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CONTENTS

EDITOR'S NOTE	1
MARISA MILANESE	
PRIZE ESSAY WINNERS	
Klimov's <i>Come & See</i> as a Work of Cinematic Response	3
Laura Brubaker	
A Key to His Consciousness: Smell in <i>A Portrait of the Artist as Young Man</i>	13
Krissy King	
Disorganized Attachment and the Orbitofrontal Cortex as the Basis for the Development of Dissociative Identity Disorder	26
Sean Manton	
WR 100 ESSAYS	
Opposing Industrial Food	36
Peter Stevens	
Clown By Day, Documentarian by Night	43
Albert Tawil	

WR 150 ESSAYS

**Obstetric Ultrasound in the Developing World: An Advance in
Prenatal and Maternal Health, or a Facilitator of Gender Selection?** 51

CHANTAL DE BAKKER

**Banksy's *Exit Through the Gift Shop*: Street Art and Our Quest
for Authenticity** 65

ETHAN DUBOIS

Immigration in Lowell: New Waves of Nativism 75

MATTHEW LAVALLEE

**A Blurry Vision: Reconsidering the Failure of the One Laptop
Per Child Initiative** 88

NAMANK SHAH

HONORABLE MENTIONS 99

EDITOR'S NOTE

One of the course goals of the Arts and Sciences Writing Program is to craft “substantive, motivated, balanced arguments.” By “motivated,” we mean that our students’ essays should address what Kate L. Turabian calls an essential “gap in knowledge or understanding,” something that provides an occasion for the essay that is more meaningful than its due date. Rather than supplying our students such motivation with a direct prompt, we encourage them to locate the gaps that motivate them. The nine essays in the third issue of *WR* were selected from more than 350 submissions. What distinguishes them is ambition, eloquence, and a motivation manifest in both writer and writing.

Nearly 7,000 Boston University undergraduates take a Writing Program course each year, and the essays here represent the impressive work our students produce on often unfamiliar subjects. They reflect the increasing diversity of topics that our courses cover, from public health to documentary film to technological innovations. In addition, our three prize-winning essays demonstrate the interdisciplinary nature of our students’ interests and projects. Krissy King considers the relationship between olfaction and consciousness in James Joyce’s *A Portrait of the Artist as a Young Man*. Sean Manton argues that Dissociative Identity Disorder—once called Multiple Personality Disorder—has both neurobiological and neurodevelopmental origins. And Laura Brubaker draws on Soviet history and film theory to explore the influences underlying Elem Klimov’s war film *Come and See*.

For the first time in *WR*, we are including instructor forewords that describe the broader context and specific strengths of each essay. We want not only to recognize our instructors for their successes, but also to show the diverse ways that they participate in the formation of motivated argu-

ments. With expertise and patience, our instructors help to shape claims that are informed and balanced, far removed from Stephen Colbert's rhetorical strategy: "I can't prove it, but I can say it."

Intellectually and rhetorically, these essays engage their readers, and, as every writer knows, that is no simple achievement. To sustain our interest over the course of ten to fifteen pages requires both an argument worthy of such attention and a writer commensurate to the challenge. Representing the best efforts of this year's Writing Program courses, these authors successfully motivate us to think about their work long after we have finished reading.

— Marisa Milanese,
Editor

From the Instructor

Laura Brubaker's essay "Klimov's *Come and See* as a Work of Cinematic Response" was written in the fall of 2010 for a WR 100 seminar on Soviet cinema. It was submitted for the third and final assignment in the course, having grown out of an impressive comparison and contrast of Klimov's film with Andrei Tarkovskii's *Ivan's Childhood* that Ms. Brubaker submitted for her second assignment. (It was entitled "Objectivity and Subjectivity in *Ivan's Childhood* and *Come and See*.") Ms. Brubaker's argument concerning the two films' relationships to one another not only met the expectations of the second essay assignment in exemplary fashion, but it also clearly had the potential to develop into something broader and more sophisticated.

In such cases, especially when the writer in question is as talented and motivated as Ms. Brubaker, I permit students to continue developing their projects for the next assignment rather than starting a new one from scratch. This emphasizes the nature of the essay as a "project," not just an assignment, and it thereby simulates professional writing more organically than requiring three distinct "papers" does. It also allows students the opportunity to spend time cultivating their ideas and harvesting the fruit born of them. As the following essay shows, Ms. Brubaker, a remarkably gifted, diligent, and intellectually curious young woman, took this opportunity and made it golden.

— Ivan Eubanks

LAURA BRUBAKER

Prize Essay Winner

KLIMOV'S *COME & SEE* AS A WORK OF CINEMATIC RESPONSE

The evolution of war films in Soviet Russia—from the overwrought propaganda of the Stalinist era, to the artistic antiwar pieces of Khrushchev's Thaw, to the more subdued films of Brezhnev's influence—illustrates the volatile cultural climate of the post-war Soviet Union. Among these films, Andrei Tarkovsky's *Ivan's Childhood* (1962) stands out as a masterpiece. So, too, does Elem Klimov's *Come and See* (1985). Released in the waning years of the Soviet Union, in the artistically liberal Glasnost period, Klimov's film commanded a view of decades of paradigms in Soviet war films, which were established and abolished and created anew. Rather than build exclusively on the work of his cinematic predecessors and contemporaries, Klimov chose to tell a war story as it had not been told since *Ivan's Childhood*. His depiction of a child in war, however, is hardly a mirror of Tarkovsky's. Nor is it an entirely new envisioning of Ivan's story. Rather, *Come and See* is an artful response to Tarkovsky's original work and, on a broader level, to Soviet war films in general. His is a story less psychologically nuanced but more jarring than *Ivan's Childhood*; it is "less 'celebratory' in tone" than its contemporaries yet with greater allowance for hope (Youngblood, "Remembered"). Klimov sought to tell a story old yet new and was able to do so in both subtle and profound ways.

From his rise to power in the early 1920s and through the Second World War, Stalin ruled the Soviet cultural scene. Epic propaganda films dominated this era, most notably Mikhail Chiaureli's *The Fall of Berlin* and the films of Sergei Eisenstein (Michaels, "Remembered" 212). Soviet war films took a turn for the more abstract and less bombastic during the Khrushchev-initiated Thaw of cultural and artistic restrictions. As

Denise Youngblood explains, filmmakers of this era “traded public issues for personal themes and made a series of ‘quiet’ war films,” instigating a drastic turn from the grandiose tales so favored by Stalin. These films, for which *Ivan’s Childhood* marked the end of an era, “stressed the psychological impact of the war on individuals” (“Post-Stalinist” 87). As is typical of films from the Thaw period, *Ivan’s Childhood* does not feature any grand battles, nor does it go to any lengths to glorify combat. In this era of filmmaking, war is an ill, a disease that wreaks havoc upon individuals and societies (“Post- Stalinist” 88).

Rather than illustrate the physical tolls of war, filmmakers of the Thaw period chose to illustrate the psychological impact. Tarkovsky is a master of such illustration. Instead including of graphic depictions of the horrors Ivan has endured, Tarkovsky’s subjective cinematography serves to place the viewer within the mind of his protagonist. The viewer is seamlessly transplanted into Ivan’s dreams, sharing the loss both of his mother and of the conceptions of his innocence that were taken long before the film’s narrative began. Tarkovsky’s placement of the viewer within a character’s mind is especially powerful in the church bunker scene. There are no German or Russian children—apart from Ivan himself—actually present, but they exist within Ivan’s fantasy, and the viewer hears them just as clearly as Ivan does in his own mind. As per Vida Johnson and Graham Petrie’s analysis, Tarkovsky’s use of “subjective soundtrack and camerawork . . . conveys [Ivan’s] fear and confusion” (72). Thus, the experience of finding oneself within a character’s mind—sharing his thoughts and feelings rather than corporeal perceptions—creates a strong emotional reaction in the viewer. Furthermore, one’s presence within a character’s mind promotes a sort of psychological perspective allowing for deeper meaning and, as Vlada Petric describes, for the insinuation of “numerous layers of ineffable transcendental signification” within the narrative (32). From within the “layers” of Ivan’s psychological distress, the viewer cannot help but feel as lost, empty, and utterly alone as Ivan himself.

