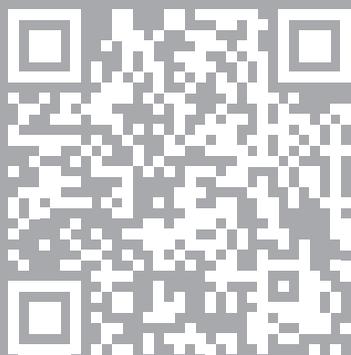
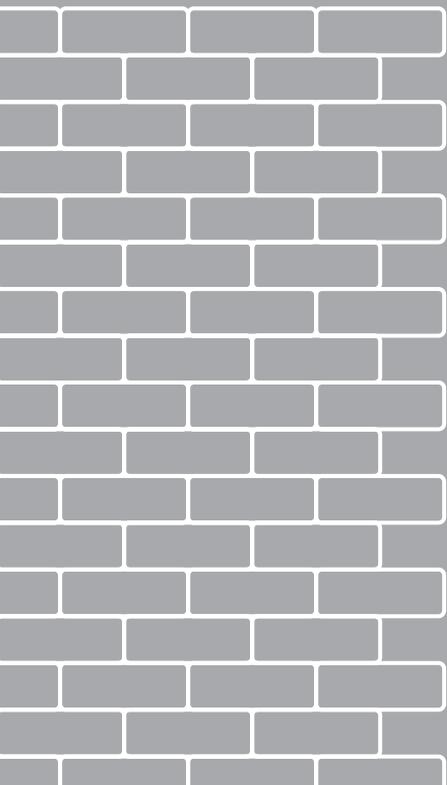




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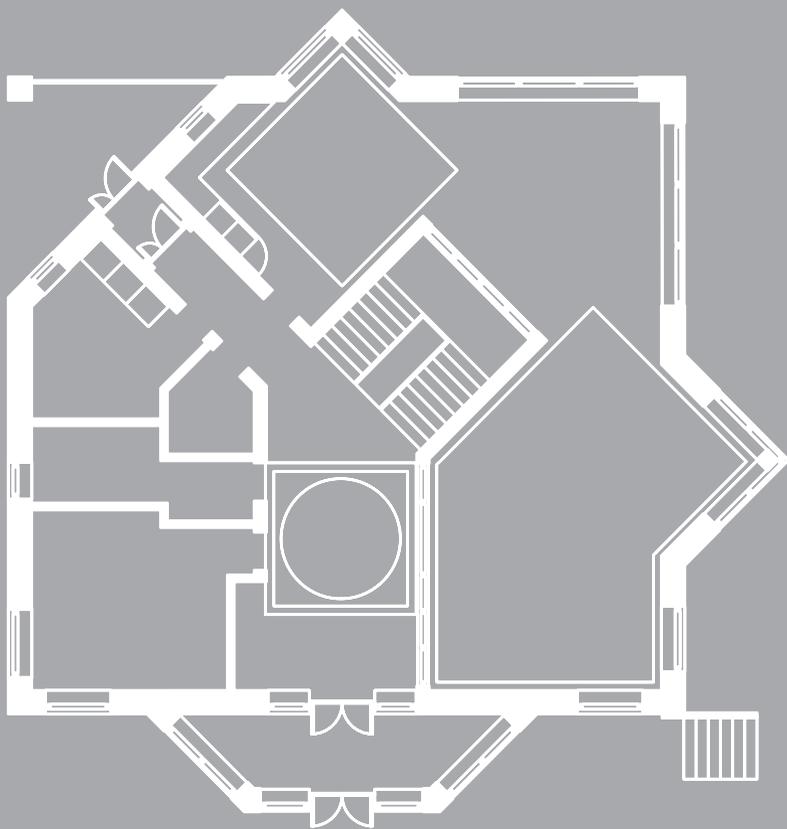
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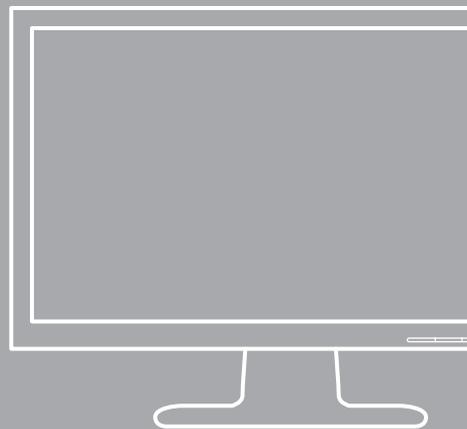
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EDITORS **ÖZDEN ŞAHİN**, **JONATHAN MUNRO** AND **CATHERINE M. WEIR**

This LEA publication has a simple goal: surveying the current trends in augmented reality artistic interventions. There is no other substantive academic collection currently available, and it is with a certain pride that LEA presents this volume which provides a snapshot of current trends as well as a moment of reflection on the future of AR interventions.



NOT THERE



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LEONARDO ELECTRONIC ALMANAC, VOLUME 19 ISSUE 1

Not Here Not There

VOLUME EDITORS

LANFRANCO ACETI AND RICHARD RINEHART

EDITORS

ÖZDEN ŞAHİN, JONATHAN MUNRO AND CATHERINE M. WEIR

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Not Here, Not There: An Analysis Of An International Collaboration To Survey Augmented Reality Art

Every published volume has a reason, a history, a conceptual underpinning as well as an aim that ultimately the editor or editors wish to achieve. There is also something else in the creation of a volume; that is the larger goal shared by the community of authors, artists and critics that take part in it.

This volume of LEA titled *Not Here, Not There* had a simple goal: surveying the current trends in augmented reality artistic interventions. There is no other substantive academic collection currently available, and it is with a certain pride that both, Richard Rinehart and myself, look at this endeavor. Collecting papers and images, answers to interviews as well as images and artists' statements and putting it all together is perhaps a small milestone; nevertheless I believe that this will be a seminal collection which will showcase the trends and dangers that augmented reality as an art form faces in the second decade of the XXIst century.

As editor, I did not want to shy away from more critical essays and opinion pieces, in order to create a documentation that reflects the status of the current thinking. That these different tendencies may or may not be proved right in the future is not the reason for the collection, instead what I believe is important and relevant is to create a historical snapshot by focusing on the artists and authors developing artistic practices and writing on augmented reality. For this reason, Richard and I posed to the contributors a series of questions that in the variegated responses of the artists and authors will evidence and stress similari-

ties and differences, contradictions and behavioral approaches. The interviews add a further layer of documentation which, linked to the artists' statements, provides an overall understanding of the hopes for this new artistic playground or new media extension. What I personally wanted to give relevance to in this volume is the artistic creative process. I also wanted to evidence the challenges faced by the artists in creating artworks and attempting to develop new thinking and innovative aesthetic approaches.

