often forgotten in the glamour of the final presentation.

The process of creating seamless gradients through conflicts and struggles in airbrushing inspired my understanding of the democratic processes. Social dynamics thrive with conflict and incompatibility that initiate the negotiation process towards consensus. Negativity, undesirability, and incompatibility are inherent components of the process, in which negotiation does not guarantee a consensual solution but a relation of coexistence. In this light, this thesis brings the aesthetics of seamlessness in the discussion of relational art between Nicholas Bourriaud's *Relational Aesthetics* and Claire Bishop's *Antagonism* to gain a better understanding of Chantal

Mouffe's conception of radical and plural democracy as a theoretical base for the proposed interactive artwork.

As an inspiration to the concept of this seamlessness, the process of airbrush painting is used to amplify the understanding of social dynamics as a participatory process. The making of the participatory artwork is a research-creation exploring digital technology with airbrush painting, and incorporating DIY learning and making. In this research endeavor, the project democratizes the airbrush artist's authority in controlling the painting process and explores a participatory art approach to investigate the degree of controllability and freedom in art-making. With these goals, this thesis project aims to create conflicts in participatory experience by challenging the consensual ambiance of art galleries. My interest resides in exploring a methodology that connects airbrushing with a contemporary art practice that motivates passive participants to think about the meaning of negotiation with conflict.

## Part 2: Participatory Art and Democratic Politics

### The Concept of Relational Aesthetics

The 1960s witnessed the rise of Pop Art, Op Art, Minimalism, Conceptual Art, Performance Art, Feminist Art and Situation art. Contemporary art movements have opened new alternatives and expanded art discourses to include the voices of minorities, women, and interdisciplinaries.

Under the social and political influences of the civil rights and feminist movements since the 60s (Finkelpearl, 2014), a branch of artistic practices started to develop interests in participation, interaction and social networks. In response to the rise of neoliberalism, consumerism, and materialism that caused alienation and social division in the West, the practice of social artwork was mainly focused on the process rather than the artistic presentation through art products, especially in the economic side of everyday life. In *The Society of the Spectacle* (1967), French filmmaker and writer Guy Debord struck at the heart of consumerism and market-based art-making. He pointed out the importance of participation despite the capitalistic society and called for the humanistic society against the repressive capitalist production. (Bishop, 2012, p11)

Debord's examination of the "spectacle" in a capitalist society provided influential ground for other theorists such as Jean Baudrillard and Jean-Francois Lyotard. Baudrillard later described the spectacle as the simulacra- the hyperrealism of reality- through the symbolic and semiotic development of signs and images in the late-capitalist consumer culture. As an influential concept, *The Society of the Spectacle* encapsulated capitalism's paradigm of creating desires and phantasmagoria through material production and consumption. In the heart of Debord's articulation, the spectacle is an endless bombardment of the commodification of material,

images, and appearances which renders individuals into passive spectators and causes the “degradation” of society into material fetishism and alienation.

“The alienation of the spectator to the profit of the contemplated object is expressed in the following way: the more [the spectator] contemplates the less he lives; the more he accepts recognizing himself in the dominant images of need, the less he understands his own existence and desire.” (Debord, 2002. Thesis 30)

In contrast to artistic practices that work in isolated studios, galleries and art markets to produce cultural commodities, participatory art practice takes a bottom-up and democratic approach in creating public art and involves everyday people in artistic activities. In response to the isolation and mystification of contemporary art and its disconnection from the general public and society, artists like Rirkrit Tiravanija, Philippe Parreno, Vanessa Beecroft, and Liam Gillick worked around the questions of what challenges contemporary art in terms of human interconnectivity in social relations. The French art theorist Nicholas Bourriaud raised a pivotal point that shifted the attention of contemporary art from aesthetic reproduction and presentation to the question of social relation. Using the 1990s internet terms of “information superhighway”, “interactivities” and “user-friendliness”, Bourriaud elaborates artistic activities as the social connection between the “interstices” of public and private spaces. “Artist activity, for its part, strives to achieve modest connections, open obstructed passages, and connect levels of reality kept apart from one another.” (Bourriaud, 2002. p.8)

Bourriaud’s concept of Relational Aesthetics, exemplified by artist, Rirkrit Tiravanija’s serving of Thai food at the Paula Allen Gallery in New York, 1990, claimed the possibility of relational art as an art practice that connects human relation to social contexts, rather than working in independent and separated spaces. (Bourriaud, 2002. p.14). In Bourriaud’s relational aesthetics,

three important aspects of relational art push the boundaries of contemporary art theory and practice. First, as aforementioned, relational aesthetics have shifted the artistic emphasis on individual art spaces to public spaces and a focus on the human connection rather than artifacts. This approach has changed the relationship between art and spectators. Instead of being spectators in galleries, spectators become participants in the process of art-making. Second, it changed the objectivity of contemporary art from thingness to humanness. The primary focus of art is no longer limited to aesthetic production and presentation, but rather on the social and artistic functions of connectivity and interactivity. Lastly, as relational art seeks opportunities to create “encounters” between people, it brings in the most important aspect of relational art which is the platform of creating conversation and dialogue. The dialogic function of art is the key that Bourriaud has advocated to combat the “separation” - the final stage in Debord’s *The Society of the Spectacle* - where human relations are only experienced through the representation of material commodities and the desires produced by images. (Bourriaud, 2002. p.9)

Bourriaud’s intention of bringing relational aesthetics into the realm of art galleries meant to challenge the materialization of art—in other words, to challenge the subjection of art to capital, the material culture in consumerism, and the alienation created by material-based social division.

In our post-industrial societies, the most pressing thing is no longer the emancipation of individuals, but the freeing up of inter-human communication, the dimensional emancipation of existence. (Bourriaud. 2002. p.60)

Bourriaud’s relational aesthetics advocates that “ artistic activity... strives to achieve modest connections, open up (one or two)obstructed passages”(Bourriaud 2002. p.8) and use art as a “social interstice” (Bourriaud. 2002. p14) in humanist connection. He points out the function of



institutions is to connect individuals and mediate between social gaps. Relational Aesthetics has brought the focus of encounters and dialogue in art making, it amplifies that human connectivity is urgently needed in contemporary society because of material production and commodification that separate individuals and social values.

Relations Aesthetics as a theoretical starting point has provided a foundational shift in my understanding of airbrush practice from aesthetic and technical focus to social relations and connectivity. The concept of Relational Aesthetics has inspired this research to seek alternatives in airbrush practice towards a participatory direction. In revisiting the role of artists from authors to producers and to participants, the expression of seamlessness in airbrush aesthetics has transferred to a relational connection between institutions, artists, and individuals, where art helps to mediate the isolation of social interstice through encounters and dialogues.

## From Antagonism to an Agonistic Approach in Radical Democracy

To put it into the context of the 1990s, Relational Aesthetics challenged the aura of the gallery and elitist dominance over individuals in institutional art spaces. Relational aesthetics helped to mediate social gaps between individuals within institutions by promoting a community-based collaboration. However, the major criticism of relational aesthetics was its romantic and idealistic approach of assuming all social interactions and participation were consensual and harmonious. Bourriaud's chosen artists and artworks were also criticized as the limitation of relational aesthetics since it only focused on the inner circle of the art community. In criticism, British art historian Claire Bishop took a more progressive and radical approach to challenge the notion of relational aesthetics and to develop upon it. She countered Bourriaud's idea of relational art and criticized it as a harmonious, smooth relationship that removed the undesired reality. Bishop argued the critical gazes and the realistic dimension were removed from Bourriaud's relational aesthetics. The notion of relational aesthetics was limited to the idealization of a micro-utopia, where exclusion is a part of the "laboratory" paradigm and it is envisioned as a small community (Bishop 2004 p.53) in the gallery space.

Rather than a discrete, portable, autonomous work of art that transcends its context, relational art is entirely beholden to the contingencies of its environment and audience. Moreover, this audience is envisaged as a community: rather than a one-to-one relationship between work of art and viewer, relational art sets up situations in which viewers are not just addressed as a collective, social entity, but are actually given the wherewithal to create a community, however temporary or utopian this may be. (Bishop 2004 p.54)

Bishop thought relational aesthetics, and the artists whose works were picked by Bourriaud to represent this concept, were taking a compromised way to deal with critical issues in art. Also, the concept of relational aesthetics was in reference to some previous modernist social movements such as situationists in the 1960s and 1970s. The difference is, Bourriaud was trying to differentiate relational aesthetics from modernism's utopian agenda by replacing it with the community-based micro-utopia. As a result, relational aesthetics promoted a democratic social fantasy that was moderate and idealistic. In Bishop's vision, relational aesthetics was a mediation without conflict, and it lacked the missing component of conflict in social relations.

Bishop's criticism demands more confrontation in relational art. She introduced the concept of antagonism in participatory art in reference to Ernesto Laclau and Chantal Mouffe's (Bishop 2004. p.69) *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics* and their view of democracy as an agonistic process of antagonism. Bishop further developed her critical insight of relations aesthetics by bringing forward the artworks of Thomas Hirschhorn and Santiago Sierra to focus and amplify contradictory social issues such as inequality, refugee crises, and labour exploitation. In this context, Bishop successfully added another realistic layer to relational art that conflict is a part of the democratic process.

a democratic society is one in which relations of conflict are sustained, not erased.

Without antagonism, there is only the imposed consensus of authoritarian order—a total suppression of debate and discussion, which is inimical to democracy. (Bishop 2004 p.66)

In defending relational aesthetics, Liam Gillick subsequently responded to Bishop's criticism. He argued that Bishop did not apply the criticism in relation to the complexity and contradiction in the large context of institutional and gallery art but rather focused on the specificity of a few artists and their works. Bishop's critics did not fully interpret the meaning of antagonism in the

context of radical democracy. In other words, Bishop's notion of antagonism is a part of the liberal democracy structure as it still resides in the frame of institutions such as galleries, therefore, it is still submissive to the domination of institutions and liberal democracy. Moreover, Gillick points out Bishop's critiques in fact are another intellectual territorial debate which is the opposite of what relational aesthetics want to open up - the obstructed passage to dialogue and connectivity- the open communication and everydayness in the institutional space. The value and the emphasis of relational aesthetics were intended to push the institutional and cultural boundaries and to provide open spaces for more communication and dialogue. This would also lead to new possible encounters in human interactions.

Things get truly interesting when art goes beyond a reflection of the rejected choices of the dominant culture and attempts to address the actual *processes* that shape our contemporary environment. This is the true nature of Mouffe's plea for a more sophisticated understanding of the paradox of liberal democracy, which concerns the recognition of the antagonism suppressed within consensus-based models of social democracy, not merely a simple two-way relationship between the existing sociopolitical model and an enlightened demonstration of its failings.

(Gillick 2006, p.100)

Gillick's response to Bishop's criticism of *Relational Aesthetics* and her notion of *Antagonism* has reflected a concurrent debate of radical democracy into the realm of art. In contrast to the prior discussion between Bourriaud's relational aesthetics and Bishop's antagonism, Gillick's response to Bishop provides a clue to the further development of participatory art practices in the light of Mouffe's articulation of radical democracy, that is in order to be critical, art practice needs to reconsider the mainframe of its political dimension.