Powerful as the psychological works of the Thaw era were, particularly *Ivan’s Childhood*, Klimov’s final film moves away from their methods in many respects. Yet in his departure from the previous filmmaking paradigms, Klimov did not completely ignore all that came before. *Come and See* is a direct response to those works that preceded it, both built upon the

established foundation and altering the pillars of that foundation in order to create something new. *Come and See* is very much Klimov's own powerful work, but it is a work that would not exist without—and cannot be considered entirely independent of—earlier war films in Soviet filmmaking history, especially *Ivan's Childhood*.

Klimov offers up several small tributes to *Ivan's Childhood* throughout his film. The opening scene, filmed on a lonely beach, hearkens back to the final scene of Tarkovsky's film. Later in *Come and See*, Florya stands looking over a well, reminiscent of Ivan's own actions some decades prior. Though Ivan's gaze drew the viewer into his dream, Florya's draws the viewer to regard an off-putting reflection of the boy—not as he is, but as the “progeriac” he becomes by the film's end (Michaels 215). Implicit in these references are the tools and devices both artists use to create their films, most notably a juxtaposition of the internal (subjective) and external (objective). Klimov and Tarkovsky are skilled in the use of such juxtaposition and employ it to create powerful films, though in different ways and to different ends.

In both *Come and See* and *Ivan's Childhood*, the trauma inflicted upon the main characters is portrayed in such a way that the audience cannot help but feel that they, too, have been traumatized. However, whereas Tarkovsky chooses to create this sense through sharing with the viewers his protagonist's own internal distress, Klimov traumatizes viewers by putting them not into the mind of the protagonist, but into the same traumatic *external* experience. The manipulation of viewers' perceptions of the physical sense can lead to a more profound and painful experience in viewing a film. Thus, the graphic portrayal of German war atrocities in *Come and See* is more deeply disturbing than the suggested situations in *Ivan's Childhood*. There is no attempt to save the viewer from any apparent physical detail of the murder of some hundreds of Byelorussian villagers. Indeed, the effort is made on the director's part to force the viewer into the same dreadful experience. As Walter Goodman states in his review of the film, “you feel it through your body as villagers are packed into a barn to be incinerated” (Goodman). Klimov's “heavy-handed” approach, as Goodman calls it, creates a painful realism in the film very different from Tarkovsky's nuanced dream references and subjective insinuations of Ivan's emotional pain.

Klimov goes further to make *Come and See* a more realistic cinematic experience than *Ivan's Childhood*. Directorially, he distances himself from the subtlety and ambiguity present in most post-Stalinist war films. *Ivan's Childhood* is marked by symbolic dreams and internalized turmoil—by an “estrangement” of the real that hints to the viewer that something is not quite right (Petric 30). This estranging “poetic imagery,” as Viktor Shklovsky terms it, serves “to increase the difficulty and length of perception.” After all, Shklovsky continues, “[poetic] art is a way of experiencing the artfulness of an object; the object is not important” (8). For Klimov, though, the object—in this case, a war and the slaughter of scores of innocents—is of the utmost importance. Thus, he relies on *explicit* depictions of horrific events to create maximum emotional impact. This simple change, from an internal to an external focus, renders *Come and See* significantly less ambiguous and more jarring than *Ivan's Childhood*.

This is not to say that Klimov totally avoids any use of estrangement or defamiliarization. Klimov creates a sense that something is not quite right many times in the film. Yet he creates this feeling not through deeply symbolic dreams as Tarkovsky does, but through a steady build-up of unease. Nothing is visibly awry in Florya's empty house, but the viewer is well aware that something is wrong. This conviction only deepens as the scene progresses; the sound of flies grows louder and the dolls lying on the floor are inexplicably off-putting. The viewer does not immediately learn what exactly is wrong in this scene, but the idea that something indeed is wrong is never in doubt; Klimov's estrangement is far less ambiguous than Tarkovsky's.

Ironically, Klimov addresses the allusive nature of *Ivan's Childhood* through subjective camerawork similar to that of Tarkovsky's film. However, whereas Tarkovsky uses subjectivity as a means to communicate his protagonist's psychological state, Klimov uses the subjective lens to influence the empathetic physical perceptions of the viewer, creating a deep and shocking impact. Klimov's subjective camerawork places the viewer into the “body,” as Goodman says, of his protagonist (Goodman). Thus, the viewers rarely see anything but what Florya sees and often only as he sees it. Additionally, viewers often hear just as Florya does. When bombs rain down in the woods in the beginning of the film, the sounds of explosions are slowly replaced by a loud ringing that persists through several scenes.

The viewers' feelings of bewilderment and utter distress increase tenfold as they share in Florya's deafness. These decisions on the part of the director serve to create in the viewer a much more jarring sense of involuntary involvement in the film by means of simulating physical sensations shared by the character and viewer alike.

It is important to note that, while Tarkovsky allows the viewer to hear what Ivan alone hears in the church-bunker scene, this subjective aural experience is only made possible through Ivan's imagination and is therefore a shared psychological, rather than physical, experience.

For all the time spent looking through a subjective lens—be it physical or psychological—both *Ivan's Childhood* and *Come and See* mainly employ an objective point of view. The scenes manifest from the perspective of a third-party observer. From this personally disconnected vantage point, the viewer has the ability to see things that the protagonist cannot see, or as the protagonist cannot see them. In *Come and See*, this perspective often bestows upon the viewer a sense of not-quite-participant, of being present and yet disconnected from the events unfolding on the screen. This is especially the case in scenes in which the central characters are under attack, such as in the field in *Bagushovka*.

Tarkovsky uses this switch in perspectives to change the dominant feelings conveyed by the scene or to create new emotions entirely. The voyeuristic quality of the scene in the birch forest is momentarily suspended as the camera moves to follow Masha's own sight when she dashes through the trees. The mood suddenly switches from one of intrusion to feelings of panic and disorientation. The feelings are clearly conveyed, and, at the moment they're revealed, the viewer shares a deep emotional connection with the characters involved.

Klimov, however, switches between objective and subjective views to intensify emotions already present. The image of the burnt, old man on the ground would be disturbing enough if come upon objectively, but, when encountered from Florya's perspective, the discovery is even more gruesome. Feelings of claustrophobia mount as the viewer is pushed through the crowd of survivors, allowing for a shock when the crowd breaks, a shock that results in numb emptiness when suddenly confronted with the blackened and dying old man. Similarly, when the viewer-as-Florya is forced into the barn in the Nazi-occupied village, the scene

becomes radically more distressing. Observed as one of the masses, rather than as a camera suspended from a rafter, the realization of the inevitable sets in more firmly: not only are the villagers going to die, but the viewer is trapped and condemned as well. While Tarkovsky's method succeeds in clearly conveying many emotions, the range of feelings fails to approach the strength of one single emotion—be it fear, anxiety, or pain—that Klimov builds up over scenes and shots.

As Youngblood writes, Klimov simultaneously “mimics” and contrasts Tarkovsky's style in more ways than with this juxtaposition of perspectives (“Post-Stalinist” 94). When *Ivan's Childhood* reaches its conclusion, it does so through a broadening of its message achieved by the inclusion of actual war footage. The shots of Goebbel's murdered children draw Ivan's own execution into the broader sphere of lost innocence. Though the film focuses on the decline of Ivan, his is but a small part of a very large and very real war.

Klimov's inclusion of documentary footage has the opposite effect. In keeping with Klimov's apparent objective to create as powerful a film as possible, the footage at the conclusion of *Come and See* effectively concentrates the scope of the war, rather than broadly relating the themes of Florya's experience. When Florya comes upon the portrait of Hitler in the mud, an impulse to shoot the picture overcomes him. With every shot, original footage of Hitler plays rapidly and chronologically backwards. As Florya continues to shoot, Hitler comes closer to his initial rise to power. Though it could be argued that this inclusion of original footage serves the very same purpose as Tarkovsky's—that is, to bring things into a larger perspective and to relate the protagonist to the war on a greater scale—such an interpretation is inaccurate. Instead, Klimov's incorporation of the reversed footage of Hitler's life serves to bring all implications of the Second World War to an ultimately personal scale. With every bullet from his gun, Florya seeks to undo all the horrors that Europe has endured. Every shot turns back the clocks until Florya has erased Hitler, leaving the once-Führer nothing but a babe-in-arms. The viewer shares in this exhilarating experience. The sensation of placing the entirety of World War II into the hands of an individual is far more powerful than symbolically relating that individual's experience as something not at all exceptional.