The whole volume started from a conversation that I had with Tamiko Thiel – that was recorded in Istanbul at Kasa Gallery and that led to a curatorial collaboration with Richard. The first exhibition *Not Here* at the Samek Art Gallery, curated by Richard Reinhart, was juxtaposed to a response from Kasa Gallery with the exhibition *Not There*, in Istanbul. The conversations between Richard and myself produced this final volume – *Not Here, Not There* – which we both envisaged as a collection of authored papers, artists' statements, artworks, documentation and answers to some of the questions that we had as curators. This is the reason why we kept the same questions for all of the interviews – in order to create the basis for a comparative analysis of different aesthetics, approaches and processes of the artists that work in augmented reality.

When creating the conceptual structures for this collection my main personal goal was to develop a link – or better to create the basis for a link – between ear-

lier artistic interventions in the 1960s and the current artistic interventions of artists that use augmented reality.

My historical artist of reference was Yayoi Kusama and the piece that she realized for the Venice Biennial in 1966 titled *Narcissus Garden*. The artwork was a happening and intervention at the Venice Biennial; Kusama was obliged to stop selling her work by the biennial's organizers for 'selling art too cheaply.'

"In 1966 [...] she went uninvited to the Venice Biennale. There, dressed in a golden kimono, she filled the lawn outside the Italian pavilion with 1,500 mirrored balls, which she offered for sale for 1,200 lire apiece. The authorities ordered her to stop, deeming it unacceptable to 'sell art like hot dogs or ice cream cones.'"¹

The conceptualization and interpretation of this gesture by critics and art historians is that of a guerrilla action that challenged the commercialization of the art system and that involved the audience in a process that revealed the complicit nature and behaviors of the viewers as well as use controversy and publicity as an integral part of the artistic practice.

Kusama's artistic legacy can perhaps be resumed in these four aspects: a) engagement with audience's behaviors, b) issues of art economy and commercialization, c) rogue interventions in public spaces and d) publicity and notoriety.

These are four elements that characterize the work practices and artistic approaches – in a variety of combinations and levels of importance – of contem-

1. David Pilling, "The World According to Yayoi Kusama," *The Financial Times*, January 20, 2012, <http://www.ft.com/cms/s/2/52ab168a-4188-11e1-8c33-00144feab49a.html#axzz1kDck8Rzm> (accessed March 1, 2013).

porary artists that use augmented reality as a medium. Here, is not perhaps the place to focus on the role of 'publicity' in art history and artistic practices, but a few words have to be spent in order to explain that publicity for AR artworks is not solely a way for the artist to gain notoriety, but an integral part of the artwork, which in order to come into existence and generate interactions and engagements with the public has to be communicated to the largest possible audience.

"By then, Kusama was widely assumed to be a publicity hound, who used performance mainly as a way of gaining media exposure."² The publicity obsession, or the accusation of being a 'publicity hound' could be easily moved to the contemporary group of artists that use augmented reality. Their invasions of spaces, juxtapositions, infringements could be defined as nothing more than publicity stunts that have little to do with art. These accusations would not be just irrelevant but biased – since – as in the case of Sander Veenhof's analysis in this collection – the linkage between the existence of the artwork as an invisible presence and its physical manifestation and engagement with the audience can only happen through knowledge, through the audience's awareness of the existence of the art piece itself that in order to achieve its impact as an artwork necessitates to be publicized.

Even if, I do not necessarily agree with the idea of a 'necessary manifestation' and audience's knowledge of the artwork – I believe that an artistic practice that is unknown is equally valid – I can nevertheless understand the process, function and relations that have to be established in order to develop a form of engagement and interaction between the AR artwork and the audience. To condemn the artists who seek publicity

2. Isabelle Loring Wallace and Jennie Hirsh, *Contemporary Art & Classical Myth* (Farnham; Burlington, VT: Ashgate, 2011), 94.

in order to gather audiences to make the artworks come alive is perhaps a shortsighted approach that does not take into consideration the audience's necessity of knowing that interaction is possible in order for that interaction to take place.

What perhaps should be analyzed in different terms is the evolution of art in the second part of the XXth century, as an activity that is no longer and can no longer be rescinded from publicity, since audience engagement requires audience attendance and attendance can be obtained only through communication / publicity. The existence of the artwork – in particular of the successful AR artwork – is strictly measured in numbers: numbers of visitors, numbers of interviews, numbers of news items, numbers of talks, numbers of interactions, numbers of clicks, and, perhaps in a not too distant future, numbers of coins gained. The issue of being a 'publicity hound' is not a problem that applies to artists alone, from Andy Warhol to Damien Hirst from Banksy to Maurizio Cattelan, it is also a method of evaluation that affects art institutions and museums alike. The accusation moved to AR artists of being media whores – is perhaps contradictory when arriving from institutional art forms, as well as galleries and museums that have celebrated publicity as an element of the performative character of both artists and artworks and an essential element instrumental to the institutions' very survival.

The publicity stunts of the augmented reality interventions today are nothing more than an acquired methodology borrowed from the second part of the XXth century. This is a stable methodology that has already been widely implemented by public and private art institutions in order to promote themselves and their artists.

Publicity and community building have become an artistic methodology that AR artists are playing with by

making use of their better knowledge of the AR media. Nevertheless, this is knowledge born out of necessity and scarcity of means, and at times appears to be more effective than the institutional messages arriving from well-established art organizations. I should also add that publicity is functional in AR interventions to the construction of a community – a community of aficionados, similar to the community of 'nudists' that follows Spencer Tunic for his art events / human installation.

I think what is important to remember in the analysis of the effectiveness both in aesthetic and participatory terms of augmented reality artworks – is not their publicity element, not even their sheer numbers (which, by the way, are what has made these artworks successful) but their quality of disruption.

The ability to use – in Marshall McLuhan's terms – the medium as a message in order to impose content by-passing institutional control is the most exciting element of these artworks. It is certainly a victory that a group of artists – by using alternative methodological approaches to what are the structures of the capitalistic system, is able to enter into that very capitalistic system in order to become institutionalized and perhaps – in the near future – be able to make money in order to make art.

Much could be said about the artist's need of fitting within a capitalist system or the artist's moral obligation to reject the basic necessities to ensure an operational professional existence within contemporary capitalistic structures. This becomes, in my opinion, a question of personal ethics, artistic choices and existential social dramas. Let's not forget that the vast majority of artists – and AR artists in particular – do not have large sums and do not impinge upon national budgets as much as banks, financial institutions, militaries and corrupt politicians. They work for years

with small salaries, holding multiple jobs and making personal sacrifices; and the vast majority of them does not end up with golden parachutes or golden handshakes upon retirement nor causes billions of damage to society.