Chantal Mouffe questioned the critical role of art in the context of capitalist society under neo-liberalism policy, as the struggle between the left and right wings of politics appear to become naturalized. (Mouffe, 2007) Although antagonism plays an adversarial role in art and democracy, later-capitalism on the other hand had predominated the overall scale of the social, economical and political structure. Therefore, art as an apparatus with historical and ethical responsibilities to critique social and political issues is facing the danger of losing its power and autonomy in the domination of the cultural capitalist mainframe.

In order to remain critical in art and democracy, Mouffe advocated for the agonistic approach in radical democracy in which she called for the political left to take a more activist approach to antagonize the hegemonic control, especially in the everyday situation where hegemony is existing in every form and function of society as right-wing capitalism has naturalized its opponents, and desaturated the hegemonic control of our everyday life through what Debord called “spectacle” or what Baudrillard called “simulation” and “hyper-reality”.

Mouffe emphasized the painstaking process of agonists' struggle as the necessary part of radical democracy, rejecting the deliberate democratic model of asserting liberty and individual rights as the only primary concerns for achieving democracy. The agonist model has recognized irreconcilable differences, and confrontation as the dynamic energy to keep democracy alive. In this regard, agonistic pluralism must be applied as the social strategy in radical democracy to resist hegemony, from identity, to feminism, to decolonization, and even to state and technological domination. Mouffe argues that: “In a democratic polity, conflicts and confrontations, far from being a sign of imperfection, indicate that democracy is alive and inhabited by pluralism.” (Mouffe, 2000. p.34)

In *Art and Democracy*, Mouffe calls for resistance and confrontation in public by using art as a tool for social intervention. She indicates the political dimension of hegemony not only resides in

the technical expertise in politics, institutions and policies but in the everyday practice of intervention, confrontation and negotiation with neoliberal and capitalist domination.

In other words, democracy is the everyday negotiation and confrontation with the social and political orders that are rooted in oppression, colonialism, and capitalism domination. The process of democracy is not only antagonism towards hegemony but an agonistic effort of connecting everyday struggles into continuous actions in public.

In art, Mouffe sees public spaces as the battleground for critical practices against hegemony without final reconciliation. In this regard, she sees art as not merely a representation or illustration of current social and political issues but as a tool for activism. Mouffe suggests the agonist model that uses art to create intervention in social and public spaces. Moreover, in hegemonic struggles, artists are activists and negotiators against dominating powers despite capital neutralization and commodification.

Seamlessness and a harmonious social ambiance do not reflect the irreconcilable struggles and incompatibilities between our cultural, social, and political differences that require constant negotiations and resistance to hegemonic control. To art and art institutions, the question is how can art push the ideological and hegemonic boundary of cultural institutions to the realistic dimension of everyday struggles of our society. In this light, we could ask whether art galleries can be truly considered as public spaces or whether they are a part of the hyper-realistic cultural reproduction of late-capitalism. The political dimension of art and democracy poses many challenges to the possibilities of art and artistic imaginations and also opens up new ways of envisaging our society and world.

## Conflict, Unpredictability, and Failure in a Democratic Process

Chantal Mouffe's *radical democracy* suggests the model of "agonistic approach" in democratic politics. In her concept of "radical democracy," she asserts that hegemony is the agonistic process of power struggle in democracy and recognizes the irreconcilable dimension of the adversarial nature of democracy.

The vibrancy of the agonistic approach in the radical democratic model is the emphasis on the conflict and antagonism as the essence of democratic progress. Mouffe took a realistic approach to see the complexity of the political sphere where consensus is not possible for all struggles. Consensus only exists temporarily as the hegemonic forces are in balance, or the hegemonic power has gained momentary control in totality. She argued the agonistic model offers alternative ways to look at democratic processes in which conflict and confrontation cannot and should not be eradicated. Instead of viewing conflict with denial and avoidance, ideas should be fiercely fought, debated and defended as new possibilities can emerge from adversariality. The principle is, one should not deny the right of others in representing and defending their ideas. To Mouffe, democracy is not the struggle between enemies who deny each other's existence, but the struggle between adversaries who fiercely defend their beliefs. (Mouffe, 2016. p.3)

The intellectual debate in democratic politics not only applies in a theoretical dimension. It has practicalities in everyday life too. In the neo-liberal political atmosphere, the idea of consensus and negotiation has been saturated into economic, social and cultural places in the form of consumerism and a narrow definition of freedom—the freedom of consumption and the freedom of choice in the frame of capitalism. The hegemonic control in neo-liberal system is because of the invisible force that denies other forms of political, social and cultural formations, as well as

anything that does not fit the interest of the neo-liberal system. In this direction, international conflict, social divisions, inequality, racism and even environmental issues are undermined or oppressed under the seamless facade of neo-liberal democracy.

Mouffe's radical democratic model provides another critical layer for participatory art practice, that is the recognition that incompatibility, indeterminacy and even failure are parts of the democratic process. In this context, participation does not guarantee a turn of consensus and harmonious relations in the communities.

The different interests and values of individuals generates indeterminacy of conflicts since freedom is not absolute in participation. Freedom and limitation may also become conflicting elements in the structure of interactive art in which the possibility of failure in negotiating a consensus may also arise. The question is not whether or not participation should be inclusive, but how to open up interaction to include incompatibilities and conflicts. In fact, participation is a process of negotiation of different values, from individual to collective. In this process, Mouffe's concept of plural and agonistic model can come to light for reference to make interactive artwork, where coexistence with irreconcilable differences can provide possibilities to incorporate differences, adversaries, and conflict for envisaging a more open and inclusive democratic world.



## Part 3: Research-Creation of an Interactive Project with a Participatory Approach

### The “Outside-to-Inside” Concept of Bringing Conflict into Galleries

Meandering into the ambience of tranquility and wonders, surrounded by admirable artworks in a quiet and relaxed setting has often been a memorable experience for me as an outsider visiting galleries. The image of galleries often resonates with an open-concept space with high ceilings, clean and polished floors accompanied by white gallery walls that reject ornamentation to provide the perfect backdrop for the art in spotlights. All of the interior conditions are designed to create a sophisticated and harmonized environment that invites the gazes and admiration of viewers. However, beneath the sophistication and harmony, I always feel there is a repressive silence and invisible force entangled in this space. The clearness of the floors, the emptiness of the open space, and the quiet atmosphere anticipates politeness and manners. Even in the exhibition that intends to provoke disagreement, visitors would carefully maneuver around the artworks, exchanging gentle gazes with their encounters.

To me, the ambience of galleries signifies a similar seamlessness to airbrush rendering: a superficial beauty of smoothness with implied consensus and harmony. Through redefining the meaning of seamlessness in airbrush aesthetics, the strategy of challenging gallery ambience is to embrace conflicts, unpredictability and failures by bringing interactions and everydayness of the outside world to the inside of gallery space.

Enlightened by the theories of *Relational Aesthetics*, *Antagonism*, and *Agonism*, my research-creation path navigates towards a participatory methodology. My concept of expanding airbrushing from technical and aesthetic perspectives to social participation focuses on the

domain of gallery space. In this light, the idea of conflict within seamlessness evoked my imagination of bringing “the outside” *into* the gallery space. I envision the gallery space as a hegemonic cultural system (in a neoliberal sense), where the *appearance of inclusion* is embedded within a *systematic exclusion* of undesired reality. In an attempt to challenge the gallery as a symbolic system of hegemony, my vision of the art exhibition focuses on provoking passive spectators to become active participants.

The exhibition consists of an installation of a fabricated “white cubic space” made up of 6 foot partition walls that are sealed with paper. These walls are intended to physically separate participants from the artwork. An interactive airbrush machine is enclosed inside of the fabricated “white cube”. Direct views of the airbrush machine are denied by the sealed walls. Viewer/participants can only peek inside the space by looking through a few small holes in the walls, or by bending down to glance through an awkward lower opening. Two joysticks are installed on opposite sides of the exterior walls. These allow participants to interact and move the machine in different horizontal and vertical directions. However, the distance between the two joysticks prevents one participant from having full control of the machine. The walls function as a visible barrier to participants’ controllability of fully interacting with the artwork. The purpose is to provoke spectators to take action and to confront conflicts. The positioning of the interactive interface (joysticks) encourages spectators to collaborate and become active participants as they negotiate with the installation’s limitations. The fragility of the paper walls suggests the possibilities of antagonism. It intends to examine the indeterminacy of participants’ behaviors of breaking the limitation that is implied by the paper walls and challenges the expected manners that are adopted by gallery goers. In this regard, the walls that separate spectators from the artwork signify the boundary between inside and outside, between inclusion and exclusion and represent the invisible institutional power that constructs gallery spaces.

Inside of the enclosed gallery space is an interactive airbrush machine that produces an airbrush painting. Unlike the traditional airbrush painting process, the machine uses a combination of mechanical and digital technology to transfer participants' actions into an "extended" painting process by using sensors and controllers. The airbrush system references CNC technology and uses Arduino microcontrollers and stepper motors to move the canvas. The airbrush is triggered by participants' engagement with the interactive interface. The system consists of three interactive components: a movable CNC easel, a CNC airbrush stand, and a compressor controlled by a photosensor to provide the air source for the airbrush. These machine components do not work asynchronously and require a collaborative effort to mediate between the movements. In contrast to the traditional airbrush process in which the artist has full control of the system, this airbrush system deconstructs the airbrush painting process into segmented movements and reconstructs it into an interactive, participatory effort where unpredictability and glitches are part of the process. In this airbrush system, the undetermined conflicts between participants' interaction challenge the seamlessness of the airbrush aesthetics that align with the artist's desire for total controllability and pursuit of perfection.

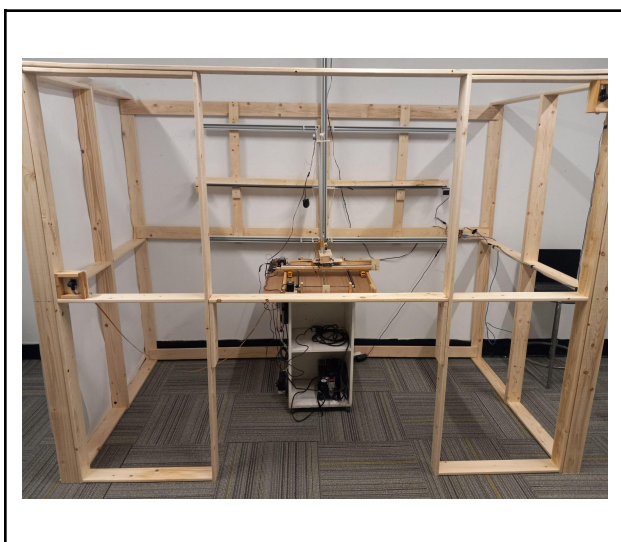


Figure 1. Installation prototype, Structure View 1. 2022



Figure 2. Installation prototype, Structure View 2. 2022



Figure 3. Installation prototype, Structure View 3. 2022



Figure 4. Installation prototype, Structure View 4. 2022

"The medium is the message," Marshall McLuhan proclaimed, arguing that *material* carries a communicative message. (McLuhan, 1966). I have chosen to create the installation using everyday materials (readily available construction materials and used or discarded electronic components) to disrupt the gallery setting and challenge the symbolic meaning of the gallery and the seamless airbrush process.