The conclusion of *Come and See* is in more ways than one a direct address of the bleak finality of *Ivan's Childhood* and its other Soviet cinematic forebears. As Youngblood states, "Given the trajectory of Soviet war films over the past two decades, and the disillusionment and decline clearly evident in the last years of the Brezhnev era, it would have been surprising indeed if Elem Klimov's contribution to the cinematic dialogue had been anything other than grim" ("Remembered"). Youngblood goes on to describe just how grim of a film *Come and See* is, but she overlooks the optimism hidden in the film's final moments. As Goodman puts it, the film's ending serves as "a dose of instant inspirationalism." Having shot Hitler's pictorial effigy to the point of a baby picture, Florya finds that he can shoot no more. Though this man is responsible for all the suffering brought upon Florya and his countrymen, he is also a person. He is a child in his mother's arms just as Florya once was. Klimov firmly believed that Florya should "remain human" and not harbor the same brutality and "desire to kill" that led to the horrors that Europe was forced to endure ("Film Genre"). Refusing to continue the cycle of inhumanity, Florya puts down his gun and turns away, running to join the other partisans. Following their march, "the camera makes its way through the forest to the accompaniment of a choir that soars and soars until we get a glimpse of the heavens, not the most original moment in the movie," writes Goodman. Nonetheless, the moment does serve to impress upon the viewer that, after all the horrors these people have endured, they may be on their way to better things (Goodman).

Even as the partisans march through the woods to the somber notes of *Lacrymosa*, the viewer must be aware of the fact that Florya, unlike Ivan, is still alive. He has survived and will carry on. As grim as the rest of the film undeniably is, the ending at least allows for the possibility of hope, the possibility of a future.

Though Klimov did not succeed in releasing any more films after *Come and See*, his magnum opus declared to the world his directorial prowess. *Come and See* is but one of a long line of Soviet war films spanning the twentieth century, a lengthy tradition that already had a war-and-childhood masterpiece in Tarkovsky's film. Klimov was well aware of his cinematic predecessors, particularly *Ivan's Childhood*. He was not entirely satisfied with how those films told their story, though. The bombastic

propaganda and nationalism, or the quiet introspection, did not fit into his vision. Instead, he took a new approach: revising the premise of *Ivan's Childhood* and displacing both the story and the viewer from an ethereal symbology of a boy's loss of childhood into an experience of "an apocalypse rooted firmly in the real" (Wrathall 29). Rather than weaving the viewer into the protagonist's mind, Klimov rips the audience from where they sit and thrusts them into an unambiguous experience of fear and pain. Contrasts with previous films and filmmaking styles aside, *Come and See* is built on every film that came before it and reflects on those films in new ways, creating a story that is at once familiar and jarringly unique.

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From the Instructor

Art is visionary, even prophetic, having the peculiar power to open before humanity as yet unseen worlds of experience, foreseeing or forecasting in history states of awareness and insight that can only later be taken possession of in fully formed speculative consciousness. Great works thus exhibit the uncanny capacity to suss out the unfolding path of human experience that as yet lies in any given moment still ahead of, or beyond us. Yet note my reliance here on the language of speculation, that is, the language of vision, to describe the process by which what art intuits of our coming experience emerges into consciousness with the progress of thought. Our thought, our conscious thought, is dominated by the metaphors of certainty that depend at root on the objectified clarity of our sense of vision. To know something with certainty is to see it in our mind and make it visible in our language.

So it was when Krissy King began her study of olfaction in Joyce's quasi-autobiographical novel that I could foresee that she would come up against the daunting challenge of rendering, or translating, the essentially unconscious experience of smell into the conscious language of literary critical exposition. The problems attendant upon this surfaced early on for her and led her, in conference, to a point of decision: would she be able to sniff her way through the enigmatic unconscious vapors of Joyce's foray into his own quasi-objectified unconscious experience? She would have to find a way of opening her own experience to the freedom, the uncertainties, the anxieties of the unconscious that Joyce himself was seeking to liberate through his novel creative process. This creative process would anticipate by half a century the clear critical formulation of Wimsatt and Beardsley of the 'intentional fallacy,' that is, the realization that the full measure of what a work of art achieves could not finally be taken from the conscious intention of its author, even if such could ever be known.

In other words, to do justice to this critical problem, Krissy would have to put herself in the creative place of Joyce's own most open and even chaotic uncertainty. But should she have the courage to do so, she would be doing a certain honor to the very—you will see below that I shared with Krissy my close attention to this word—challenge that Joyce himself took on as he sought to find a new balance between actual lived experience and conscious reflection in leaving behind the cloistered security of the objective remove of speculative aesthetics to descend into the stink of the real world! At this moment a word of encouragement was in order: "go for it"! So it is that we leave it to her to lead us by the nose through the fetid alleyways and ethereal sublimations of Joyce's unconscious to inhale the incense of his most intimate and ineffable experiences!

— Michael Degener

KRISSY KING

Prize Essay Winner

A KEY TO HIS CONSCIOUSNESS: SMELL IN *A PORTRAIT OF THE ARTIST AS YOUNG MAN*

James Joyce, in writing *A Portrait of the Artist as a Young Man*, made sure to equip Stephen Dedalus with a realistic sense of smell and, therefore, kept in mind the random and highly subconscious nature of olfaction as opposed to other sensual faculties. However, as the writer and creator of the world in which Stephen lives, Joyce faced the paradox of deliberately and consciously crafting Stephen's smell so as to *seem* random and subconscious. The problem becomes even more complicated when one factors in the recurrence of figurative and imagined smells in *Portrait*, which often correlate with concrete smells that have occurred earlier in the text. What results is a tension between reality and contrived reality, as Joyce, in allowing Stephen to develop an "autonomous" sense of smell, subconsciously unleashes his own olfactory associations; as a result, we catch glimpses of Joyce's consciousness filtered through the lens of Stephen's perspective.

Before dissecting the intricate relationship between Joyce and Stephen using smell as a catalyst, it is important to outline the three interactive beings present in varying degrees throughout the novel. First, of course, we have Stephen, who grows to understand himself in spite of and because of obstacles, such as his Jesuit upbringing and his father's strident nationalism; then, there is the narrator, an older Stephen, who has the advantage of having lived through everything Stephen experiences and thus knows the outcome of every choice that Stephen makes; and, finally, there is Joyce himself, the invisible but omnipresent artist of Stephen's world, who has created every obstacle Stephen faces and guides the choices that resonate throughout Stephen's life. If Joyce were the artist of Stephen's aesthetic theory, he would remain "within or behind or beyond or above

his handiwork ... indifferent, paring his fingernails" (Joyce V.1467–9). However, Joyce cannot remain indifferent. *Portrait* is the chronicle of a character as complex as any real human being—and, as Jerry Allen Dibble points out, Joyce “recogniz[es] implicitly the impossibility of bringing a character to life without giving up an enforced detachment which is, after all, as much an intrusion of the author’s personality on the lives of his characters as explicit, intrusive commentary would be” (37). In order to create a living human being within the pages of a novel, Joyce must make Stephen in his own image and pour fundamental elements of himself into Stephen’s creation. Not only that, but Stephen Dedalus’s story is that of an *artist*. For this reason, Joyce intervenes within the novel in order to allow Stephen to experience certain things guiding Stephen’s ultimate choice to become an artist. By doing this, he continually calls attention to the artifice of the entire novel, to its status as a work of art, and to his awareness of the impossibility of an “indifferent” author.