The current success of augmented reality interventions is due in small part to the nature of the medium. Museums and galleries are always on the lookout for 'cheap' and efficient systems that deliver art engagement, numbers to satisfy the donors and the national institutions that support them, artworks that deliver visibility for the gallery and the museum, all of it without requiring large production budgets. Forgetting that art is also about business, that curating is also about managing money, it means to gloss over an important element – if not the major element – that an artist has to face in order to deliver a vision.

Augmented reality artworks bypass these financial challenges, like daguerreotypes did by delivering a cheaper form of portraiture than oil painting in the first part of the XIXth century, or like video did in the 1970s and like digital screens and projectors have done in the 1990s until now, offering cheaper systems to display moving as well as static images. AR in this sense has a further advantage from the point of view of the gallery – the gallery has no longer a need to purchase hardware because audiences bring their own hardware: their mobile phones.

The materiality of the medium, its technological revolutionary value, in the case of early augmented reality artworks plays a pivotal role in order to understand its success. It is ubiquitous, can be replicated everywhere in the world, can be installed with minimal hassle and can exist, independently from the audience, institutions and governmental permissions. Capital costs for AR installations are minimal, in the order of a few

hundred dollars, and they lend themselves to collaborations based on global networks.

Problems though remain for the continued success of augmented reality interventions. Future challenges are in the materialization of the artworks for sale, to name an important one. Unfortunately, unless the relationship between collectors and the 'object' collected changes in favor of immaterial objects, the problem to overcome for artists that use augmented reality intervention is how and in what modalities to link the AR installations with the process of production of an object to be sold.

Personally I believe that there are enough precedents that AR artists could refer to, from Christo to Marina Abramovich, in order develop methods and frameworks to present AR artworks as collectable and sellable material objects. The artists' ability to do so, to move beyond the fractures and barriers of institutional vs. revolutionary, retaining the edge of their aesthetics and artworks, is what will determine their future success.

These are the reasons why I believe that this collection of essays will prove to be a piece, perhaps a small piece, of future art history, and why in the end it was worth the effort.

Lanfranco Aceti

Editor in Chief, *Leonardo Electronic Almanac*
Director, Kasa Gallery



Site, Non-site, and Website

In the 1960's, artist Robert Smithson articulated the strategy of representation summarized by "site vs. non-site" whereby certain artworks were simultaneously abstract and representational and could be site-specific without being sited. A pile of rocks in a gallery is an "abstract" way to represent their site of origin. In the 1990's net.art re-de-materialized the art object and found new ways to suspend the artwork online between website and non-site. In the 21st century, new technologies suggest a reconsideration of the relationship between the virtual and the real. "Hardlinks" such as QR codes attempt to bind a virtual link to our physical environment.

Throughout the 1970's, institutional critique brought political awareness and social intervention to the site of the museum. In the 1980's and 90's, street artist such as Banksy went in the opposite direction, critiquing the museum by siting their art beyond its walls.

Sited art and intervention art meet in the art of the trespass. What is our current relationship to the sites we live in? What representational strategies are contemporary artists using to engage sites? How are sites politically activated? And how are new media framing our consideration of these questions? The contemporary art collective ManifestAR offers one answer,

"Whereas the public square was once the quintessential place to air grievances, display solidarity, express difference, celebrate similarity, remember, mourn, and reinforce shared values of right and wrong, it is no longer the only anchor for interactions in the public realm. That geography has been relocated to a novel terrain, one that encourages exploration of mobile location based monuments,

and virtual memorials. Moreover, public space is now truly open, as artworks can be placed anywhere in the world, without prior permission from government or private authorities – with profound implications for art in the public sphere and the discourse that surrounds it."

ManifestAR develops projects using Augmented Reality (AR), a new technology that – like photography before it – allows artists to consider questions like those above in new ways. Unlike Virtual Reality, Augmented Reality is the art of overlaying virtual content on top of physical reality. Using AR apps on smart phones, iPads, and other devices, viewers look at the real world around them through their phone's camera lens, while the app inserts additional images or 3D objects into the scene. For instance, in the work *Signs over Semiconductors* by Will Pappenheimer, a blue sky above a Silicon Valley company that is "in reality" empty contains messages from viewers in skywriting smoke when viewed through an AR-enabled Smartphone.

AR is being used to activate sites ranging from Occupy Wall Street to the art exhibition ManifestAR @ ZERO1 Biennial 2012 – presented by the Samek Art Gallery simultaneously at Bucknell University in Lewisburg, PA and at Silicon Valley in San Jose, CA. From these contemporary non-sites, and through the papers included in this special issue of LEA, artists ask you to reconsider the implications of the simple question *wayn* (where are you now?)

Richard Rinehart

Director, Samek Art Gallery, Bucknell University

Leonardo Electronic Almanac
Volume 19 Issue 1

5 EDITORIAL Lanfranco Aceti

9 INTRODUCTION Richard Rinehart



12 THE VARIABLE MUSEUM: OFF-TOPIC ART
+ Interview, Statement, Artwork
John Bell

20 TRANSLOCATED BOUNDARIES
+ Interview, Statement, Artwork
Jacob Garbe



44 IN BETWEEN: EXPERIENCING LIMINALITY
+ Interview, Statement, Artwork
Dragoş Gheorghiu & Livia Ştefan

62 HACKING: A NEW POLITICAL AND CULTURAL PRACTICE
Christina Grammatikopoulou



76 CONNECTICITY, AUGMENTED PERCEPTION OF THE CITY
+ Interview, Statement, Artwork
Salvatore Iaconesi & Oriana Persico



106 AUGMENTED RESISTANCE: THE POSSIBILITIES FOR AR AND DATA DRIVEN ART
+ Interview, Statement, Artwork
Conor McGarrigle

122 SITUATED SOUNDSCAPES: REDEFINING MEDIA ART AND THE URBAN EXPERIENCE
+ Interview, Statement, Artwork
Natasa Paterson & Fionnuala Conway



140 A NEW RELIC EMERGES: IMAGE AS SUBJECT TO OBJECT
+ Interview, Statement, Artwork
Rebecca Peel



158 RE-VISUALIZING AFGHANISTAN IN "WHAT IF IM THE BAD GUY": USING PALIMPSEST TO CREATE AN AR DOCUMENTARY
+ Interview, Statement, Artwork
Aaron A. Reed & Phoenix Toews