Despite having access to commercially available components for making CNC devices, I have chosen to construct my machine from as many found objects as possible: from a broken sign plotter motor to wooden canvas stretchers, to children's toy cars and the left-over window blinds tracks from my commercial projects. These everyday materials reflect fragments of my everyday life. Each one of these used, rejected, and damaged objects is connected to my personal and professional activities. The choice of using these everyday materials in the project is not only a financial decision for reducing material consumption, but also an amplification of my creative independence to bring art and life together.



Figure 5. Project Making Process Images. 2021-2022.

The first emphasis on using everyday objects is the intention of acquiring creative autonomy. As the *Fountain* (1917) attributes to Marcel Duchamp's *readymade* that challenges the authority of galleries, using everyday things gives artists' the authority to claim art. Duchamp claimed that "everyday objects raised to the dignity of a work of art by the artist's act of choice." (Martin, 1999. p.42) The freedom of using everyday objects does not only depend on its material form but also the relationship between artists' choice and institutions' limitations. It can be seen as a

power struggle between the autonomy of artists and the constraints that are implied by institutions such as galleries. In this relation, the power dynamics between cultural hegemony and individual creative power are negotiated between what is considered as art, between the inside and the outside of the gallery walls. That is to say, artists are the composers of art through experience in everyday life where art galleries create the boundaries that define art in its domain. Using everyday found objects in art making connects artists' everyday experiences with art. This not only empowers artists to negotiate with the authority of the gallery, but also addresses the independence of constructing artworks and acquiring institutional spaces. In this process, artists acquire an equal stand to challenge the power of galleries, negotiating between the overlapping boundaries of art and life.

The connection between art and life through everyday objects also links with shared experiences between artists and spectators, such as in the work of artist Sarah Sze: *Seamless*, first shown in 1999 in Pittsburgh, USA, and later re-installed at Tate Modern in 2018. (Tate, 2019) Sze uses everyday materials in her large sculptural installations to incorporate fragmented everyday experiences with images, and multimedia devices to construct a "seamless space" (Tate, 2019) that triggers participants' memories and senses between reality and imagination. Sze's concept of *seamless* expands the power of images to a spatial relationship of objects, gallery space and audiences. Through the use of everyday objects in the installations, Sze asks questions about how everyday objects acquire meanings that reflect in everyday life through artistic intervention. More importantly, the art that she created by using ubiquitous everyday objects connects the everyday experiences of the viewers and inspires imagination and interpretation beyond gallery walls.



Figure 6. Sarah Sze. Sculpture Installation: *Seamless*, Medium: mixed objects. 1999.

To me, the function of everyday objects does not depend on the economic value and their predetermined function, but on the *relational experiences* associated with the everyday life that is shared by individuals. To claim the resemblance of everyday objects as a form of art in the gallery space serves a similar function as Rirkrit Tiravanija's food serving in *Pad Thai* (1992) for bringing in relational connectivity between objects, artists, and spectators. To another extent, the use of everyday objects in artwork also intends to remind the participants to reimagine the possibilities of often forgotten ubiquitous objects as the marginalized groups of individuals in our social spaces.

In the choice of digital components for the project, the technology I chose to learn and use in this research-creation was the Arduino microcontroller. Arduino is a community-based project begun in 2005 as a tool for students at the Interaction Design Institute Ivrea, Italy, (Kushner, 2021) aiming to provide a low-cost digital controller that interacts with sensors and other devices. With the ability to use many types of sensors, Arduino is a bridge that connects machine environments and human interactions with digital hardware and programming.

The choice of using Arduino is technical as well as theoretical. It is an attempt to adapt DIY and craft cultures in artmaking to a participatory process, where sharing experiences and connecting individuals together is the base of communities. Technically, learning and using Arduino gives me the opportunity to participate in maker communities and engage with other participants, working as a learner as well as a facilitator. Theoretically, Arduino helps to transform human behaviors into machine movements in my artmaking. It challenges me to think about the relationship between technical constraints and individual freedom and their everyday experiences during human-machine interactions. In this aspect, Arduino is a connective medium similar to Tiravinija's choice of Thai food, and Sze's choice of everyday objects and it becomes a technical and theoretical tool to create reflections of interactors' behaviors and choices.

The principle of collective sharing and making in the DIY community is analogous to the notion of democratizing technology. Although Arduino hardware is not free of cost, the software is entirely a community-based free platform that depends on the users' contribution and participation. The overall concept of Arduino is to give more freedom and alternative ways of using technology. In supporting users, a large community-based, open-source library and learning documentation provides resources and facilitation to help participants in the learning and making processes.

Overall, the exhibition is an experiment of connecting airbrush practice with interactive art in participatory methods to engage with contemporary social and political discussions about democracy. There are two levels of intention in the concept of the exhibition. First, as an institutional critique, it challenges the authority of galleries by taking the artist's agency to bring conflict and everyday context into the territory of galleries. The artwork also deliberately creates conflicts in participants' interactions with limitations and constraints in the gallery space. The second intention is to bring in participatory experience to provoke spectators to be active participants as a part of the art-making process. It implicates the social participation that



individuals embark on everyday life and cultural production regardless of their intentions.

However, social participation in everyday reality is not always seamlessly harmonious. Conflicts and unpredictability in everyday negotiations between freedom and constraint are part of social dynamics and the democratic process.

## The Research-Creation Process for Making an Interactive Exhibition

In deciding the research method, defining the nature of this research is a dilemma between *research-creation* and *participatory research*. Making the decision about the research method becomes a pivotal point in which clear definitions are needed to construct the research path. Participatory theory has been investigated so far in reference to the discussion of democratic process. It is the intention of this research to gain more understanding of social issues and democracy in relation to artists' agency and disciplinary practice. Participatory methodology, on the other hand, involves the exploration of methods and experiments of working with participants. The process consists of planning, creating stimulants (tangible or virtual artwork), interacting with participants, analyzing the relations and outcomes of the participation. It is a complex undertaking that focuses on generating knowledge through interactions and participation which is beyond the focus of this research.

The purpose of this project is to connect the theoretical understanding to disciplinary practice, using airbrush art as a reflective medium to amplify the contemporary issues in focus of democratic discussion. As an artist, it is also a self-reflection and shift in my practice, in which it challenges the passiveness of my disciplinary nature. In this case, research-creation is a path that I take in this journey as it brings a combination of creative making and academic research together. The process of research-creation provides me with the opportunity to bridge intellectual and practical knowledge by engaging with contemporary art theories and my disciplinary insights. It is a reflective process through researching, learning, analyzing and reflecting. As a result, the project is not only an interactive simulation for the purpose of participatory exploration but also, a self-portrait.

The process of research-creation is a self-reflection through engaging theories, methods, technology, and material. The development of the project works as a mirror to communicate and discover an artist's inner self and agency, transforming the understanding of the world into materiality through medium and process. As David Rokeby writes in his text *Transforming Mirrors* about interactive art, "transformed reflections are a dialogue between the self and the world beyond," and through the medium, it "not only reflects back but also refracts what it is given; what is returned as ourselves, transformed and processed." (Rokeby, 1996)

Although Rokeby refers to how interactive art reflects the worlds of its interactors, the process of reflection through artwork is a process of interpretation and finding meaning. Since the artist is the primary creator who interacts with the artwork, the process of making the artwork becomes a reflective endeavor of synthesizing the artist's experience and discovering meaning by interacting with the medium. The artwork functions as "transformed reflections" (Rokeby, 1996) that engage the inner dialogue between an artist's theoretical inquiries and the understanding of the artwork, as well as to the artist.

However, the reflective process in research-creation is not a seamless process. It is a painstaking journey of deconstructing and reconstructing existing knowledge with new meanings. Confusion, frustration, and contradiction are a part of the process and one might have to confront their principles and knowledge with conflict and challenges. In fact, my research-creation process involves constant debates between theories and the struggle to articulate clear ideas. Often, the reflective process brings me to scrutinize and interrogate my understanding and articulation of my work. Sometimes the process takes me to a paradox that requires me to break down previous work and reorganize the concepts and arguments. The technical difficulties and the frustration of failures in artmaking also make me realize the limitations and the indeterminacy of my work. However, through the reflective process of

making, interacting, and interpreting, the meaning of the artwork becomes more clarified and articulated.

My reflective process combines deconstruction and reconstruction methods throughout the research-creation process. Deconstruction requires the acknowledgment of the gaps and critical issues between the existing knowledge, aiming for new possibilities by looking deeper into the issues and breaking down large problems into workable components. This is theoretical as well as technical. For instance, in the process of learning Arduino, the main goal is to apply the technology and create interactive artwork for participation. However, the complexity of the technical nature is the obstacle of this research as it requires new knowledge and expertise in my research process. In this case, deconstructing technical challenges into small learning goals works effectively in the process. It helps me disassemble the complex problems into individual issues with feasible goals for learning and seeking expertise. Therefore, each learning component becomes new possibilities to overcome obstacles towards the main purpose. This method also works well in learning theory, in which deconstruction can help me dissect the theoretical inquiries into individual questions, using keywords to guide the research to an array of directions but keeping them connected as a whole. The key concept is not to be intimidated by the seemingly complex structure: by deconstructing the hierarchical structure of the system into connected components, the issues can be tackled individually and new opportunities may emerge in the process.

Although the deconstruction process breaks down complex problems for more in-depth understanding of the issues, it needs a reconstruction process to combine the findings to a collective understanding towards the main research question. In other words, deconstruction is relational to reconstruction as the individual parts need to be connected in relation to the main goal. By combining the individual elements that are deconstructed, the reconstruction process helps to verify and improve the hypothesis, moving it closer towards the objective. It also helps

to create relations and structures between material, techniques, and knowledge. Moreover, reconstruction helps to discover incompatibilities and glitches in theories or methods in which conflict can arise in the reconfiguration.

I also noted the relationship between deconstruction and reconstruction processes is not linear but complementary. That means the reconstruction process does not need to wait until all the smaller issues are addressed before combining them. The research-creation process may require a frequent mix of deconstruction and reconstruction methods to examine and verify the compatibility between two or more components to visualize or theorize the possible outcome. For instance, the mixed deconstruction and reconstruction process is often used in my research-creation process, where I combine different hardware to see whether they could work together. Sometimes I have to repeatedly take apart the artwork and recombine the parts in various forms. During the reconstruction process, emerging conflict and incompatibilities lead to troubleshooting and reviews of the principle and theories. On the other hand, too much deconstruction sometimes leads to a tunnel vision of specific issues that demands reconstruction methods to connect specificities to the main goal.