How, then, does smell fit into this grand scheme of the artist creating an artist? Smell, by its very nature, functions as the most fitting tool with which to understand Joyce’s presence in Stephen’s life. The sense of olfaction subtends consciousness, revealing one’s subconscious desires and drives. According to a recent study of smell in relation to social preference, smell is directly connected to emotional response, and subliminal smells can even markedly influence one’s judgment of a person’s likeability (Li et al. 1044–5). In short, smell is the gateway not only to self-perception, but also to perception of others and the environment. In *Portrait*, Joyce has created Stephen’s environment, and, of course, the smells around him. Most of the time, Joyce adheres to realistic parameters when introducing a smell into Stephen’s environment. At certain moments, however, he uses literal and figurative smells to influence Stephen’s unconscious experience of his environment and to guide him to a greater understanding of the world and of his calling. These smells give Joyce leverage in defining certain aspects of Stephen’s life; the level of Joyce’s conscious control over Stephen’s subconscious oscillates throughout Stephen’s development and reveals much about the process Joyce underwent in writing *Portrait*.

In chapter I, for example, Joyce exerts a hefty measure of control over Stephen’s susceptible, and relatively binary, mode of thinking. As a young boy far from home in the dark corridors of Clongowes, Stephen’s

frame of mind is simple and understandable: he dislikes school and wants to go back home to his mother. Fittingly, Stephen's reaction to the various scents of Clongowes is repeatedly negative: he fears the bath and the "smell of the towels, like medicine" (I.551-2), wrinkles his nose at the "stinking stuff to drink [...] in the infirmary" (I.689-90), and dislikes the "weak sour smell" of burning charcoal in the sacristy (I.1194). Most telling is his unpleasant bout of nausea on the day of his first communion; he feels a tinge of guilt that "the faint smell [of wine] off the rector's breath had made him feel a sick feeling" because he has been told that "the day of your first communion was the happiest day of your life" (I.1402-4). Much of this negativity can be attributed to childish tendencies both to think in black and white and to over-exaggerate experiences; however, the question becomes why these particular smells fall decisively on the negative side of this binary. Granted, it makes sense that a child would have an adverse reaction to medicinal towels and a most likely unsanitary bath, but the smells of charcoal and wine by themselves are not necessarily regarded as unpleasant. In fact, the word "wine" triggers a pleasant linguistic association in Stephen's mind (I.1399-1401). It is a subconscious aversion to the winy residue from the rector's breath and the atmosphere of the church that offends Stephen's nostrils.

Here is where Joyce comes into the picture: he stands something to gain from Stephen's instinctive repugnance toward the "faint winy smell" (I.1398). Of all the things to be repulsed by that are conducive to a later rejection of the Church, why not Stephen's first communion, which represents both his initiation into the Church and his first contact with Christ? Stephen, being too young to have formed moral and intellectual objections to the Church that would create such an aversion, is easily controlled by Joyce, who has implanted this drive in Stephen's unconscious as a foundation for his repudiation of Church doctrine as a young adult.

Even as a young child, however, Stephen is aware of the boundaries Joyce has delineated for his life. After rereading his inscription on the flyleaf of his geography textbook, which is a list beginning with his own name and expanding its scope until it reaches "The Universe," Stephen reflects upon the borders of this universe in which he is placed: "What was after the universe? Nothing. But was there anything round the universe to show where it stopped before the nothing place began? It could not be a

wall but there could be a thin thin line there all round everything" (I.318–321). There is a high degree of irony in the seemingly innocent questions Stephen asks. Although Stephen matter-of-factly replies that there is "nothing" after the universe, we as readers know that there is not "nothing" after the universe: there is Joyce. In fact, Stephen's further reflections hint that he also is aware of Joyce's presence beyond Stephen's microcosmic universe. His ostensibly hypothetical exploration of the "thin thin line" separating his universe from the "nothing place" evidences his knowledge of the boundaries someone (whom we know as Joyce) has placed around him. Stephen intuitively knows that if he were to travel to the end of the earth or even to the end of existence, he could not possibly break through the thin line that is Joyce's artistic control. The fact that this element is included in the text points to two things: one, that the teller of the tale (an older Stephen) finds it important enough to include in the story and thus remains painfully aware of Joyce's inescapable presence in his life; and two, that Joyce himself wanted this ironic statement to be included in order to remind his readers of the artifice of the entire novel. However, as the "god" of Stephen's universe, Joyce allows Stephen to more freely develop an identity and sense of self, as evidenced by his more relaxed sense of smell in chapter II.

Here, there is a marked transition from the rigidity of Stephen's previous olfactory perceptions—a rigidity that ascribes only negative reactions to church smells and positive reactions to those evocative of the home—to the realistic ambiguity of his perceptions in chapter II. He has less of a sense of "good" and "bad" smells, and some of Stephen's perceptions regarding smell are even contrary to what one might expect. For example, as Stephen approaches Heron and Wallis smoking before the Whitsuntide play, he "became aware of a faint aromatic odour" (Joyce II.541). Contrasting his childhood tendency to characterize smells into defined categories, Stephen does not react particularly strongly to the scent. The clear departure from Stephen's black-and-white reaction to smells in chapter I is worth noticing, if only by virtue of its contrariness to what we have come to expect. Certainly, it marks a transition toward Stephen's maturity, for in the adult world not every smell must be judged as pleasant or unpleasant. When observed from the point of view of Joyce's

control over Stephen, however, it takes on added significance as a greater allowance of freedom on Joyce's part.

It is important to note the phrasing here: rather than there merely being an odor, he "became aware" of it. When contrasted with phrases in chapter I such as "*there was* a cold night smell in the chapel" (I.381), the diction gives Stephen a sense of self-awareness and a feeling of autonomy over his own conscious processes. "There was" causes one to think of a smell merely *being* there, placed there as if by some outside force that gives Stephen no choice but to inhale it. In chapter II, on the other hand, Stephen is the acting force that becomes aware of this smell, and he is aware that he becomes aware of it. In short, Stephen is afforded control over his consciousness because Joyce has no need to steer him in any given direction. Joyce allows Stephen to grow as a character through adolescence, without any supernatural-seeming interventions beyond the reality Joyce has created for Stephen.

If only things remained that simple. Joyce, as the creator of a literary masterpiece, would not instate such a dynamic of control and freedom without baffling his readers through such developments as figurative smells. Take, for example, the scene in II.3 in which Stephen tears away from the object of his passion, Emma. As he realizes he has lost the chance to kiss her, "pride and hope and desire like crushed herbs in the heart sent up vapours of maddening incense before the eyes of his mind" (II.930–932). Here, Stephen does not literally smell anything; even figuratively an odor is not explicitly mentioned, only the fact that his eyes burned. Yet it is strange that the narrator describes these abstract emotions as "crushed herbs" and "maddening incense," both of which emit powerful, intoxicating aromas. It can also be argued that so far, none of the smells in Stephen's world have actually been described as entering his nostrils—whether it be the "there was" of chapter I or Stephen's "[becoming] aware of" smells in chapter II, the fact that the narrator doesn't mention Stephen's intake of the smells does not discount their presence. The problem becomes what to make of this strange metaphor that is not even entirely consistent—first the "maddening incense" goes up before the "eyes of his mind" (II.932) and then again before his actual "anguished eyes" a few lines later (II.935). For now, we will leave this dilemma; in chapter V, several instances in the text will shed light on the meaning of this mixed metaphor of a "smell."

A final significant moment in the realm of Stephen's freer subconscious is his perception of what many of us would find to be a repulsive odor. Eventually, Stephen's frenzy of emotion quiets, and "a power, akin to that which had often made anger or resentment fall from him, brought his steps to rest" (II.938–9). Considering this from a control standpoint, we might be tempted to ask: what is this awesome power that can subdue his overwhelming array of emotions so rapidly? Once again, the phrasing is significant. The teller has not only implied that there is an outside "power" in play, giving Stephen no control over his actions, but he has also connected previous occurrences of this mysterious force to this present moment, evidencing his retrospective acknowledgment that this power is not unique to this moment, but something that has long played a part in Stephen's life. Could it be a "divine intervention" on Joyce's part, guiding Stephen to this alleyway for a specific purpose? A further examination of the succeeding passage makes this interpretation plausible.