Translocated Boundaries

by

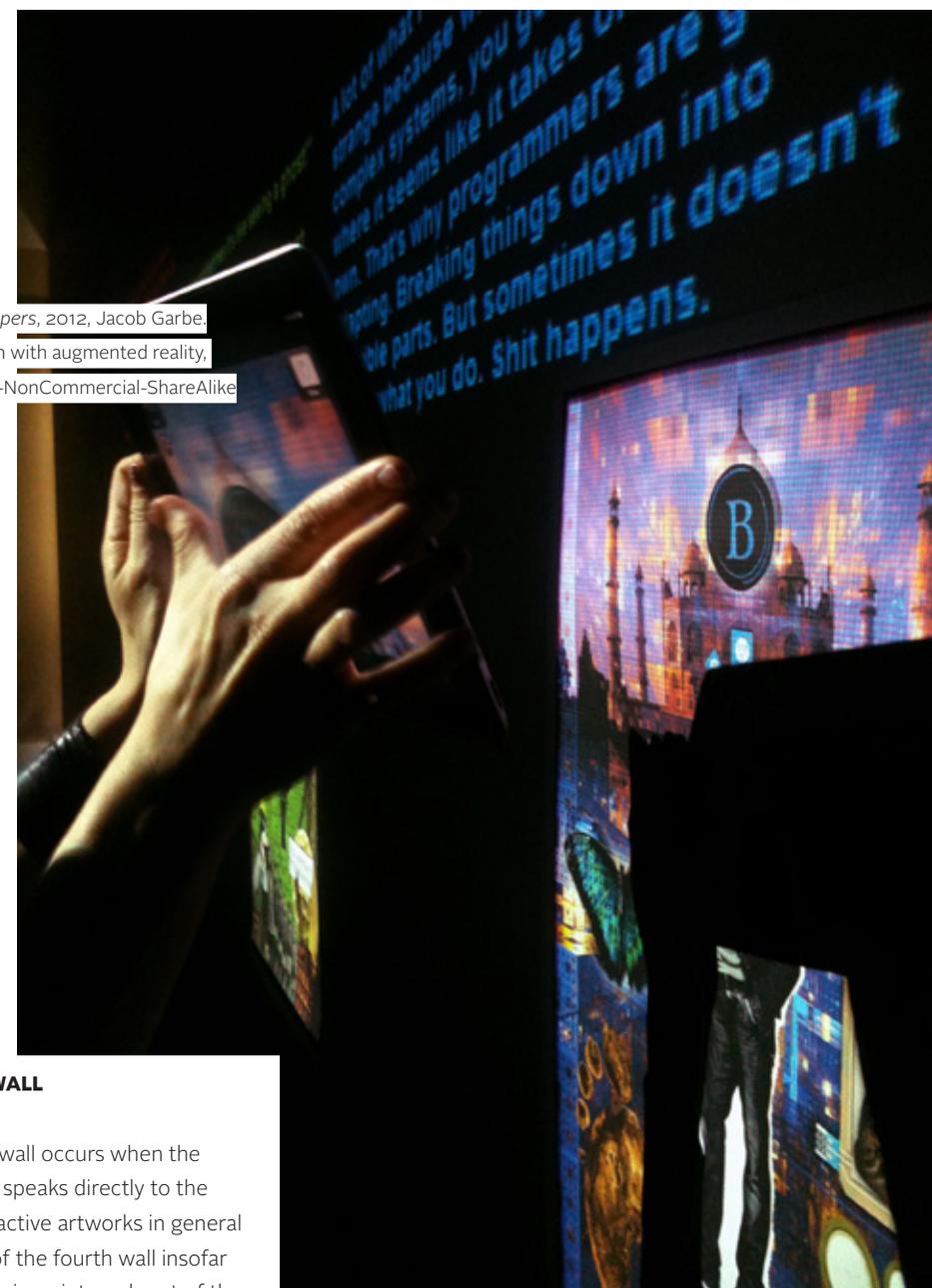
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The challenge of new media interactive artwork is becoming more and more familiar to the conversation of exhibition practice. While these works are radical in many ways, for the most part they still establish their interactivity within a statically delineated physical space: a gallery, an installation, or an area created through the formulation of specific environmental parameters. They break down the fourth wall of passive experience through interactivity, but still – for the most part – partake of traditional exhibition space, and leverage that to provide boundaries for acceptable behavior. In many cases, they are in active dialogue with that space, and are engaging, co-opting, or subverting those spaces and their accompanying expectations. However, they remain concerned with a specific physical location.

Augmented reality (AR) art, however, distinguishes itself through its particular mechanics of exhibition and performative re-contextualization. This allows the artist to translocate the borders and constraints of experience from physical to virtual, expressing the piece onto spaces in a way that is independent of physical constraint. This practice of anchoring virtual assets to the physical world allows artists to make use of mutability and replication, while engaging with issues of embodiment, performance, and presence. In this way AR pieces, such as *From Closed Rooms, Soft Whispers*, show themselves as dynamic both in content due to their performativity, and in a physical location of experience due to their mediation.

From Closed Rooms, Soft Whispers, 2012, Jacob Garbe.
Interactive projector installation with augmented reality,
Creative Commons Attribution-NonCommercial-ShareAlike



ENGAGING THE FOURTH WALL

Engagement of the fourth wall occurs when the observed piece changes or speaks directly to the audience. New media interactive artworks in general already violate our notion of the fourth wall insofar as the viewer's participation is an integral part of the performativity of the piece. Artworks for their part are concerned with perlocutionary acts, which is to say acts described from the vantage point of their effect on the viewer: scaring, angering, beguiling. Specifically, perlocutionary is also a useful term in describing the actions required from the viewers of the pieces of artwork – and the performances the pieces respond with – and how this process can create an emotional effect in the viewer. The perlocutionary qualities of certain new media pieces create a feedback loop of continual engagement, which is only broken when the partici-

part has exhausted the piece's ability to perform, or the engagement offered cannot compete with their diminished attention span. Dourish explored this in his investigation of 'engaged interaction.'

How is this different from experiencing a non-interactive piece of artwork? While a painting or sculpture may seem different to a viewer who steps closer or spends longer with the piece, the critical point is that the artwork asks nothing from them in terms of embodied action. All demands are perceptual, ones

they can comfortably respond to, from their position behind the passive fourth wall. In this method too one can consider a non-interactive work conceptually complete when sitting in a gallery space unobserved. Interactive works, however, have a critical component missing that robs them of their expressive voice when they are sitting unengaged within an exhibition space.