Even with clear goals, structural methods and acknowledgment of possible issues, components may not work together and failure could be the result of incompatibility. The indeterminacy of failure needs to be put into consideration in the deconstruction and reconstruction process, not because it denies success but because it provides challenges for deeper understanding and new possibilities. This is demonstrated in the research-creation process of working with Arduino, in which frequent failures often occur as a result of hardware incompatibility and conflict in programming. In fact, failures not only lead me to more understanding of certain issues, but also lead me to new discoveries and realization. The entire research-creation process made me appreciate that failure is an inherent part of reality which must be endured in the process. At the

same time, failures become a part of limitation that encourages me to challenge the constraints and seek new possibilities.

As Rokeby points out, making a structure of an interactive artwork is similar to “designing the infrastructure of a community or society; it changes the space politically”.(Rokeby, 1996) In this case, the methods of deconstruction and reconstruction in research-creation could be seen as a methodology for structuring a community. Deconstruction is useful in community building as it can help identify individual interests and pay attention to particular needs of certain groups, therefore to develop strategies and formats for participants to navigate in the community. On the other hand, reconstruction is useful in connecting individuals groups together, creating relations through interactions, and finding the possibilities and limitations between the individual freedom and collective purpose of the community.

Rokeby noted that limitation is necessary in the interactive artwork as “freedom exists only in relation to the established structure.” (Rokeby, 1996) Creating rules and limitations to guide the interaction between the participants to negotiate a shared space is a key element of developing relations between individuals and participation in communities. A wide-open interactive system or a community without constraints does not constitute shared interests. Therefore freedom loses its meaning, as freedom is not absolute and is relational to some references points. In Rokeby’s view, a well constructed limitation provides interactors a sense of control of their freedom in navigating the system. Similar to community building, reasonable limitations could ensure freedom is respected between individuals and in shared spaces. That is because limitations provide a sense of choice and control between desires and constraints.

This research-creation process, in fact, is a continuous interaction between my understanding of art in relation to my experience and the world. It is a process of deconstructing what I know and reconstructing new meanings and possibilities. Interactive artwork as the result of the

research-creation process functions as the symbolic stimulant and relational connection between me, other individuals and shared spaces. It is also a mirror for interactors to reflect their relation to their worlds and to each other. In this perspective, the meaning of interaction is transformed into the negotiation between freedom and limitation, where conflict and failure are entangled with desires and expectation in the process of a dynamic system with perpetual movement and momentum.

## Components of Interactive Art

Art connects society, institutions, artists and spectators. Art is material as well as relational since it transforms our desire and relation to the world and to each other. In a large perspective, every artwork is interactive as it involves relation-building and meaning finding through interpretation and dialogue. However, the degree of interactivity depends on the intention of the artwork and the engagement level with the audiences. What are the key elements of interactivity in relation to art, artists and spectators often become a central discussion between participatory, relational and interactive art.

In the discussion of participatory theories and democratic process, relational art emerged as the main topic in connecting theories to praxis in this thesis. *Relational Aesthetics* as the departing point in theoretical inquiries has inspired this research-creation process. The project of creating an interactive airbrush system to provoke active participation aims to challenge the authority of galleries as the symbol of cultural hegemony. In this light, the discussion must return to the understanding of interactivity, as it stimulates the active engagement of spectators and may inspire them to become active participants.

Interactivity and relationality are relevant to structure. In interactive artworks, the work's structure provides a mainframe of reference in determining the purpose of the interactivity. The structure of the interactive work can vary from many physical, digital, spatial or relational forms. Rirkrit Tiravanija's *Pad Thai* (1992) in 303 Gallery in New York demonstrates the physical and relational methods of connecting isolated social spaces and everydayness through communication, encounters and cultural alterity, as does the Spanish artist Santiago Sierra's radical *Wall Enclosing a Space* at the 2003 Venice Biennale that intentionally created inclusion and exclusion based on visitors' social and legal status. The degree of interactivity is the



primary consideration in the concept of the art projects as it reflects the authority of the artist in response to the particular issues. In Tiravanija's case, the purpose is to bring relational connection between people in cultural institutions by employing a casual structure of everyday gathering in the gallery. However in Santiago's project, his concept intended to tackle the status quo through rejection and inequality by provoking actions against institutional boundaries. Therefore, he took a more spatial and radical approach to set the structure of the exhibition to provoke audiences with exclusion.



Figure 7. Rirkrit Tiravanija: Pad Thai (1992)

Although the exhibition is planned with the objective of the artists' intention, the participant's subjectivity is a variable component in the structure of an exhibition as it gives open-ended possibilities to the interactive processes. Subjectivity comes from the idiosyncratic interpretation and behavior of the audience. Depending on their individual social, cultural background, personality and behavior towards certain settings, unpredictability and incompatibility become a part of the interaction. Therefore, the structure of the exhibition needs to consider the degree of openness and freedom it gives to the participants.

Structure provides a framework for interactive artwork, but how much freedom and openness does the interaction need to be in the participation? It depends on how much controllability and constraint that artist and the artwork provide to the participants. For example, painting exhibitions are often structured to embrace audiences' gazes and open interpretation and allow freedom to interpret the meaning of the artwork while the gallery setting is constructed to encourage silence and contemplation. If the exhibition structure allows many enthusiastic visitors, it is open to many different audience behaviors, and individual behaviors could form unexpected interactions that alter the objective of the exhibition.

As David Rokeby observed in his text *Transforming Mirrors: Subjectivity and Control in Interactive Media*, wide-open interaction within a system without constraints is usually unsatisfying to the interactors. It is the constraint that allows the interactors (participants) to appreciate their abilities and success in navigating the system with a sense of freedom. (Rokeby, 1996) To echo his point, interactive art requires setting some limitations and rules for participants to interact with the artwork. Total controllability of the interactive art may render the artwork to be uninteresting as it makes participants lose their desire to challenge the obstacles. Constraints can provide challenges and conflicts that trigger curiosity and eagerness of the participants to actively engage with the stimulants, connect their experiences to interpret the meaning or find alternative ways to deal with the problem. Often, freedom and constraint have a constructive relation in interactive artforms. As exemplified in video games, it is the constraints to controllability and the ability to overcome the difficulties that give the overall sense of freedom to gamers to enjoy the process and achievements.

My project of the interactive airbrush system intends to explore the relation between freedom and constraint in both technical and theoretical understandings. Technically, the artwork is created as a stimulant for the participatory process. Controllability is given to participants using joysticks to control the movement of the CNC easel which allows the canvas to move along the

x and y axis. Freedom is also given as open choices to participants to enter the enclosed area that is constructed with an unconventional entrance and destructible facade. The installed sensors act as constraints to interfere with participants' interaction of controlling the machine's behavior. Theoretically, the invisible authority of the gallery anticipates participants' rational behaviors and opposes radical actions. Freedom in this exhibition is implied to participants' agency and individual choices, as there is no obvious limitation to obstruct their behaviors. However, the constraint exists in an invisible sense, where technology has transferred participants' actions into physical conflicts and uncontrollability, and participants' own passiveness becomes a limitation for acquiring agency in the gallery.

My role as an artist in this exhibition will be transformative and fluid as it ranges from creator to facilitator and participant. This is not only challenging but also meaningful to my practice as the spectrum of my responsibilities has expanded from technical and aesthetic aspects to social engagement and facilitation. My role as a participatory artist is a part of the exhibition to co-inhabit the space with other participants and to work with incompatibilities, glitches and conflict during the exhibition. That means that I need to take an active role to confront technical issues, unexpected glitches, and unforeseeable circumstances, and possibly accept failures as opportunities for this exhibition.

In this exhibition, I am the artist who has multiple negotiating roles between freedom and constraints in the interaction with participants. Although the purpose of my exhibition is objectively set with structure and planning, the indeterminacy of the participants and their actions could alter the direction of the exhibition. In this regard, my role as an artist could shift from a creator and/or organizer to a facilitator and mediator between the artwork and the participants in the gallery. I am not only the creator of an artwork that captivates the interests of the participants, but also a facilitator to assist participants through interaction and dialogue to interpret meanings of the artwork. As an artist, I need to take an active role in provoking and

inspiring spectators to take actions to engage with interaction and discussion, as well as taking a participant role to help mediate the conflicts. In other words, I need to work in the gaps between constraints and individual freedom, using my artist's agency as a catalyst to enact cultural and social participation.

My work in this research-creation project in fact is a self-reflective process to understand the meaning of my practice. The seamless aesthetics of airbrush rendering has changed its meaning as my understanding of democracy changes through my investigation of participatory theories in relation to interactive art. My idealistic vision of seamlessness in pursuit of perfection and technical excellence has expanded to more open, inclusive perspectives to look at my practice and beyond. By theorizing my practice and connecting it with contemporary discourse, I realized conflict and failure in the process is the momentum of my work and that inspired my agency as an artist. The struggles of my artistic journey with freedom and constraint pushed me to envision more possibilities, where the seamless beauty of airbrush practice can embrace contemporary art practice, taking alternative ways to connect aesthetics to social values and engage with intellectual discussion.

What I learned from this research-creation is the understanding of the relational aspect of interactive art in connection to structure of communities and society, where inclusiveness resides in the vibrant pluralism that constitutes differences and diversity. In this relation, incompatibility, conflict and failure are part of the vibrancy that makes dynamic democracy and keeps pushing the agonistic struggle between freedom and constraints. The work of this research is not a final presentation of success, but a part of the process in my investigation of the participatory theory and methodology, as well as a part of my self-reflection as an artist and participant in our world. I now understand that an artist's agency is embedded with confrontation and struggles between hegemonic constraints and individual freedom in everyday life.

## Expectation and Failure

As much as I do not expect to find the answer to my research questions, in which I cannot define a single definition of what seamlessness is in respect to airbrush art, social participation and to our contemporary world, my artwork will never be presented as final. Instead of a complete work of art, it will be a continuous process of my exploration and desire to seek possibilities in extending my artistic practice in social and cultural spaces.

It is the entanglement of my achievements and failures that brings me into this stage of the research to share my work and experience openly. The work itself, as I proclaimed, is not an aesthetic or technical investigation, but a theoretical inquiry about the meaning of my practice and myself as an artist in relation to my understanding of democracy.

During the process of my research, I have encountered the work of Fredric Jameson, Jean Baudrillard, Guy Debord, Nicholas Bourriaud, Claire Bishop and Chantal Mouffe, and artists such as Rirkrit Tiravanija, Santiago Sierra, Sarah Sze and David Rokeby. My work engaged in their intellectual discussions through reading, writing and making to find inspiration for my practice. Although I expect to gain a deeper understanding of contemporary art and social participatory theories from this research, the limitation of my knowledge may not fully interpret the meaning of social participation and democracy in relation to my practice. But to me, the gaps between expectations and failures have enriched my knowledge and set the direction for my future practice.