After Stephen "breathe[s] slowly the rank heavy air" in the lane, he finds a strange sort of comfort in its fetid fumes: "—That is horse piss and rotted straw, he thought. It is a good odour to breathe. It will calm my heart" (II.943–4). With this unorthodox reaction to what many would consider a revolting smell, Stephen embraces the stench of reality as opposed to the stifling, musty corridors of the church. While it may not be of great significance to Stephen now, later he will realize that he is called to be an artist immersed in the odors of the world rather than cloistering himself away in the confessional. The narrator, however, is well aware of the importance of this moment, as evidenced by the narrative shift that takes place. John Paul Riquelme, in his essay "Dedalus and Joyce Writing the Book of Himself," astutely notes that in chapter II, the teller uses "the same typographical indicator, the dash, that previously identified only direct discourse" (372). In a certain sense, Stephen engages in direct discourse at this moment, a discourse in which the interlocutors are both the present Stephen himself and the future Stephen who tells the story. Although the teller cannot physically answer the past Stephen, he can include this firm statement of Stephen's in the text to show that it has resonated with the teller over the years.

Joyce, as we know, is the power that has led Stephen to this cobbled lane, guiding him on his path to becoming an artist by showing him that

he is not meant to dwell within the Church. What separates this intervention from Joyce's necessary authorial manipulation of Stephen's actions is that Joyce has endowed the narrator with a peculiar self-awareness of the forces at play in his life. He has made the conscious decision to let the narrator know that Stephen's sudden halt in the alleyway was not of Stephen's will but of someone else's. In this instance, Stephen is unaware of what this force is or what it entails. In chapter III, however, he mistakenly comes to believe that this acting force is the Christian God.

Something during the priest's harrowing sermons at the retreat instills in Stephen a renewed sense of fear of the Lord. The lurid depiction of hell, which Stephen believes to be his destiny, sends him into a paroxysm of guilt and disgust for his previous sexual acts. As memories of the past flood his brain, "the sordid details of his orgies stank under his very nostrils" (Joyce III.488–9). Once again we must grapple with the concept of figurative versus literal smell. It would be easy to dismiss this statement as a mere rhetorical device, but, as Professor Michael Degener of Boston University points out, the phrasing of "under his *very* nostrils" would defy our attempts to do so. This syntactically unnecessary phrase draws attention to the unreality of the entire statement, for it does not leave the stink of these "sordid details" as a quaint metaphor, but, rather, thrusts it directly under Stephen's nose to wreak physical havoc on him (just as the "maddening incense" did in part II). Considering that this diction is the choice of the narrator, for the exact words themselves were most likely not running through Stephen's mind at this moment, it becomes evident that the older Stephen purposely blurs the line between real olfaction and imagined olfaction. Joyce, by including this segment in the first place, reminds his readers once again of the contrived reality of the entire novel—for, whether literal or figurative, both are ultimately artificial because they are created by Joyce. Both are shown to have equal power over Stephen, and both are able to affect his mind as well as his body.

This overlap of figurative and actual smell continues as Stephen's thoughts are increasingly consumed with the weight of his sin. Paralyzed with guilt, Stephen fixates on his past despite his attempts to fall asleep. A futile struggle takes place in which "he desired with all his will not to hear or see . . . till his frame shook under the strain of his desire" (III.1257–8), yet he falls into a lurid nightmare of repulsive goat-like creatures circling

him in a field of thistles and crusted excrement. However powerful Stephen's will may be, he cannot repress the deluge of dread and terror that has been lurking deep within his unconscious since the priest's first hominy. His guilt is not the only thing taking hold of him: "an evil smell, faint and foul as the light" (III.1265) pervades the dream, yet another imagined odor that somehow infiltrates his nostrils as well as his consciousness. It is strange that the smell is described as "evil" in light of Stephen's more ambiguous reactions in chapter II, contradicting his previous categorization of horse urine and rotting straw as a comforting smell. Even stranger is that the revolting stench follows Stephen through layers of consciousness separating his dream from reality: "He sprang from the bed, the reeking odour pouring down his throat, clogging and revolting his entrails . . . clasping his cold forehead wildly, he vomited profusely in agony" (III.1288-93). Somehow this "imagined" smell, which entered Stephen's dream despite resistance of the body and soul, has the power to physically enter his throat and prompt a violent, visceral reaction—surely no mere figment of the imagination could have such an effect. With this powerful smell that affects several layers of Stephen's consciousness, Joyce creates a stench that Stephen, since Joyce has crafted him to seem like a realistic human being, cannot possibly interpret as anything but otherworldly. Stephen believes that "God had allowed him to see the hell reserved for his sins" (III.1285-6), but, in reality, it is Joyce who has consciously intervened within the fabric of his own contrived reality in order to propel Stephen towards the chain of events that will lead him to artistry.

This chain of events culminates in chapter IV with Stephen's epiphany. For the final time, we see Joyce intervene beyond the demands of his authorial presence with a supernatural smell. The catalyst is the director of Belvedere's invitation for Stephen to join the priesthood, which then prompts an intensive consideration of the calling that would irreversibly alter his future. Suddenly, his anxieties come rushing forward, and he realizes that "it was a grave and ordered and passionless life that awaited him" (Joyce IV.480-1). But it is not even his potentially mirthless life that repels Stephen from accepting the call to the priesthood; rather, it is the "troubling odour of the long corridors of Clongowes" that returns to him and fills him with dread and unrest (Joyce IV.484). The effect is immediate and terrifying. Assaulted with "a feverish quickening of his pulses" and "a

din of meaningless words . . . his lungs dilated and sank as if he were inhaling a warm moist unsustaining air which hung in the bath in Clongowes” (Joyce IV.487–92). It is well known that smell is able to evoke strong and often emotionally charged memories without any conscious decision on our part. Why, however, does the smell arise in the first place, and why are its effects so debilitating? This turning point in Stephen’s life is facilitated once again by Joyce, who reaches out to save Stephen by awakening “some instinct, stronger than education or piety” that makes him realize “the chill and order of the [priesthood] repelled him” (IV.493–7). This instinct, stemming deep from within Stephen’s subconscious, has slowly been gaining strength because of key events in the text—his childhood at Clongowes, his religious experience in chapter III, and, most importantly, the real and figurative smells that have implanted themselves in Stephen’s memory—and was cultivated by Joyce himself, who has not pared his fingernails, but has gotten his hands dirty with his subtle interventions in Stephen’s life. The result of these interventions is Stephen’s rejection of church doctrine and acceptance of the call to be an artist. Now that this has been accomplished, Joyce sets his character free in the world and observes the fruit of his creation in action.

Evidencing this new freedom is a fundamental change in the nature of Stephen’s olfaction. In chapter V, Stephen finally experiences smell as it exists in reality: random, unstructured, with links to the subconscious that are not immediately obvious. Smells often trigger linguistic associations that lead to wordplay, and certain scents even precipitate Stephen’s creative process. Nonetheless, as Joyce looses Stephen’s subconscious, so must he set his own subconscious free in order to create linguistic associations that are neither forced nor contrived, but natural. For this reason, chapter V is as much about Joyce as it is about Stephen; more specifically, we learn what is at stake for Joyce in creating a character who seemingly possesses a subconscious mind of his own.

An excellent example of the budding connection between smells and words can be found as Stephen takes a stroll along Stephen’s Green toward his next class. As he passes along the Green, “the rainsodden earth gave forth its moral odour, a faint incense rising upward through the mould from many hearts” (V.363–4). Many elements from previous chapters collide in this cryptic statement. For one, it must be determined whether

these words are Stephen's or the narrator's. The answer to this query is far from simple because, as Jerry Allen Dibble puts it, "the personality or identity of the narrator [in *Portrait*] is . . . constantly in the process of breaking down as it flows toward the main character in the story, taking on his 'personality,' vocabulary, syntax, and even his values as the narrative distance lessens" (34). In short, as the novel draws near its close and the temporal distance between the narrator and Stephen—who is growing older twice as fast as the narrator—lessens, so do the differences in outlook, personality, and experience between the two of them. The decreasing narrative distance between Stephen and the narrator thus makes it more difficult to differentiate between them, especially in combination with the stream-of-consciousness sequence of this paragraph (V.362–9).