AR complicates this even further by adding intermediary devices into the interpretive and experiential mix. Augmented reality artworks provide a way in which the fourth wall of passive viewing is enriched, at the most basic level, by technology which is appended to the senses of the viewer. The 'performances' or 'texts' of the piece are first mediated through a device, usually a video feed computationally modified and then displayed. This can take the form of a computer connected to a gallery's display, or in the case of locationally diffuse works, the ever more ubiquitous smart phone.

The most passive level of interaction takes place purely on the level of the machine, which provides a virtual frame for interaction, with the viewer then moving or changing the view/focus of the machine, but not interacting with the primary components. The viewing device for the user becomes a digital prosthesis which allows them to 'sense' artwork in a variety of ways invisible to others. However, they do not actively take part in the piece, such that it effects change for other viewers. They are performative observers who can be affected by the piece, and even be receptive to it in a perlocutionary way, but when physical action or participation is demanded of them they will opt instead for a passive role.

There are many works of augmented reality which take advantage of the fact that most audience members are comfortable with having their perceptions challenged, but are less likely to engage with concepts

of interactivity being challenged in a performative way. One of the sub-genres of augmented artworks that take advantage of those proclivities are locative literature pieces, such as those authored by StoryTrek software.

In one such piece, entitled *Crisis 22*, viewers experience a story spatially, tied in a physical location to a street in Ottawa, Canada. Viewers use a mobile device as a prosthesis for the communication of narrative, and exhibit agency in the story through an exploratory framework. Retracing their steps reveals backstory, while heeling off into an alleyway provokes narrative digression. In this way the piece leverages augmented reality for an artistic experience that is closely tied to place yet whose borders of experience are not clearly defined to the participant. However, nothing more is being asked of the participant other than the exploration of physical space to yield narrative. They change nothing in the work for others through their interactions. They have agency only as far as their own experience and interpretation of the work goes – much like a viewer of a non-interactive work in a gallery. What makes *Crisis 22* interesting is its engaging use of space, which at once seems delineated, yet open to ambiguity.

Another good example is Camille Scherrer's *The Haunted Book*.⁹ Through the experience of this piece viewers see what amounts to short movies that correspond to the different pages of the narrative. It is a beguiling piece that provokes a whimsical state of interaction with the viewer – one that is focused on the aspect of hidden content revealed through the appropriate digital prosthesis. However, we see here again that while people interact with the book by turning the pages, they are not performatively engaged as co-producers of the piece. The singularity of its experience is mirrored in the singular experience of static artwork exhibited in a gallery or museum.

A more involved level of interaction occurs when the viewer participates in some mediated way with the objects which provide "hooks" or liminal intersection points between the realms of the digital and physical. These sorts of engaged interactions call for the artist to leverage predictive dramaturgical skills in order to craft a piece in which the performance resulting from it is both rich and communicative – a sort of "performative design."⁶ Artists who craft these sorts of interactive works must strike a fine balance between planning and crafting responses within the artwork to a normative set of interactions, whilst also leaving room enough that the participants feel they have space to explore and possess a sense of agency (whether that is co-opted / subverted or not) in their own experience. An example of such a work is the Blast Theory collective's *Uncle Roy All Around You*, which uses mobile devices and website interaction to stitch together an experience that feels custom-tailored to each person, dramatizing a city space.¹²

EXPERIENCE AS PERFORMANCE

Central to this performance, and intrinsic to the unbound physical locatively unique to certain forms of AR, is the concept of perceptual re-contextualization. For example, in works such as Manifest.AR's gallery interventions² or Phoenix Toews' sculptural app *Pyrite*,⁸ the artistic interface becomes invasive in its deployment. Participants are engaging the real world through a mediated context which dramatizes spaces that are otherwise mundane. Not only breaking down the 'fourth wall' in terms of active participation, it also eliminates the boundaries in which this art is experienced. *Pyrite* allows viewers to create and find persistent sculptures anywhere, turning the most mundane of locations into opportunities for artistic display. Manifest.AR's interventions allow visitors to their website the ability to submit art and have it virtually dis-

played in any number of galleries worldwide. Thus the performative approach that artists foster contextually redefines not just the conventional interactive spaces, but potentially any part of the real world.

It is tempting then to see the medium as one that is breaking down or eliminating the privileged space of the gallery in favor of more pervasive and revolutionary implementation. Arguably however, when considering AR, the blurring of lines for exhibition space is not so much the removal of the wall, but the translocation of it. Explanation or revelation of the experience's border parameters is always deferred, until the performative and perlocutionary components of the piece are exhausted. Only then do viewers, if they engage for an appropriate period of time, grasp the borders of what the piece can offer.

Even then the underlying architecture, the operational logic of the piece remains implicit, not explicit, to the viewer.¹⁰ There is a body of code, one could even argue language; that is just as valenced and proscriptive as the visual language of curation in a physical exhibition. Compiled programs can only be explored experientially, in a virtual manner. Thus, through the lens of software development, works which in terms of physical space seem limitless and inexhaustible are actually very clearly delineated. They have acceptable, supported forms of interaction (with all the affordances those entail) even if only visible to the artist. Indeed, there's much to be said about the parallels between gallery art installation – resulting from the configuration of elements in precise manners for an intended aesthetic effect – and art software installation – the arrangement of device physical states into precise configurations for an intended aesthetic functionality. What confuses the perception of AR borders is that it is a medium seeking (or in dialogue with) embodiment. It inscribes from the riot of virtual expressive possibilities a specific domain, touching the physical

world. And it asks of its audience that they engage these virtual elements in an embodied way.

PRIVATE INTERACTION, COLLABORATIVE PARTICIPATION

Espen Aarseth coined the term “ergodic literature” to refer to written works that require significant effort by the reader to decode in order to experience. ¹¹ I would argue AR too is especially ergodic in nature – requiring real work from the viewers (usually technical proficiency) that can mean some succeed and others fail in grasping its embodied rules, and thus exploring the piece to full expressivity. This challenge set before viewers gives rise to another layer of consideration when thinking about the performativity of AR pieces.

In non-interactive artworks, there is generally one level of engagement the audience participates in. The differing layers and contexts of analysis each person brings to a piece of artwork may differentiate them when they are placed in dialogue, but for the most part the experience is a uniform level of engagement, even if there are different times and styles of attention and engagement on that level. The varying valences of content can go privately unresolved while the only thing made public within the exhibition space is the piece of the artwork itself.