My expectation of this research-creation project is intended to reposition my commercial airbrush practice to a participatory and interactive artform. Through engaging with the interactions between artmaking and participants, I hope some meaning could emerge through the process, not only to the participants who interact and interpret the work, but also to an artist who observes and interacts with the participants. I am interested to see how participants would

engage with the artwork, how much interest participants would have in the interaction, and whether the art work would provoke their impulse to act willingly. In other words, I am interested to see whether my work would bring in conflicts in the ambience of the gallery, where imposed constraints contradict with unleashed freedom.

My expectation also anticipates failures and unexpected occurrences from technical unpredictability to participants' behaviors. The glitches and technical failures of the artwork is always a part of the process that I have to endure throughout the research. The indeterminacy of the participation may arise as a result of passive spectators with no interest to try anything, or curious participants may accidentally break the fragile digital parts. The possibilities of chaos and disaster may be the result of the exhibition, or possibly no participants at all. In many cases, unpredictability is parallel to my expectations.

The conflict between expectations and failures functions as a complementary opponent in the adversarial: without expectation, no failures would occur. Vice versa, failures give expectation to changes, possibilities and desires. After all, the exhibition is a reflection of my understanding of interactive art and social participation in democratic process. It is the beginning of a perpetual process of negotiating seamlessness and finding new possibilities between freedoms and constraints, between inclusion and exclusion.

## The Exhibition and Findings

This section of the thesis is devoted to the exhibition as it leads to the testing stage of connecting theory and practice in the research-creation. At this stage, the exhibition becomes a reflective and analyzing apparatus for theorizing the research outcome, and generating findings through the participatory experience from artist and visitors. From setting up the installation to engaging with participants in the exhibition, I have encountered some very interesting experiences and findings throughout the five-days exhibition .

The first finding is that gallery spaces become a contextual background that is relational to the artwork. Unlike the making process where concepts and techniques are the main focus of the artwork, the focus of the artwork in the exhibition is shifted to creating encounters and relational connection between participants in the gallery. How the artwork is displayed in the gallery is not only a matter of positioning the artwork in the space but also how to attract and direct viewers' interest for interacting with the artwork. In this case, I find gallery lighting plays a very important role in creating contrast that emphasizes the artwork in the gallery space.

The rectangular layout of the gallery provides a prime location for the artwork to be placed in the center of the room. However, the fluorescent light of the gallery space did not work in favor of the artwork. The bright white light exposed all the visual objects unbiasedly in the room. As a result, the lighting reduced the power of the artwork in competition with other objects such as the window coverings, ceiling and the carpet pattern. To rectify this situation, dimmable spot lights were needed instead of the fluorescent lights, as it creates the contrast of light and shadow that enhance the appearance of the artwork. By adjusting the lighting to emphasize the front panel of the artwork, the lighting brings viewers' attention immediately to the interface of

the artwork as viewers walk into the gallery space. With the emphasis created by the spotlights, a sense of order was enhanced to guide viewers to navigate in the gallery space.

Most of the viewers walk into the exhibition with curiosity. Although they often directly go to the installation, I find most of the visitors do not interact with the controllers right away. They often carefully inspect the installation. Interestingly, the small openings on the wallpaper become an effective teaser to attract visitors peeking into the enclosed walls. The interaction at this stage is rather careful and prudent as the visitors were not sure about the intention of the artwork. However, the juxtaposition between veiling of the art and the visitors' curious gazes, worked effectively for generating the first contact of interaction between the viewers and the artwork.

The subsequent interaction is triggered by the photosensor detecting the shadow of the visitors as they get closer to the wall. The photosensor turns on the air compressor and the servo motor that make sudden noise to break the silence in the gallery space. Visitors are often startled by this unexpected action and shift their attention to investigate the installation cautiously. It is during this unexpected interruption of sound, visitors start to pay more attention to the controllers (joystick) of the wall panel. Some of the visitors would start to interact with the joysticks, however, the interaction at this stage is often cautious until I (artist) start to engage with the visitors and encourage them to try all the controllers.

The most interesting part of the interaction is the conversations that are triggered by the artwork - the airbrush machine. Although the visitors are very keen to figure out the ways to control the machine, dialogue soon becomes the major part of the interaction in the participatory process. In this process, the human-to-machine interactions gradually transformed into human-to-human interaction. The conversation often extends from how to work with the machine to the discussion about the project concept, which leads to sharing of personal experiences and views of our



society. For instance, in my nearly one-hour conversation with another artist, we shared similar feelings about the conflict between our artistic desire and commercial demand in our practice. We find that although our subjects are very different, our realizations throughout our experience lead us to the same intersection to find the meaning of our work.

The airbrush machine in the exhibition can be seen as a medium of connection between participants (artist and visitors) in the process of interaction. It helps attract the interest of viewers and connect strangers by first building a primary interaction between human and machine, then triggering the unexpected conflict to shift the linear interaction between viewers and artwork to conversation and dialogue. The function of the airbrush machine in this participatory process is to generate what Bourriaud called “encounters” in the gallery and providing participants the opportunities to connect. In other words, the machine stimulates human connections through interaction in which conflict is brought into discussion in relation to our everyday experiences. The painting that is generated through the participatory process, signifies a collective trace of struggles and conflict between individuals and collective purpose in the participation process.

I also find my role as an artist was quite performative in the exhibition. At the beginning of the exhibition, I was very nervous about the possible technical issues involved in the airbrush system, even though the exhibition is intended to bring failures and conflict. I was more nervous dealing with technical glitches and explaining failure is a part of this exhibition. To my surprise, the visitors are quite open to discussing the issues and often offer help. One visitor offered to help me fix the loose wire on a motor. At another time, I engaged in a conversation about technology with another visitor between the walls as I was fixing the machine inside. Amongst the machine and other participants, I find myself becoming a part of the artwork that bridges

between the inside and outside the walls with everyday conversations in the realm of the gallery.

Interestingly, conflict caused by incompatibility and technical issues of the airbrush machine became a connection that triggered interactions and linked my experiences with other participants. My presence in the exhibition takes on multiple roles in engaging with different situations and different visitors. This experience is very similar to my everyday endeavor of running my studio business where I frequently shift between different modes in order to work on multiple tasks. From a maker and representative of my artwork to a troubleshooting technician, my roles in the exhibition were fluid and performative. My actions of crawling in and out the enclosed walls often became a performance in the show to provoke participants to interpret the meaning of the conflict between the walls.

After a couple of days in the exhibition, my attitude toward dealing with unexpected situations became very natural, my performativity becoming habitual participation with conflict and issues. The exhibition provides a stage for me to perform as an artist and actor, giving me the opportunity to become a part of the artwork and affect other participants' actions. I found my performance in the exhibition became more and more realistic as my everyday practice, and it helped other participants be more relaxed and active in interacting with the machine. The conflict and challenges in dealing with the machine during the interaction also reduced the pressure of discussing sensitive issues in the conversations. In this case, the human-machine interactions between different participants gradually evolved into the humanistic connection in relation building.

The exhibition has been a wonderful experience in this thesis research. It not only provided an opportunity to show my work but it gave me a stage to perform as an artist and participate in

social dialogue and interactions. The findings in the show have further improved my understanding of participatory art theories in connection with interactive art practice. I find that galleries, artists, artwork and participants are all part of a dynamic and interactive social system. We are all connected and participate in the system in multiple ways. Beyond the enclosed walls that separate art and everyday life, it is the human connection that eases the barriers and isolation in our social and cultural spaces. By opening our participation to conflict, incompatibilities and glitches, we are exposed to more realistic and candor ways of communication and interaction, perhaps in this way, we can also imagine more possibilities to co-inhabit with the imperfect world and each other.

# Conclusion

From the modernist belief in disciplinary excellence and technical perfection to the postmodern embrace of diversity and multiplicity, this thesis investigated the shift of airbrush practice from avant-garde to commercial art, and to a niche practice in everyday life. It led to an experiment of transforming airbrush practice to a relational and interactive art form. This shift from aesthetics to social relations in airbrush practices is informed by theoretical discussions from relational aesthetics, antagonism and the agonist approach in radical democracy. It is an inquiry of how a disciplinary practice could take an active role to engage with our contemporary world through interactive art forms. The emphasis of conflicts in this research-creation does not intend to create solutions to our social issues, but to stimulate social participation with a sense of activism.

In understanding participatory art and its implication of social democracy, this thesis recognizes that conflict, incompatibility and failure are the necessary components that push social participation in various forms including confrontation, negotiation, collaboration, and mediation. More often, social participation requires dialectic exchange and understanding in both collaborative and adversarial ways. In this light, both relational aesthetics and antagonism are the relevant components in understanding the agonistic model in radical democracy. That is to say, the liberal and radical tendencies in everyday politics are the necessary components in the pursuit of seamless social dynamics. Therefore, this research emphasizes the components of *process* rather than the result as a theoretical exploration in the form of participatory and interactive art. As much as the social world is a dynamic and unpredictable system, I envision artmaking as a democratic social participation, where conflicts, failures and imperfections are in the mix of generating the dynamic *process* of *seamlessness*. The social and cultural meaning of

*seamlessness* needs to be constantly redefined through our inquiries and understanding of democracy.

Social dynamics and vibrant democracy depend on the liveliness of participants and their active and fierce debate on theories, ideas and methods collectively. Democracy is not a singular definition. It is fluid, multiple and subjective where conflict and failure is a part of the process toward temporary consensus. This research is a small part of the exploration to understanding the profound meaning of participation in social democracy. It takes a disciplinary starting point from a single commercial artist's practice and engages with contemporary art theories and the discussion of democracy. It is the small act of stepping out of the enclosed studio walls to embrace social spaces. The work of this research-creation not only means to challenge the gallery's authority, but also the inner agency of the artist himself. As an academic research project and a journey of searching for inspiration and knowledge in multidisciplinary art practice, it is a reflection of the artist's desire between freedom and constraints.

# Appendices

## The History of Airbrush Development

Airbrush had been a popular tool for art and design for more than a century before being replaced by digital technology. Since the early 20th century, airbrush techniques have been applied in many creative fields such as fine art, illustration, graphic design, architecture, industrial design, and fashion. The mechanical advantages of spraying seamless colour gradients and flat colors makes the airbrush an ideal tool for artistic rendering and production. It was widely used in the mid 20th century in many creative industries and everyday applications until digital tools replaced its function and aesthetics for more productivity and system controllability. Thus, airbrush has transformed into nostalgia associated with the pre-digital age and POP culture. Although the history of airbrushing was rarely studied in mainstream art and design history due to its technical nature and its subordinate position in art production, the development of airbrush is arguably an important clue to reflect how artistic practice is shaped by technology. More importantly, studying the history of airbrushing can exemplify how technological changes affect our understanding of cultures, society, and the world.