What, then, do we make of this "incense" that bears much similarity to the metaphor of the "crushed herbs" and "maddening incense" in chapter II? Both describe this metaphorical incense as rising or wafting up, either "before the eyes of his mind" (II.932) or "through the mould from many hearts" (V.364). Both descriptions are also inconsistent: in the former instance, the incense is said first to go up before the "eyes of his mind" and later before his actual eyes, whereas the latter describes the odor first as "moral" (V.363) and then as "mortal" (V.366). It should be noted that the "incense" of Stephen's Green is an actual smell, as opposed to the precarious metaphor of the crushed herbs and incense in chapter II. The similarities between the two lend support to the idea that in the universe of *Portrait*, literal and figurative smells have the same properties. However, their differences say more about the progression of Stephen's artistry. The first "incense" makes for a clunky metaphor, whereas the second is more sophisticated, albeit equally enigmatic. The improved fluidity of the second allusion shows Stephen's enhanced aptitude for aesthetic and linguistic sensibilities.

That said, it must be remembered that Stephen's linguistic associations were crafted by Joyce and are thus inescapably his wordplay intended to seem like Stephen's. Taking this into account, we learn something about Joyce's creative process: that his words at times are not chosen solely based on their exact denotations, but rather by virtue of their sounds, shapes, and the connotative imagery that arises from them. Moist, rainy earth is imbued with an odor that is "moral" as well as "mortal," a toying with

syllables that allows Joyce to continue with his metaphor based on a free association with the “[moral] incense” that wafts “through the mould of many [mortal] hearts.” The pattern is thus established of art through association, in which loose subconscious connections create an ambient aesthetic. Now that we have an inkling of Joyce’s artistic process, we realize that it is in large part incompatible with Stephen’s aesthetic theory—for Joyce does not create art through the “luminous silent stasis” (V.1401) of aesthetic apprehension, but by playing around with words and sounds, which is, in large part, a fluid process of trial and error rather than a sudden, overwhelming moment of insight.

Even after seeing both Joyce’s conscious maneuvers and subconscious associations at work within Stephen’s world, is it possible to determine how much of *Portrait* is a result of the former and how much is a result of the latter? To what extent did Joyce, in writing *Portrait*, surrender to the deeper layers of his own mind, over which he himself had no control? It is impossible to know completely, for we cannot permeate Joyce’s mind. However, we can see that Joyce’s consciousness, while fundamentally intertwined with Stephen’s at all times in the novel, becomes more apparent and richly embedded within the text as Stephen matures and solidifies into the complex character he is at the end of the novel. In this way, Joyce gradually erodes the barrier that he has constructed between Stephen and himself, and Stephen’s consciousness (as well as his subconscious) converges with his own. Certainly, by *Portrait*’s final pages, Joyce himself found it impossible to discern which of Stephen’s olfactory associations were consciously crafted and which stemmed from the deepest layers of Joyce’s own subconscious mind.

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KRISSY KING is a rising sophomore studying International Relations and Public Health with a minor in German. She is a Trustee Scholar as well as a member of the University Honors College. Krissy is originally from Pittsburgh, Pennsylvania, where she lives with her parents and four younger siblings. This essay was written for Michael Degener's course, WR 100: James Joyce: Voicing Modernity.

From the Instructor

A key hypothesis tested in this course is that all psychological behaviors are entailed by neurological processes. In the case of Dissociative Identity Disorder (DID), in which the host self breaks into one or more distinct alters, is it the trauma of early abuse and resultant stress that ultimately modifies the brain's structure, or are there also psychological processes at work? Why don't all traumatized children develop DID? These are the kinds of questions Sean's detailed and complex hypothesis aims to investigate.

It is clear from the first pages of his paper that Sean is most persuaded by the neurobiological evidence. He has read the journal articles closely, so his summaries are focused, logical, and detailed. He can draw his own convincing conclusions from the research in support of the analysis he is conducting. I especially like the clarity of his scientific prose. He defines key terms quickly and exactly and describes essential processes in immediately accessible language so that he never loses his reader.

Early versions of this paper developed the possible role of the Orbital Frontal Cortex in the expression of typical DID behavior, but those drafts lacked a trigger to show how and why the dissociation occurred. It was Sean's discovery of the more psychological attachment theory that made all the pieces fall together. Sean's logical organization of the paper creates a sense of continuous discovery, of having many of the questions posed by the biology very closely answered by the psychology. This combination of deep research and original speculation make the paper a real pleasure to read again half a year later.

— Stephen Scheurman

SEAN MANTON

Prize Essay Winner

DISORGANIZED ATTACHMENT AND THE ORBITOFONTAL CORTEX AS THE BASIS FOR THE DEVELOPMENT OF DISSOCIATIVE IDENTITY DISORDER

Dissociative identity disorder (DID), formerly known as multiple personality disorder, is perhaps one of the most well-known and extreme psychological disorders. While DID has been extensively studied, a clear cause is still undetermined. Childhood trauma has been identified as an important factor; however, it is not sufficient on its own to explain the roots of DID. One particularly promising theory posits that, in addition to traumagenic origins, infant disorganized attachment may be a significant contributor to the development of DID. Neuroimaging studies have identified areas of the brain, the orbitofrontal cortex in particular, that function differently in DID patients, thus providing a neurobiological basis for the disorder. By examining the effects of trauma on neurodevelopment, some of the differences between the normal and the DID brain can be accounted for. Attachment theory allows the cause of DID to be traced even further back to neurodevelopment that occurs during infancy. The combination of disorganized attachment with later childhood trauma provides a strong basis for the development of DID.

Neuroimaging, in its many forms, can provide structural and functional information about the brain and is a powerful tool in understanding neurobiology. Thus, neuroimaging studies pave the way in the search for a neurobiological understanding of DID. Several promising studies have been performed that imaged the DID brain. Vermetten, et al. used MRI to compare the brain structure of female patients with DID to healthy subjects and found that the hippocampus and amygdala of the DID patients were significantly smaller (19.2% and 31.6%, respectively) (630). Such a significant difference in brain structure would imply that the hippocampus

and amygdala are key in understanding DID, which seems to make good sense given the hippocampus's role in forming long-term memories and the amygdala's in regulating emotion. Irregularities in these brain areas would, thus, help account for the variance of memory and emotions among the different alters present in DID.

Unfortunately, the results of Vermetten's study were largely discredited by another study, which used MRI to compare subjects with post-traumatic stress disorder (PTSD) to healthy subjects, as well as subjects with dissociative amnesia (DA) or DID but not PTSD. This study found similar results in terms of reduced hippocampal and amygdalar volume in PTSD patients, but found that there was no significant difference between the DA/DID patients and normal subjects (Weniger, et al. 281). Vermetten recognized the possibility of such a result, stating that "a potential limitation of this [Vermetten's own] study is that all of the patients with dissociative identity disorder also met the criteria for PTSD, which makes it impossible to establish that the findings are not related to the comorbid PTSD diagnosis" (634). However, he also points out that "patients with true dissociative identity disorder without PTSD essentially do not exist" (635). Seeing as Weniger's study managed to find patients with DID but not PTSD, Vermetten's statement would appear to be an exaggeration. Nonetheless, it is true that DID is often, if not in the majority of cases, accompanied with comorbid PTSD. Thus, although Vermetten's findings cannot shed much light on the specific neural basis of DID, his study does have potential to provide insight into some of the symptoms of many DID patients.

While there may not be such a clearly identifiable structural difference in DID patients, functional imaging studies (those that measure the amount of brain activity) have produced some valuable results. Two studies of interest measured regional cerebral blood flow (rCBF) as a way of inferring relative activity in different areas of the brain. One study compared rCBF of DID patients while they were in their host personality with normal controls and observed lower rCBF in the orbitofrontal cortex (OFC) of the DID subjects (Sar, et al. 219–20). The orbitofrontal cortex is thought to be involved in decision-making. Thus, Sar hypothesizes that the decreased functioning of the OFC results in impulsivity and that the

switch to an alter personality may represent a drastic expression of impulsive behavior caused by cognitive and emotional conflicts (222).