For viewers of participative interactive artwork, however, interaction can change the perception of the piece for other viewers. Those who come forward to impact the work through interaction become part of the display, and their ability to tease out the performative, perlocutionary subtleties of the work can open them to critique from other viewers, giving rise to performance anxiety. This segments viewers into groups based on their willingness to interact, their willingness to perform the piece. ¹² Thus, there's

an undeniably relational aesthetic element to these projects, especially since the mediation through a technological framing device demands – as a base requirement – perceptual performance from its audience. Holding the device just so, downloading this app, scanning that QR code, knowing to perform a specific sequence of actions, even outside a gallery setting, creates a Bourriaudian “state of encounter.” ¹³ While at an installation there's a sense of being part of a group, but even in one's home or outside a physical gallery, when accessing AR there's an element of being privy to secret knowledge, a hidden virtual world, that creates a sense of being “in the know.” There's a feeling of membership in a distinct group of people, accented by the very fact that AR viewers literally see the world differently than those unaware of the virtual content anchored around them.

How can one get out of the gallery without going completely virtual in the artwork? One of the quirks of much exhibited new media art, especially installation work, is its inherent difficulties to mechanically reproduce. However, certain forms of augmented reality can overcome this through composition of virtual assets overlaid on physical objects, which in themselves can be very straightforward, such as the collages in *From Closed Rooms, Soft Whispers*. ¹⁴ Thus, you can have an art print – easily reproduced – which acts as an anchor for an extremely complicated configuration of virtual objects, allowing freedom from the limitations of physical configuration of interactive work, yet retaining a vestige of physicality in that they can only be triggered by the art object. This opens up a further realm of inquiry for the blending of the digital and the real.

CASE STUDY

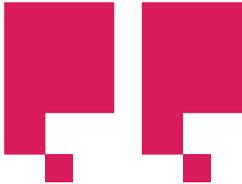
From Closed Rooms, Soft Whispers ¹¹ premiered at the Open Studio exhibition at the UC Santa Cruz Digital Arts Research Center in 2011, and featured physical collages used as interfaces through which viewers could activate the display of narrative. The initial context was collaborative, via cell phones and iPads which changed projections of text on the gallery's wall. However, prints of the collages could also be purchased by viewers. As an art object, they function in a traditional manner, static and straightforward, but their function as a marker, a hook for AR elements hosted on the artist's web server (a digital space under constant revision) allows the modification of their virtual components. This means the story elements, the virtual visual artifacts which must be accounted for when speaking of the piece as a whole, are dynamic and subject to change.

When *Whispers* is exhibited in a gallery with an installed projector, the piece is a collage of narrative fragments displayed on the space surrounding the collages. Passive viewers of the piece may have decidedly different experiences depending on the level of interaction the piece is currently experiencing in that

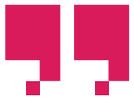
space. Lexias may vanish before they are read when another viewer triggers a different part of the story. However, prints displayed at home or in another area are interacted with on a solo level, allowing the viewer to experience the display of text with no one else to usurp interaction or judge them based on individual proficiency. Its ability to perform both in the gallery as a public collaboration of text and image, and privately as a less performative, deeper interactive piece, with artistic content provided from a singular source, make it multi-valent and dynamic on several levels.

Whispers can take place in locations all around the world, simultaneously in multiple settings, but the artist can change one aspect on the server and impact the experience of viewers and interactors in multiple venues. Museums, homes, offices, from the most formal of gallery space to the most informal. The text can be changed, the behaviors of its appearance and availability can be impacted, and the story and imagery presented can change over time.

Additionally, the piece's use of databased location awareness opens a host of tools to the artist in both



But how can one get out of the gallery without going completely virtual in the artwork?



tracking an audience, gauging the depth and breadth of interaction, and changing or modifying the virtual artwork tied to a specific instantiation of a physical object. In this way the artifact of the art print becomes more than just a static mechanical reproduction. It becomes a subscription, an open channel that can be dynamic, novel, and eminently re-configurable. The database capabilities, while raising clear issues of privacy, also mean the interaction with an artwork can become further grist for the mill in an extremely concrete fashion. Data-based works can be driven by previous interactions with other pieces, and thus the double gesture of presentation and reception, vision and re-vision, is made digitally possible.

CONCLUSION

Interactive new media works challenge traditional interpretive methods in many ways – their exceptions and special cases are as variegated as the artists and mediums used in their composition. The addition of interaction complicates audience reception and segments viewers into active participants, or passive receivers of the perlocutionary actions enacted by the piece. Augmented reality artworks, situated as pieces re-contextualizing the perceptions of the viewers through intermediary devices, further show themselves as challenges – in the perception of the viewer if not in actuality – to not only the fourth wall of audience passivity, but to the borders and accepted limits of interaction. They accomplish this by translocating those borders into the more numinous virtual world, whose affordances provide a bewildering array of compelling expressions to artists. Although in the content they partake of the digital, there is always an element of the physical to augmented reality artwork, something to tie it to the viewer and their embodied experience of the piece. In this way AR art invites a model of the world as not one in which art happens, but one which is conditionally defined and experienced as an integrative work of art. ■

REFERENCES AND NOTES

1. Espen J. Aarseth, *Cybertext: Perspectives on Ergodic Literature* (Baltimore, MD: Johns Hopkins UP, 1997).
2. Sander Veenhof and Mark Skwarek, "Augmented Reality Art Exhibition MoMA NYC (guerrilla intervention)," <http://www.sndrv.nl/moma/> (accessed April 25, 2012).
3. Nicolas Bourriaud, *Relational Aesthetics* (Dijon: Leses Du Réel, 2009).
4. Paul Dourish, *Where the Action Is: The Foundations of Embodied Interaction* (Cambridge, MA: MIT Press, 2001).
5. Brian Greenspan, "The New Place of Reading: Locative Media and the Future of Narrative," in *Digital Humanities Quarterly* 5, no. 3 (2011).
6. Andrew Morrison, "Designing Performativity for Mixed Reality Installations," *FORMakademisk* 3, no. 1 (2010). Online version: November 11, 2011, <https://journals.hioa.no/index.php/formakademisk/article/view/187/182> (last accessed March 19, 2013).
7. Stuart Reeves, Steve Benford, Claire O'Malley and Mike Fraser, "Designing the Spectator Experience," in *Proceedings of 2005 SIGCHI Conference on Human Factors in Computing Systems*, New York, New York, 741–750.
8. Phoenix Toews, "Augmented Mountain- Pyrite," <http://www.augmentedmountain.com/pyrite/> (accessed April 25, 2012).
9. Camille Scherrer, Julien Pilet, Pascal Fua, and Vincent Lepetit, "The Haunted Book," in *Proceedings of the 7th IEEE/ACM International Symposium on Mixed and Augmented Reality (ISMAR '08)*, 2008.
10. Noah Wardrip-Fruin and Michael Mateas, "Defining Operational Logics," in *DiGRA 2009 – Breaking New Ground: Innovation in Games, Play, Practice and Theory*, Brunel University, Brunel University, 2009.
11. Jacob Garbe, "From Closed Rooms, Soft Whispers," <http://www.jacobgarbe.com/whispers> (accessed April 25, 2012).
12. Blast Theory, "Uncle Roy All Around You," http://www.blasttheory.co.uk/bt/work_uncleroy.html (accessed April 25, 2012).