The earliest air spray device patent known for retouching and coloring photographs was dated 19 September 1876 and was introduced by Frank E. Stanley as “an improvement in atomizers” (Soltan, 2015). In 1879, a jeweler named Abner Peeler from Iowa invented the first airbrush called “The Paint Dealer,” which he patented on April 25, 1882, subsequently selling the patent to Charles & Liberty Walkup. In 1883, the Walkup brothers founded the Rockford Airbrush Company to make the first airbrush and present it to the world market. (Aerografos. n.d.) Charles Burdick patented the first atomizing’ type airbrush In 1892, which is similar to the modern airbrush that mixed paint and air inside the airbrush and sprayed it out by compressed

air for a much better paint mixture. In 1893, Burdick moved to London, England, and established the Fountain Brush Company to manufacture the “Aerograph” airbrush brand. (Merlin, n.d.)

The early development of airbrushes changed photo retouching forever. The continuous improvement of cameras in the late 1800s demanded more ability for capturing reality with clear images. Airbrush, as a part of the post-production process, had expanded the ability of cameras and gave photographers the ability to enhance the quality of the photos for capturing and altering images. On the other hand, photography as a symbol of truth and reality has been fundamentally challenged by the ability of airbrushes in image alternation. For example, propaganda photographers often utilized airbrushing as a way to remove "unfavorable" people from official photographs during wars.

In the United States, Chicago was a hot spot for airbrush development and manufacturing. Thayer & Chandler(T&C) began manufacturing the internal mix airbrush with an agreement with Budick in 1891. In 1896 Olaus C. World refined the internal mix airbrush for T&C, making the basic configuration of the modern airbrush. Jens A. Paasche, an ex-employee of World and Thayer & Chandler, founded the Paasche Airbrush Company in 1904 and is still operating today in Chicago, Illinois. The famous Paasche VL airbrush is still one of the most recognizable classic airbrushes in the market. Badger Airbrush Co is another well-known manufacturer operating today since 1963. Thayer & Chandlers was bought by Badger in 2000. (Merlin, n.d.)

The rise of airbrush development and manufacturing marked the increasing demand for airbrush usage in both commercial and everyday applications, especially during the 1950s to late 1980s. In both Europe and North America, consumerism, advertising, and popular culture provided opportunities for illustrators, photographers, designers, and artists to use airbrushes for producing and manipulating artworks. Airbrushes were expanded to many types with the quality to fulfill different needs from wider spray patterns to precise detail rendering. Some hardware

tool manufacturers that served the war had shifted production to quality airbrushes after WWII, such as the Harder & Steenbeck company in Germany that specialized in producing the high-end Infinity airbrush brand.(Harder & Steenbeck, n.d.) The quality of airbrushes was determined by the precision of the machinery and technology used by its manufacture and nation, and they were often competing for the best quality for their reputations.

Japan is another world leader today for making quality airbrushes such as Anest Iwata airbrush. Established in 1926 by the Iwata brothers, the company joined the international stage between 1961-1981 and expanded its national sales network, exporting airbrushes to over 20 countries. (Anest Iwata, n.d.) The variety and the quality of Iwata airbrushes have earned its Made-in-Japan reputation as a premium product for the industry. Today, Iwata is considered one of the most reputable airbrush brands and the “must-have” airbrush for professional airbrush artists. Interestingly, the competition between airbrush manufacturing also demonstrated the shift of economic and technological power between the nations.

Since the early 2000s, airbrushes made in China have become very competitive in the market, which brought much competition to the established airbrush brands. The competition made airbrushes much more affordable for everyday DIYers to learn and practice airbrushing. Moreover, the low-cost airbrushes enabled the revival of airbrush practice with the help of the internet, social media, and Youtube DIY videos. More amateur users started to use airbrushes for more individual-based art and design customization, which extended the popularity of airbrushes from mainstream to more sub-cultural aesthetics.

The development of airbrushes is not only the mechanical development of making spray tools but a synthesis of technology and creativity for producing and manipulating reality in visual culture. It is a combination of human desire in pursuing perfection with its belief in technology. Airbrush as a symbolic art tool of the 20th century has its iconic meaning in both artistic



development and technological advancement, which reflects the relationship between art production and market economy, technology to profitability, and individual value to system controllability. Moreover, as airbrush practice has been disappearing from mainstream art and design production, a more democratized shift of artistic culture occurs in everyday application, where airbrush is used for creating individual expression and human interactivities.

Airbrushing as a creative tool in the development of art and design demonstrated the human desire in capturing realities and pursuing perfection with technology. Even since the appearance of photography, the meaning of reality has been challenged by the mechanical ability of cameras to capture reality. To help mediate the quality of early photographs for rendering images as close to real life, airbrushing first appeared as a technological advancement to improve the quality of photographs. The ability to create sharp contrast as well as seamless blending soon evolved into a diversity of techniques and styles in image rendering manipulation and airbrushing thus expanding from a photo retouching tool to a creative tool in fine art, painting, illustration, advertising, film, and other creative disciplines. Typically with its advantage of rendering realistic images with photographic quality, airbrushes were not just used as a technical tool, but also a creative medium in image manipulation and compositing. It was regarded as one of the most advanced technologies in creative industries in the first half of the 20th century. In a way airbrushing has expanded artistic production from the traditional media to a mechanical process, in which a machine helps the artists to achieve a high quality of image-making in realism and photographic quality.

As a symbolic art tool of the 20th century, airbrush has an iconic meaning in both artistic development and technological advancement. The development of airbrush techniques has inherited the traditional techniques of oil painting. With adjustable air pressure, airbrushes can produce a similar soft and tender blending of colours and lighting effects as an oil painting rendering. However, unlike oil painting in which the blending was applied by smearing oil paint

with brushes or cloth, airbrush uses air to spray paint onto painting surfaces without direct contact. The ability of contactless painting in airbrushing allowed artists to use quick-drying mediums such as acrylics, watercolors and gouache, hence it provided more freedom and versatility for artists to develop new painting and rendering techniques. At the same time, new techniques from photo retouching such as masking and layering allowed artists to produce high precision rendering in realism and lighting effect. In this light, airbrushing as a technological and artistic development bridged the gap between traditional painting and photography, and it set a foundation to combine art and technology into the process of art and culture production.

A more democratized shift in airbrushing occurs as digital technology rapidly replaces the mechanical process in art and design production. Contemporary airbrushing takes a new turn in sub-culture aesthetics and the DIY process in which individuals apply airbrush techniques in customization and personalization of everyday objects. This type of approach to custom airbrushing was a revival of automobile airbrush and disco culture from the 1950s to the 1980s, where airbrush was embraced as an expression of individualism and freedom. As digital technology monopolized the creative industries at the beginning of the 21 century, the nostalgic aesthetics of airbrush and its versatile production process provide individuals the alternatives in spite of highly sophisticated digital tools. In such conditions, airbrushes were welcomed in the individual-based creative process and embraced pop cultures such as rock n' roll, punk, graffiti and hip-hop. More often, the contemporary airbrush styles embarked on the freehand styles with a more antagonistic attitude rather than the traditional commercial airbrushing that emphasizes clarity and perfection. In a way, it can be seen as a more class-based aesthetic movement that demands individual freedom and self-expression.

The history of airbrushing can provide a unique way aside from academic art history to look at art and culture. It is an important medium to fill in the gap between our academic knowledge and pop-cultural insights, in which the development of airbrushing reflects how technology changes

artistic production and society. More importantly, by investigating deeper into how the demand and function of airbrushing is changed in different times and spaces, we can gain more understanding of the changes in social and cultural structures.

## The Golden Age of Airbrush Art and Design

Airbrush Design was a popular technical and aesthetic development in art and design disciplines in the pre-digital age. It was widely applied in many diverse creative areas such as visual art, architecture, industrial design, advertising, illustration, graphic design, and craft-making processes. Because airbrush does not directly contact the painting surface and uses air spray to apply seamless paint, it allows artists to paint anything onto skin, textile, canvas, vehicle, etc. from flat to irregular shapes. The functionality and diversity made airbrushes an advantageous tool to work in art, design, and mass production.

The primary application of airbrush was photo retouching. In the 1920s to 1930s, European artists embraced this new tool and applied their Modernist ideals in the spray.

(Hathaway, 2008. p27) Influenced by Art Nouveau and Bauhaus philosophy led by Walter Gropius, Vasily Kandinsky, and other eminent artists, the early use of the airbrush proclaimed the interdisciplinary marriage of art, craft, and technology in Modern Avant-Garde art. Modern artists embrace the ability of airbrushes to create flat colours, smooth gradients, and transparent overlays.

Airbrush made significant headway in graphic application in the late 1930s to 1940s. After the great depression of 1929, advertisement companies and magazine publications needed to find new ways of producing advertisements to help manufacturers sell products. Airbrush art and illustration provided a refreshing look in developing images for new consumer desire and behavior. Graphic illustrators George Petty and Alberto Vargas' pin-up art for the American magazine *Esquire* not only made a reputation for the artists and the publication but also influenced the femme fatale nose art of WW2 fighter planes. This is where airbrush art appeared as a form of applied art throughout WW2, where the iconic female form was rendered

as a symbol of beauty and protection that provided patriotic courage for pilots, and portrayed the new spirit of the ideal, independent, and free American female image with optimism and hope during the war period. (The Arts in Focus, 2016)

Walt Disney began to implement the airbrush technique to create backgrounds that added an extra sense of realism to the animation films from the 1940s. For example, Tinker Bells' delicate Fairy wings were designed by using a stencil and applying the paint with an airbrush. (King, 2016)

As the world recovered from the Second World War, the rise of consumerism in the post-war period stimulated the need for consumer goods and advertising. Graphic design, film, entertainment, and automobile culture pushed airbrush art to arrive at the beginning of its golden age in the 1950s. Beginning in the 50s, commercial illustration in magazines and advertising started to bring in the lush, romantic, and nostalgic images before the war period. (Hathaway, 2008. p8). The airbrush Pin-up art of the Vargas Girl became a popular icon of the time. *Playboy* magazine was founded in 1953 by Hugh Hefner and was the symbol of the idealization of the American dream mythology, and airbrush was no doubt the tool for perfecting the dream body of pinup models. (Curtis, 1980. p18)

The rise of Pop art in the 1960s, and the proliferation of consumerist culture prompted a major return of airbrush work into commercial art, illustration, and fine art. Illustrators David Jason and Terry Pastor had glamorized airbrush work into a sardonic, plastic form of reality. (Curtis. 1980. p21) They used airbrushes in a manner that idealized the rendered product and created the illusion of perfection that resonated with the manufactured desires of consumerism. For advertisers, that meant the opportunity to perfect product images with a gloss of seamless makeup. In that sense, commercial airbrush art became an iconic style of consumerism and glamorous material culture.

The golden age of airbrush between the late 1940s to early 1980s has demonstrated the lifestyles and social changes after WW2. It was a time of material proliferation and technological development. The development of consumerism, material, and popular culture has raised airbrush to its stardom status and used its smooth aesthetics to mediate with the trauma of the past and imagine the desirable future. Airbrush as a creative tool for art and design was also a part of the social and cultural media that represented the epoch where technology and materialism became the ideology of everyday life.