The second study, conducted by Reinders, et al., measured rCBF of DID subjects in a neutral personality state (NPS) compared with a traumatic personality state (TPS) while they listened to a memory script. The procedure is described: “Subjects listened to two autobiographical audiotaped memory scripts involving a neutral and a trauma-related experience. The neutral memory script was regarded as a personal experience by both personality states. However, only the TPS experienced the trauma-related script as personally relevant” (2120). The study discovered no difference between the NPS and TPS when listening to the neutral script, as well as no difference between the neutral and traumatic scripts for the NPS. Comparing the NPS and TPS rCBF when listening to the traumatic script, though, the study found a deactivation pattern of brain areas in the NPS. This pattern matches the deactivation pattern found in studies of normal subjects when recalling non-autobiographical memories as opposed to autobiographical memories. Thus, one conclusion of the study is that, on a neurobiological level, the alters in DID do in fact have different autobiographical selves. Furthermore, among the brain areas that were deactivated in the NPS versus the TPS is the medial prefrontal cortex (2122–3). This is a significant finding, as the prefrontal cortex is involved in personality expression and also contains the orbitofrontal cortex. These two studies both implicate the orbitofrontal cortex as a key to understanding DID.

The function of the orbitofrontal cortex can be summarized very simply as decision-making. However, to leave it at that would be a gross understatement of the functions it actually performs. A more adequate description, provided by Rhawn Joseph, is that the OFC is the “senior executive of the emotional brain” (qtd. in Schore 29). An examination of the complex workings of the OFC will illuminate the degree to which it can be seen as the crucial element in DID. Schore summarizes the results of several studies into the functions of the OFC:

Indeed, this prefrontal system [the OFC] appraises visual facial information (Scalaidhe, Wilson, & Goldman-Rakic, 1997), and processes responses to pleasant touch, taste, smell (Francis, D., *et al.*, 1999) and music

(Blood, Zatorre, Bermudez, & Evans, 1999) as well as to unpleasant images of angry and sad faces (Blair, Morris, Frith, Perrett, & Dolan, 1999). But this system is also involved in the regulation of the body state and reflects changes taking place in that state (Luria, 1980). (30)

Antonio Damasio posits in his model of consciousness that the development of a notion of self arises from the brain's second order mapping of the relation between "objects" and the organism (169–70). Within this model of consciousness, the OFC, with its functions in both emotional processing of sensory information as well as homeostasis and the mapping of the body, would seem to be a critical component in the generation of a self. Thus, it is quite plausible that an abnormally functioning OFC could lead to the generation of multiple selves. Furthermore, Schore states:

The functioning of the orbitofrontal control system in the regulation of emotion (Baker, Frith & Dolan, 1997) and in "acquiring very specific forms of knowledge for regulating interpersonal and social behavior" (Dolan, 1999, p. 928) is central to self-regulation, the ability to flexibly regulate emotional states through interactions with other humans—that is, interactive regulation in interconnected contexts—and without other humans—that is, autoregulation in autonomous contexts. (33)

What Schore terms here as "self-regulation" seems to describe the concept of a unified personality. Hence, it seems that abnormal functioning of the OFC serves as a very solid neurobiological basis for the development of DID. With this basis in mind, it is easier to identify a neurodevelopmental cause of DID. Complementarily, by examining the neurodevelopmental aspects of DID and the OFC, the role of the OFC in DID will be further solidified.

Generally, childhood trauma has been implicated as the causative factor in DID. It is well documented that traumatic experiences are disruptive to normal development in children. Heide reviews the findings of several studies to identify a broad spectrum of negative effects caused by trauma on childhood development. These include that childhood trauma can lead to long-term changes in the brain through negative effects on

areas of the brain such as the limbic system (which contains the amygdala and hippocampus) as well as on neurotransmitters, and that traumatic experiences can cause dissociation of mind and body (224–8). Childhood trauma certainly has enough strong neurodevelopmental consequences that it would seem the likely candidate in the explanation of the origins of DID. A study by Briere of 618 subjects who responded to the Multiscale Dissociative Inventory (MDI) and the Detailed Assessment of Posttraumatic Stress found that 90% of subjects with clinically elevated scores on MDI scales also reported a trauma history. However, the subjects with clinically elevated scores represented only 8% of the subjects who reported a trauma history (80). While Briere's study confirms that trauma is a unifying factor in dissociative disorders, the fact that only a small group of subjects with trauma develop DID or any sort of dissociative disorder means that there must be additional factors that play into the development of DID.

Attachment theory provides another perspective and traces the origins of DID further back to attachment behaviors in infancy through a psychological model hypothesized by Giovanni Liotti. Attachment theory posits that an infant's development of attachment to its caregiver, usually its parent(s), plays a large role in the development of its personality and later social behaviors. Parenting style is the main factor that leads to different patterns of attachment behavior. These patterns are classified based upon the infant's behavior around its parent, especially when the parent leaves or returns. Most infants exhibit secure attachment. They will cry when their parent leaves them and are comforted when their parent returns. Secure attachment forms as a result of the parent consistently responding to the infant's needs. On the other hand, neglectful parenting tends to lead to insecure attachment, in which the infant either behaves indifferently to the parent or is upset when the parent leaves but continues to be upset at the parent even on his or her return. Lastly, of interest to DID is disorganized attachment, in which the infant displays conflicting or disoriented behaviors around the caregiver. Main and Hesse found that a combination of frightening and frightened behavior on the part of the caregiver may result in disorganized attachment in an infant. If the caregiver displays frightening or abusive behavior, the infant is faced with the paradox of the caregiver as a source both of safety and of danger. If

the caregiver appears frightened, the infant may be led to believe there is a threat nearby, or that the caregiver is frightened of the infant. Main and Hesse hypothesize that disorganized attachment is, thus, accompanied by the development of conflicting models of self within the infant. Frightening behavior by the caregiver will lead the infant to view itself as helpless and vulnerable. Frightened behavior will lead the infant to view itself as threatening. In some situations, the infant may also develop a model of self where it sees itself as a caregiver (qtd. by Liotti 198–199).

Liotti builds upon the work of Main and Hesse by hypothesizing that the conflicting models of self that are developed within an infant with disorganized attachment create the risk for the later development of DID. He proposes different possible outcomes for such an infant. If later experiences favor one model of the self, it may eventually be selected over the others. On the other hand, multiple models of the self may continue to develop, disposing the child towards dissociation as a way of handling stress. If the child then experiences trauma, she will dissociate as a defensive mechanism and may begin to use one of the models of self to develop an alter (198–201). Thus, Liotti's model provides a strong possibility that the development of DID will be linked to disorganized attachment during infancy.

Liotti's model is supported by the findings of a study by Ogawa, et al., which measured the dissociative symptomology of 168 18- to 19-year-old subjects four times across 19 years and found that disorganized attachment during infancy was a strong predictor of later dissociative symptoms (860, 874). However, even more convincing is Schore's statement that "attachment experiences, face-to-face transactions of affect synchrony between caregiver and infant, directly influence the imprinting, the circuit wiring of the orbital prefrontal cortex" (30). Thus, a neurodevelopmental link exists between attachment and the OFC, solidifying the case for both as bases for DID. The conflicting attachment experiences endured by an infant with disorganized attachment would lead to irregular development of the OFC, which would mirror the development of the conflicting models of self. Later childhood trauma would further affect the brain's development and, thus, allow for the dramatically different neurological functioning of patients with DID. Liotti's attachment theory model of DID provides an intuitive understanding for how DID arises from a psy-

chological perspective, which, combined with the neurobiological perspective provided by neuroimaging studies, creates a very complete foundation for understanding the causes of DID.