JACOB GARBE

interviewed by
Lanfranco Aceti & Richard Rinehart

Is there an 'outside' of the Art World from which to launch critiques and interventions? If so, what is the border that defines outside from inside? If it is not possible to define a border, then what constitutes an intervention and is it possible to be and act as an outsider of the art world? Or are there only different positions within the Art World and a series of positions to take that fulfill ideological parameters and promotional marketing and branding techniques to access the fine art world from an oppositional, and at times confrontational, standpoint?

Conceptually, I feel there are always subjects, methodologies, and approaches that can be considered outside a given field of practice. Drawing distinctions from which we establish an "art world" necessitates an outside to define itself against. That said, I feel the borders are fluid and conditional upon the form in question and the analytical context. For example, the art world for traditional figurative paintings encapsulates a different space than Fluxus event scores. Therefore, there's always room to intervene. I do not feel transgressing those boundaries is an act necessarily in dialogue with marketing or commercially motivated branding strategies. Also I do not characterize intervention as something oppositional, so much as playful. In my own practice, I'm concerned with expanding and perforating borders with intent towards hybridization and mutation, with the hope that it can expose new opportunities and affordances to viewers. I'm not concerned with the commercial or branding success of my pieces, or challenging some institution, abstract or concrete. What is important to me is the creation of a novel expression, something that challenges the viewer from a perceptual standpoint, and others in the art world from a conceptual standpoint.

“In *The Truth in Painting*, Derrida describes the *parergon* (*par-*, around; *ergon*, the work), the boundaries or limits of a work of art. Philosophers from Plato to Hegel, Kant, Husserl, and Heidegger debated the limits of the intrinsic and extrinsic, the inside and outside of the art object.” (Anne Friedberg, *The Virtual Window: From Alberti to Microsoft* (Cambridge, MA: MIT Press, 2009), 13.) Where then is the inside and outside of the virtual artwork? Is the artist’s ‘hand’ still inside the artistic process in the production of virtual art or has it become an irrelevant concept abandoned outside the creative process of virtual artworks?

I like to describe digital artwork as works that inhabit digital space. There’s a lot that goes into the construction and curation of that space by the artist, and in programming and configuring installations (and having them break down). As a matter of fact, there’s arguably quite a few similarities between installing a piece in a gallery, and installing a program on a computer. The thing to keep in mind is that the materials of virtual artwork can be fluid and dynamic—such as data streams or reactive sensors—but what is typically explicitly coded is a piece’s functionality. With augmented reality artwork, one can have different assets mapped onto physical spaces or objects that seem incongruous or mash-up. So to the viewer it may appear that the *parergon* of the piece is highly nebulous, and the digital/virtual nature of it complicates the framing in an inscrutable way. However if you talk to the artist and the person that programmed those routines and methodologies, they will have unusually clear descriptions of what behaviors and functions are possible. The generative nature of its performance may make the end result unpredictable, but the performance of the technology itself something explicit. In my own work, I’ve found that the functional space is very clearly delineated. Pragmatically speaking, for non-installation AR work you are typically starting up an app on a mobile device. Expressively speaking, who

knows where the limits of the correlation and mapping of that piece – interventionist or not – will be? Within that context, it may not be known or may be non-existent, but from a functional standpoint, I believe pressing the button on the device – starting that app, entering that channel, scanning that QR code – is a perceptual move to inside the frame. It is entering a curated, deliberated digital space.

Virtual interventions appear to be the contemporary inheritance of Fluxus’ artistic practices. Artists like Peter Weibel, Yayoi Kusama and Valie Export subverted traditional concepts of space and media through artistic interventions. What are the sources of inspiration and who are the artistic predecessors that you draw from for the conceptual and aesthetic frameworks of contemporary augmented reality interventions?

In my work, I’m still focused mostly on creation and technical proficiency, so the main sources of my inspiration have tended towards the conceptual and the technological, rather than interventionist. Wardrip-Fruin and Carroll’s piece *Screen* was one of the first VR pieces I saw that drove home the possibilities of digital interactive narrative. Visually I also find the installation work of John Campbell compelling, as well as what artists like Klaus Obermaier and Gideon Obarzanek are currently doing with interactive projection.

My pieces all contain narrative elements, in writing those stories I’ve been inspired by people like Mark Amerika, John Crowley, Angela Carter and William Gibson. I still dream of some day making a Young Lady’s Illustrated Primer. A piece I’m currently working on is much more embedded in the social arena, I find ARG’s and social engineering projects such as those done by 42 Entertainment and No Mimes Media really compelling, although I’d be more comfortable if they didn’t have commercial underwriting. I find myself doing most of my conceptual work by watching tech

demos and reading research articles from labs in academic journals, and figuring out how to de-couple the concepts from the commercial or research domain and appropriate them as an artistic medium.

In the representation and presentation of your artworks as being ‘outside of’ and ‘extrinsic to’ contemporary aesthetics why is it important that your projects are identified as art?

In working with augmented reality and other cutting-edge technologies, there’s the risk of pieces always being perceived as not much more than glorified tech demos – something gimmicky that is not making a genuine statement, aesthetic or otherwise. For many viewers, it is their first experience with the medium (be that AR, projection mapping, body-responsive pieces, etc). That usually means an initial moment of acclimatization, an interaction learning curve. The revelation of a novel expressive space is where some people sign off. They feel that in understanding the instantiation of the medium, they’ve grasped the full content of the piece. So what I find myself struggling to achieve is not only getting people to engage my pieces on a “material” or medium level, but also giving honest time to explore what the piece is trying to say. Coming from my background as a writer, there’s a narrativity to all my work, that takes time to express. It is important to me that my pieces are cast in an artistic context so that—operating within that space—viewers are more likely to take that time, and dig deeper than surface issues of technology.

Also, if it is identified as art, then people are more likely to look for the aesthetic reasoning that went into its production. As an artist, I ask myself constantly “why are you using this particular technology for this piece?” I feel there has to be a justification for my choice of medium, especially given new media’s breadth of materials and techniques. Having my pieces identified as art makes it more likely viewers will continue the

conversation to that aesthetic level, and that is where I want the deeper engagement to occur.