## Digital Revolution and Its Impact on Airbrush Discipline

Rapid technological advancement has changed many industries and disciplines. On one hand, technology made things more affordable with an overwhelming abundance of material choices, but on the other hand, it accelerated the economic division and social alienation based on capital. Led by technological advancement, the creative industry works at a fast-changing pace, old actors are frequently replaced by the new. Since the 1990s, desktop publishing software, multimedia, and large format printing led by the digital revolution gradually replaced airbrushing in the profit-driven creative industry for higher productivity and more efficient production management.

As mentioned above, airbrush was a major photo retouching and image-making tool in many creative fields. Especially prominent in commercial art, many professional practitioners have enjoyed celebrity status by using airbrushes in their artwork for hyper-realistic styles and rendering, which exceed all other traditional reproduction formats. However, digital publishing has changed the mechanical process of image-making to digital production. Under the market demand and the explosion of digital imagery since the 1990s, many artists have been looking into digital art to find new ways of inspiration. Image manipulation processes are largely done with digital software. Digital tools such as Adobe products have expanded from a few software products to a large system that dominates many creative industries and set the standard for professional practice. Although new digital media have created a lot of new opportunities for artists to explore digital tools and expand art production from physical spaces to virtual reality, digital tools have increasingly become a dominant force that threatens the independence of artists: the demand for digital skills and hardware becomes a crucial request for emerging artists and practitioners. As a result, more and more artists are focusing on integrated digital technology and virtual reality rather than the tangible, independent mediums such as airbrush.

A pressing issue in airbrush practice today is its survivability in competition with digital media. Since airbrush is a craft-based art form that embraces individuality and technical excellence, it requires a long process of practice. In a capitalist system that adores productivity and efficiency, the airbrush process is not feasible to be integrated into a streamlined, interconnected, and manageable mass production system. As its mechanical ability of rendering is replaced by digital media, there is no more advantage for airbrushing in commercial art and design industries. The retreat of airbrushing from mainstream production becomes an inevitable outcome under technological evolution.

Nowadays, digital technology effectively supports economic profitability in the competitive design and applied art market. Economically, the purpose of applying digital technology is not driven by empowering individuals in social innovation and creative imagination, but by establishing systematic management that increases productivity and sustains material resources for prolonging the capitalistic economic system. In this matrix of technological advancement, individuals are not fundamentally empowered but further rendered as passive labourers and consumers of the capitalist system.

Many airbrush artists who adopted the changes worked tirelessly to incorporate digital tools in airbrush production. Although digital programs, CNC technology such as vinyl plotters, and laser cutters could help to generate more productivity and precision in airbrush work, it is hard to compete with the cost of digital production in automation. Digital production has conquered many technical advantages of airbrush work, such as large wall murals and advertising billboards that used to employ many skilled artists, but now can be done with large format printing by general laborers. In cultural production, airbrush work has been marginalized as a sub-product for advertising or a kitsch craft that does not belong to galleries and mainstream



social venues. Therefore, airbrushing has lost its pre-digital age celebrity status in creative industries and has withdrawn to everyday corners as a niche art in customization. Instead of appearing in large billboards and posters, airbrush work now appears more on community murals, street clothing, body art and temporary tattoos that embrace individuals and self-expression.

The shift in airbrush practice reflects a parallel to Charles Darwin's law of evolution. Although nature has nothing to do with the decline of airbrushing, the fundamental process of natural selection is similar to how capital and economy can change the existence of a discipline. The survival of airbrushing may not be possible if it continues to compete with the dominant force of technology. However, it may be mutated to a new ground, thriving in the interstice and boundaries for new possibilities. In this regard, it must rethink its submissive model of reproduction that is dependent on market demand. Instead of working hard to hold its ground, there are many uncovered territories in social and cultural spaces that require more exploration and cultivation. The challenges from technology to airbrushing is not a single case, but a reflection of our contemporary issues between material and cultural development, where art practice is facing an intersection of choices of how to use technology and the knowledge we have to mediate our existence with the dominant system.

## A Shift in Ideology: From the Pursuit of Perfection to Interactivity

The ability to apply perfectly smooth colours on different surfaces allowed modern artists to use airbrushes to achieve desired expressions with sublime quality since airbrushes produce seamless blending and lighting effects that are difficult to achieve with other mediums. By combining the mechanical advantages of airbrushing with other creative painting techniques, the early modern avant-garde artists were able to explore the illusion of perfection through transforming the aesthetic of clarity, elegance, and desire of excellence into modern art. Artists such as Man Ray and Lázló Moholy-Nagy applied airbrush techniques in their artworks to explore the configuration of humans and machines with respect to modern ideology that believes in technology and progress.

Influenced by Dada and Surrealist movements, Ray loved the airbrush for its ability to produce an industrial-like appearance with no brush strokes. Around 1919 he produced a series called “Aerographs” (Figure 1.) in which he used hand-made stencils as well as household objects as stencils. (Midwest Airbrush Co. 2017). By using airbrushes, Man Ray abandoned conventional painting methods and applied airbrush techniques in his work to demonstrate his radical attitude in the anti-art movement. (Naumann & Stavitsky, 2003) Lázló Moholy-Nagy’s 1926 Spray Paint with Blue Disc (Figure 2.) could be seen as another early attempt of applying airbrush aesthetics to transmute technology into an exploration of Modern art. Evident in his painting, airbrush spray is used to explore the visual juxtaposition between soft, blurred backgrounds in contrast with sharp, flat geometric shapes. The exploration of the mechanical painting process demonstrated his approach of integrating modern aesthetics with technology and art.

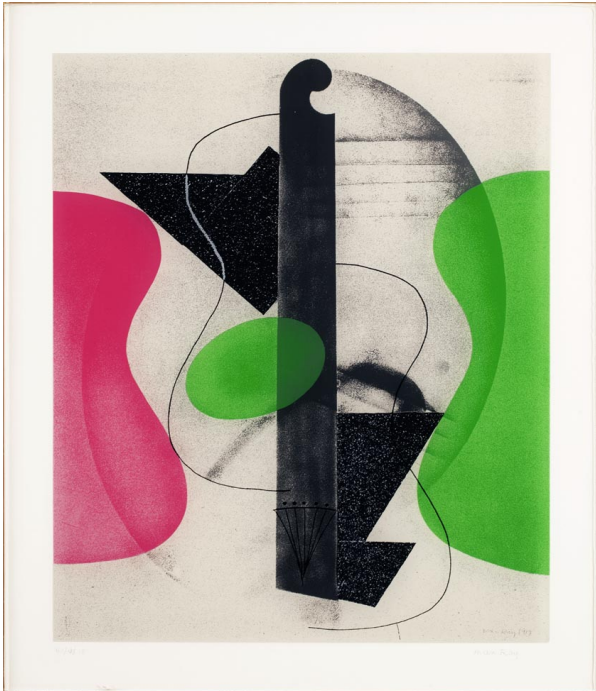


Figure 8. Man Ray, Aerography. 1919. Airbrush painting

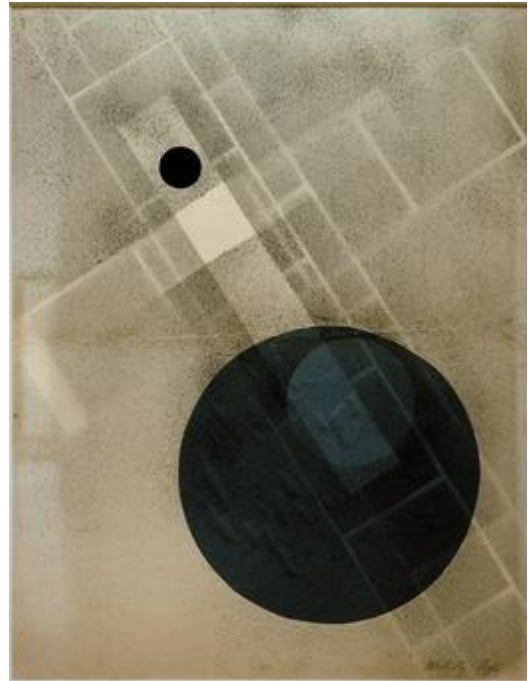


Figure 9. László Moholy-Nagy, Spray Paint with Blue Disc, 1928. collage; Paper collage with airbrush painting.

With the influence of modernism and its admiration for technology, airbrush was regarded as an advanced tool in combining technology and aesthetics to express desires and fantasy through visual language. The ability to render realistic images with photographic quality, allowed artists to explore the styles of realism and hyperrealism, transforming idealism into everyday life and beyond. Photorealism, as an anti-abstraction movement between 1950 to 1960s (Meisel & Chase, 2002, p14-15) explores the visual language that is objective and unbiased to viewers. Photorealism uses photography as references for creation and applies airbrush techniques to achieve highly realistic rendering to pursue perfection in disciplinary excellence. The sharp clean edges produced by airbrush with masking techniques, and the soft, blended color gradient gives artists the control over the paint medium to reproduce images with photographic quality.

Photorealists blend photography techniques with the classic realism of oil paintings into airbrushing. Instead of long drying oil paints, using airbrushes provide the advantage of using fast-drying mediums such as acrylics, gouaches, and watercolor to give more freedom and productivity for artists. Photorealist artists Richard Estes, Ralph Goings, Chuck Close, Charles Bell, Audrey Flack, Don Eddy, Robert Bechtle, Ron Kleemann, Richard McLean, John Salt, Ben Schonzeit, and Tom Blackwell. (Meisel, 1989) were considered as the first generation of photorealism. Many of them use the combination of brush and airbrush to produce hyperrealism paintings to pursue technical perfection and disciplinary excellence.

Hyperrealism, developed from the base of photorealism, pushes the technical rendering and scale to the extreme. As a result, it produces high-resolution images that have greater details than photographs and compose fantasies that are beyond reality. The style is often used to enhance photographs and produce larger-than-life artworks that attest to the power of images. The name of hyperrealism is associated with Baudrillard's term hyperreality, as the imagery that is often rendered beyond reality and into a fantasy of superficiality as "the simulation of something which never really existed." (Baudrillard & Glaser, 1994)

The rise of consumerism in the post-war period stimulated the need for consumer goods and advertising. Airbrush art and illustration provided a refreshing look in developing images for new consumer desire and behavior. The advantages of retouching and rendering seemingly perfect images in realism and hyperrealism provided commercialism the perfect tool to produce the illusion of perfection. As a signature of consumerist culture, airbrush images were regarded as the desire for perfection, artificial beauty, and a belief in happiness through material consumption. To practitioners, airbrushing was fantasized as a highly-skilled discipline and artists regarded hyperrealism as the highest standard of technical excellence.

The golden age of airbrush between the late 1940s to early 1980s demonstrated the lifestyles

and social changes after WW2; where material proliferation and technological development was celebrated as the pathway to a better future. Consumerism embraced seamless airbrush aesthetics and utilized its fantastic rendering to promote the illusion of a desirable society with freedom and happiness through material and popular culture. Airbrush as a creative tool for art and design was also a part of the social and cultural media that represented the epoch where technology and materialism became the modern ideology of everyday life.

In the sphere of cultural institutions, even with the rise of Pop art in the 1960s and the proliferation of consumerist culture popularized airbrush work in commercial art, airbrush art has been considered as a kitsch art form in the hierarchical structure of academic art. While abstraction and concept art occupied modern gallery spaces, airbrushing only existed as a technical apparatus for producing aesthetic rendering but never enjoyed the fame as it had in the commercial art field. The division of high and low taste in modern art made airbrush an outsider of the galleries. As Brian O'Doherty observed in *Inside the White Cube: The Ideology of the Gallery Space*, modern art constructed galleries "as rigorously as a medieval church with sealed windows, authoritarian white walls, and artificial lighting sources to keep the outside world separate from its territory." (O'Doherty, 1999. p15)

Airbrushing and its practitioners in this regard did not join the intellectual arena of the gallery but worked in a subordinate position that focused on technical and aesthetic production based on market demand. However, as technology advanced into the digital age, the modernist notion of quality and excellence was not only challenged by the digital tool, but also by the cultural turn in ideology.

Postmodernism challenged the notion of Modernist ideology through rejection of universal values and seeking plurality in visual expression and representation. Unleashed by ideological constraint, postmodernists were interested to work in scattered fragments of events, breaks,

and individual aesthetics to seek creative autonomy and diverse ways to negotiate with hegemonic domination (capitalism, authoritarian and political powers). Artists often focus on the experience in the mix of the past, present, and future. Subculture aesthetics such as street art and graffiti were more appreciated as alternative expressions disrupting the formalist approach in modern ideology.

Under the influence of postmodernism, airbrushing shifted the practices from mainstream commercial field to subculture-based customization and specialization since the late 1990s. The cultural shift from modernism to postmodernism provided more freedom to airbrush practitioners in seeking new styles and individual expressions. The rapid changes of technology also pushed practitioners to promote subculture aesthetics and individual styles as niches in order to survive in the commercial art market. Nostalgic airbrush styles became a newly commodified aesthetic and experience in individual customization and specialty products, such as in skateboarding, fashion, and motorcycle industries, airbrush styles reemerged to link the 1980s aesthetics as a unified postmodern expression in the 21st century. (Kassaveti, 2019) Instead of pursuing disciplinary excellence, practitioners work in scattered cultural and social spaces to mediate between their artistic desires and economic constraints. To gain more popularity and market demand, more and more airbrush artists appear to work as performers in events and social media to demonstrate their talents in public.

However, the shift of ideology in cultural influences did not change the meaning of seamlessness in airbrush culture significance. The discourse of airbrushing still rests on the decorative surfaces and technical skills. The subordinate attitude to market demand and capital constraints is a critical issue in this art form as the desire for excellence has transformed into a diversified and exclusive commodification of material and experiences in airbrush practice, where the pursuit of perfection in airbrushing has shifted towards the commercialization of nostalgia and spectacles.

The critical issues in airbrushing indirectly reflect the tendency in postmodern art and culture in which a kind of flatness and lack of collectiveness appears to be the characteristic of the epoch. Cultural theorist Fredric Jameson observed in *Postmodern or The Cultural Logic of Late Capitalism* that postmodern aesthetics is also a political one as it eschews the fundamental issues of social conflicts. "Postmodernism is not the cultural dominant of a wholly new social order...but only the reflex and the concomitant of yet another systemic modification of capitalism itself." (Jameson, 1991 p.xii) In other words, the criticisms of postmodern culture are similar to the problems of seamlessly airbrushed surfaces in which a compromised, superficial attitude is taken in criticality.

The shift from Modernism ideology to Postmodernism influence did not change the subordinate position of airbrushing except the meaning of seamlessness has been transferred from aesthetics into commodified human experiences; Even contemporary art sometimes incorporates airbrush aesthetics and techniques into artwork, airbrushing is only a part of the supportive addition due to its interactive value and performativity for spectacles. The "magic of spray" to create seamlessness in airbrushing still resides on the surface, from a decorative facade to a spectacle of fantasy and experience. In a cultural sense, airbrush seamlessness is transformed to a new postmodern form, which is "the emergence of a new kind of flatness or depth-lessness, a new kind of superficiality..." (Jameson, 1991. p.9).

As an artist, I feel the appearance of flatness and depthlessness becomes the signature of seamlessness as the aesthetic expression of airbrushing, as well as our contemporary world where material comfort has neutralized our critical gazes in art and everyday life. The commodification of everyday experience from the material to experiences has rendered our criticality into passive consensus in social and cultural participation. As Nicholas Bourriaud noticed in the 1990s, the shift in the emphasis of art production from objects to human experiences (including the rise of performance and interactive art, expanded cinema, site-based

and installation art ) has completed the last stage of the transformation of the “Society of the Spectacle” in Guy Debord’s theory. (Bourriaud, 2002 p.9) The urgent issue in airbrushing, and perhaps in contemporary art is to reactivate our agency to look beyond the smooth surface of the seemingly harmonized world, looking deeper into glitches and conflict to find possibilities for investigating critical social issues.

The shift from the technical and aesthetic pursuit of perfection to niche commodification and human experience has demonstrated the cultural changes in airbrush practice. However, what is the cultural and social significance reflected from airbrushing, in relation to ideologies and everyday life, is an extended question to artists, researchers, and historians. The meaning of seamless in airbrushing requires more investigation under the facade of its surface, not only to inspire new practices but also to lead to finding artists’ agency to engage with the issues of our contemporary world.



## Culture Turn: DIY and Participatory Making Process.

The postmodern concept has formed the basis for many contemporary art and social theories, such as Gilles Deleuze and Félix Guattari's concept of the rhizome to social relations and connectivity, (Deleuze & Guattari, 1987) Judith Butler's concept in performativity in gender and sexuality, (Butler, 1988) and Roland Barthes' semiology (Barthes, 1972) through the analysis of a variety of sign systems. Postmodern theories have become an influential culture and discourse that reforms the latter half of the 20th century. Under postmodern discourses, the focus of art also shifted from aesthetics to process, relations, senses, and individual experiences.

As the culture shifted from Modernism to the Postmodern atmosphere, participatory theory and practice emerged from the 1960s as the social experiment in East Europe has influenced community-based and bottom-up approaches in art and design. The fundamental principle of the participatory methodology is based on the democratic process that opens up decision-maker authorities to collective and collaborative efforts. Roland Barthes' 1968 text *The Death of the Author* (Newton, 1997) could be considered as one of the key influences in participatory theories. Although the text was primarily concerned with linguistics, the concept of bringing readers into the reconstruction of meaning was influential to participatory practices.

The early participatory practices existed as community networking, public projects, and interest groups. The desire was to produce social inclusion that enables individuals to be the collective members of the society where sharing experience and knowledge are the key elements to bring people together. The popular Do-It-Yourself (DIY) culture since the 1950s inherently adopted the participatory methods, especially in the spirit of self-efficiency as the reaction to mass-production and specialization that is dominated by modern technology. Although individual

needs are the primary inspiration for DIYers, the participatory methods of sharing and exchanging knowledge are well utilized and promoted in communities-based collaborations.

The development of the internet has further pushed the participatory concept into user-as-producer in DIY culture. Digital platforms such as Youtube, Skillshare provide more virtual spaces for individuals to participate in content producing, sharing, and making. The internet has expanded communities from local to the general public and given the opportunities to expand the DIY culture into everyday practice, in which a non-hierarchical structure has been formed in social and technical spaces. It is also important to note that DIY culture not only appears in maker communities but is also a shift of attitude from passive consumers to active producers which links participatory practice towards social changes.

The major change in the airbrushing industry is the shift from institutional-based practice to everyday customization and DIY communities. Since digital media has largely replaced airbrushing in commercial advertising, illustration, and other creative industries, airbrush became a niche specialization to fill the gaps between individual customization and mass production, sometimes to be used as a touch-up tool to cover the defect in production. Ironically, the technical seamlessness of airbrushing has become a filler element to other media, working in scattered space to mediate the glitches in technical or aesthetic defects. However, despite becoming an obsolete medium in the mainstream, airbrushing has adopted individual-based everyday applications in small-scale operations and survived as niche specializations. With more exposure via the internet, the revival of airbrush styles and DIY applications has become more popular in the last two decades. Moreover, as the cost of equipment has drastically reduced due to the international competition of manufacturers and online shopping platforms, airbrushing has gained popularity in DIY making, individual customization, and personalization. In spite of the profit-driven digital monopolization, DIY airbrushing was used as a way to acquire

user autonomy and individuality through the DIY process and self-expression against gradually more complicated digital tools.

Although community-based local airbrush groups are not popular, online communities of airbrush enthusiasts have been thriving, exemplified by the massive amount of Youtube airbrush videos in a wide range of applications. Airbrush experts in this regard provide the pivotal contribution to share airbrush techniques, tricks, and tips that were otherwise secrets behind professional studio production. More and more airbrush users became experts through “self-taught” and skill sharing. Despite art institutions and mainstream industries’ bias to digital media and production, airbrushing was embraced by individuals and expanded to diverse styles and expressions. The technical and aesthetic meaning of seamlessness, in this aspect, has become more inclusive to technical, cultural, and social diversity, where everyone becomes the producer and maker of the airbrushing industry. The pursuit of perfection in airbrushing has expanded from individual quests to a collective effort of participation and sharing in everyday life.

Individual and collective are the main components in the construction of the participatory process where freedom and limitation are considered in forming the structure. In many cases, freedom and limitation are embedded in the interactivity within the participation, where individual interests align with the collective purpose of the communities. The degree of limitation affects the individuals’ desire for participation. Such as in airbrush communities, the limitation could be technical as well as social, it can appear as the difficulty level of learning a technique, the access to certain material, a lack of clarification and facilitation from experts or taboo of certain expression. Individual freedom, on the other hand, is not only determined by participants’ ability to make choices, but also by the condition of cohabiting in a diverse cultural and social background of the participants. The critical point is how much freedom is appropriate in relation to respecting individual aesthetics and cultural differences in the structure of the community.

That is to say, freedom must be incorporated with limitations to provide an effective base for prolonging community-based participation.

Compared to the traditional model of airbrush practice, the participatory approach and DIY culture have provided alternatives to the airbrush discipline by engaging in a democratic process, where social values become more important than aesthetic and technical emphasis. Different from traditional hierarchical structures, participatory and DIY processes focus on exchange and sharing through interactions and encounters where authority is distributed through ethics and relations. Unlike the physical limitation in forming the participatory structure, the relational aspect of the participation is much more complex as it does not always turn into consensus or agreements. Although the formation of communities may appear as seamless as the smooth airbrush rendering, imperfection and incompatibilities are an inherent part of the reality beneath the illusion of seamlessness. How to redefine the meaning of seamlessness in the context of social participation and inclusiveness, is not only a struggle in airbrush practice but also a much deeper debate in the understanding of community and democracy.

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