What has most surprised you about your recent artworks? What has occurred in your work that was outside of your intent, yet has since become an intrinsic part of the work?

Originally I thought my art practice would center around purely digital constructions, and the exhibition and installation of them would be incidental to pieces as a whole. I saw myself more as a net artist. However, once I started working with spaces and seeing how one could overlay digital assets onto physical surfaces, I was really beguiled. Additionally, modifying a space so that physical actions of viewers are required to explore the expression of an artwork sets up some truly intriguing affordances. I’ve found that when viewers are asked to physically participate, even when it is something as simple as moving viewing devices over the surface of the work, you get unexpected, emergent behavior. I think it is exciting when people collaborate on interaction, and I love watching them share their approaches to interaction with others. That is a great energy.

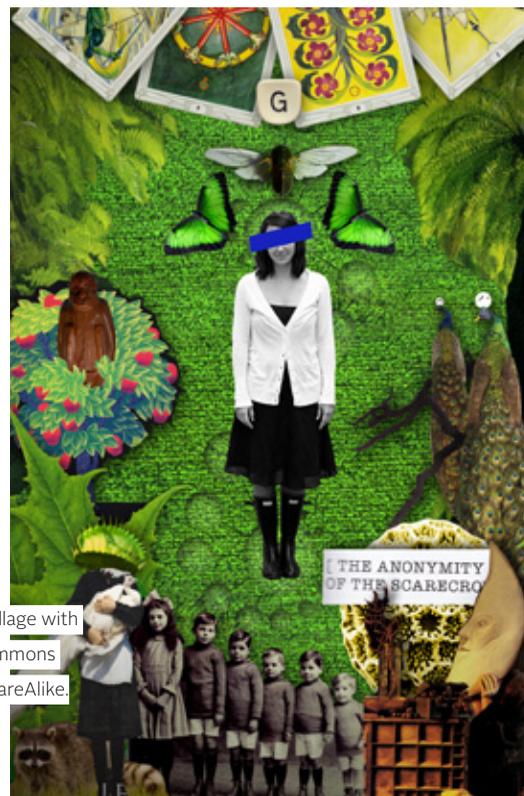
I do not want to get heavy into the installation because I like the ubiquity of the net, and do not like the idea of something I’ve worked on only being experienced for a specific time in a specific place, I attempt to achieve both. I would certainly say that installation is now an intrinsic consideration in my conceptual process. There are just too many good opportunities to explore to pass that up. What I’m hoping to straddle with pieces like *From Closed Rooms*, *Soft Whispers* is the presentation or extrusion of virtual pieces into an exhibition space, so I can tap into that collaborative interaction energy, but preserve the piece’s activity through the expressive capabilities of AR-enabled prints outside the gallery. ■

JACOB GARBE

statement & artwork

From Closed Rooms, Soft Whispers is an interactive narrative concerning loss and the passage of time, utilizing augmented reality as its medium.

It humanizes a high-technology concept through interaction with real world objects, blurring the border between the physical media and the digital media overlaid upon it. It focuses on how memories and feelings are triggered and re-experienced through objects all around us, providing a symbolic afterlife for the people and events they evoke long after the passage of time has removed them from our lives. You can find out more at jacobgarbe.com/whispers ■



G, 2012, Jacob Garbe, digital collage with augmented reality. Creative Commons Attribution-NonCommercial-ShareAlike.

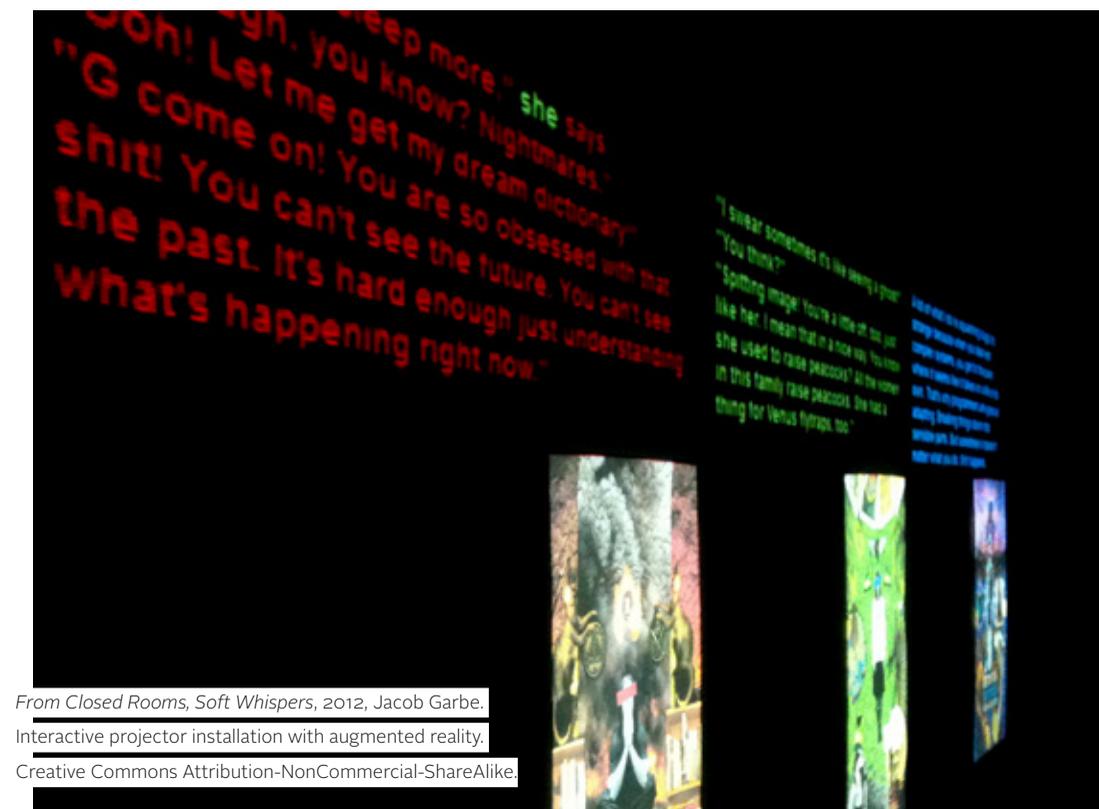


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B, 2012, Jacob Garbe, digital collage with augmented reality.

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From *Closed Rooms, Soft Whispers*, 2012, Jacob Garbe.

Interactive projector installation with augmented reality.

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