The attachment-OFC model has some important implications. Lakatos states that disorganized attachment is displayed by 80% of infants who have been maltreated, but also in 15% of infants in low-social-risk populations (633). This indicates that while poor parenting or maltreatment is the primary cause of disorganized attachment, other factors also play a role. Lakatos performed a study in which DNA samples were taken from one-year-old infants who were classified as disorganized or non-disorganized. The study found that infants with a 7-repeat allele in the dopamine D4 receptor (DRD4) gene were four times as likely to display disorganized attachment (633–4). Thus, the attachment model reveals a genetic risk factor for developing DID.

The attachment model also serves to resolve a long-term debate about DID. Due to its almost unbelievable symptoms, DID has always been a controversial diagnosis. Many skeptics argue that DID is iatrogenic rather than traumagenic in origin. That is, they believe that DID is the result of the suggestive influence of a therapist rather than a legitimate disorder. Proponents of this iatrogenic model of DID believe that patients' alters are not truly present before therapy, but appear during therapy as a result of a therapist suggesting to the patient that he has an alter. Furthermore, they question the link between childhood trauma and DID, suggesting that the therapist implants false memories of trauma. These concerns are not unreasonable; the DSM-IV states that many DID patients also score highly on hypnotizability scales (American Psychiatric Association). Thus, it seems possible that the suggestive power of a therapist might lead an easily hypnotizable patient to believe he has DID and memories of childhood trauma and, thus, display the symptoms. However, while some cases of DID might have iatrogenic origins, the attachment-OFC model provides an undeniable neurobiological basis for traumagenic origins of DID, thus refuting the possibility of a purely iatrogenic model of DID. Those who continue to support the iatrogenic model would simply seem to be in denial of the amazing neurodevelopmental capabilities of the brain.

Much remains to be understood about this complex and fascinating disorder. However, the attachment-OFC model of DID offers a very

promising groundwork to unravel these mysteries as well as improve the treatment strategies and provide insight into the nature of human consciousness in general. Understanding DID from an attachment perspective provides a different perspective from which to approach psychotherapy treatments for DID patients. In addition to traditional methods of treatment, such as encouraging the patient to consolidate his personalities, therapies that address the patient's attachment patterns may prove useful. The fact that the extraordinary symptoms of DID can be traced to clear neurobiological and neurodevelopmental origins is an undeniable example of the amazing potential of the brain's neuroplasticity. While the expression of this potential is often quite tragic for those who suffer from the negative symptoms of DID, it is also this potential that makes all the wonders of human consciousness possible. Additionally, DID sheds light on the importance of the integration of the entire brain in the production of consciousness. The irregular functioning of the OFC leading to DID is an extreme case but it is illustrative of how differences in even one brain area can lead to dramatic changes in the manifestation of consciousness as a whole. For those who suffer from DID, it is a very unfortunate occurrence; however, the ability to study these patients is a great gift to the furthering of cognitive neuroscience. Continuing to build upon the attachment-OFC model of DID will lead towards a better future for the treatment and prevention of DID and the cracking of one of the greatest mysteries known to man—that of his own mind.

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SEAN MANTON is a Biomedical Engineering major in the Class of 2013. He would like to study Neuroscience/Neuroengineering in grad school and thus found Professor Scheuerman's course truly fascinating. He would especially like to thank Professor Scheuerman for helping him with his development as a writer, for the insight into cognitive neuroscience and the nature of consciousness that he gained from this course, and of course for nominating this essay. He would also like to thank his WR 100 teacher, Professor Eubanks. This essay was written for Stephen Scheuerman's course, WR 150: The Nature of Consciousness.

From the Instructor

Students in WR 100 “Topics in Public Health” study an 1854 cholera outbreak, a 20th-century meatpacking scandal, and the emergence of industrial farming, events that provide an opportunity to examine the values embedded in public health discourse and practice. For example, under what circumstances should policy makers limit personal freedom in the interest of promoting public health? To what degree are tradeoffs between individual and collective interests justified? And are individual freedom and “the common good” by definition at odds? These questions are as critical to contemporary policy debates on food safety as they were to Victorian Londoners contemplating the need for a sanitation infrastructure to stem the spread of disease.

Popular food writer Michael Pollan asserts his belief that enlightened self-interest is not at odds with the common good when he advises the average consumer to “stop participating in a system that abuses animals or poisons the water or squanders jet fuel flying asparagus around the world. You can vote with your fork... and you can do it three times a day.”(1) Put differently, when consumers understand the hidden costs of factory farmed food, they will exercise personal choice in a socially responsible way. Critics say Pollan’s views are elitist, while so-called “foodies”—and public health advocates—hail him as “way ahead of the curve.” In the final essay of WR 100, students were asked to respond to his statement, drawing on course readings that represent 150 years of public health history.

— Melanie Smith

PETER STEVENS

OPPOSING INDUSTRIAL FOOD

Americans today are accustomed to having access to a selection of diverse and inexpensive food options available in numerous produce markets. The diversity and affordability of these products are the result of industry-wide practices promoting high rates of output along with heightened efficiency. Advancements in farming procedures and technologies allow for exorbitant quantities of production from increasingly concentrated production plants. Unfortunately, these practices have proven to be “unsustainable” due to overuse of natural resources, environmental damage, and a failure of the food system to provide sufficiently nutritious products to the general population (“Voting” 2–3). In his article “Voting With Your Fork,” Michael Pollan, Knight Professor of Journalism at the University of California, Berkeley, argues that the informed consumer can combat this system by avoiding consumption of industry-produced food, thus promoting change through communal action (4). This notion of consumer freedom, however, fails to consider the practicalities of adjusting buying habits and budgets to accommodate this movement, and it overstates the ability of consumers alone to spark such radical development. While the ideas and values supporting long-term reform through a collective shift in consumer habits are sound, it remains unrealistic to expect that the average consumer possesses the capacity to make such adjustments—and hold such influence—under present-day circumstances.

Factory farms, also known as Concentrated Animal Feeding Operations (CAFOs), produce the majority of the “meat, poultry, eggs, and milk” sold in the U.S. today (Weeks 25). This accounts for a great margin of the food consumed by Americans, as the “typical American

eats more than 200 pounds of meat per year,” a number that “continues to rise” (Niman 3). In order to keep up with demand, as well as to generate increased profits, the food industry has developed techniques to concentrate food production into small areas and minimize extraneous costs. This involves forcing high volumes of animals to live in densely packed quarters, which raises issues concerning animal health. The food industry’s solution is to administer a variety of antibiotics to the animals raised on factory farms; however, while enabling many of these animals to survive, the antibiotics also “help generate drug-resistant bacteria and spread infections in humans” (Weeks 25). In effect, the very measures used to produce food are directly at odds with the well-being of American consumers.

The damages sustained by the food industry’s practices extend not only to the population, but to the environment as well. These damages exist in the forms of overuse (of natural resources) and pollution. According to Pollan, the rigor and scale of “industrial agriculture” cause it to “literally consum[e] the soil and genetic diversity on which it depends” (“Voting” 2). This disproportionate use of resources is impossible to uphold. In addition, the extraordinary output of CAFOs coincides with an excessive production of waste, which, combined with a lack of appropriate processing measures, results in extensive environmental pollution. Factories often store this waste in “lagoons,” which lack secure fortification—they overflow from “light rains,” and are lined with polyethylene that can be “punctured by rocks . . . allowing [manure] to seep beneath . . . and spread and ferment” (Tietz 2). Additionally, farmers attempt to deal with this waste by spraying it over their fields as a fertilizer, albeit in excessive amounts, which can result in “hundreds of acres” being covered by “shallow mud puddles of pig [waste]” (Tietz 2). This practice results in high amounts of unnecessary pollution, expanding the environmental footprint of factory farms while failing to provide any beneficial gains towards production and efficiency. Due to the dominant position of industrial corporations within today’s infrastructures, it is beyond consumers’ abilities to take action influential enough to pressure them into altering these practices.

While pollution from waste is problematic enough, it is made worse by the high levels of nutrients contained within (Weeks 31). A result of the numerous antibiotics supplied to the animals within factory farms, this nutrient-rich waste can have devastating effects on entire ecosystems.

This is encompassed by the damages sustained by the Chesapeake Bay and its surrounding areas, which become victims of poultry manure flowing from multiple rivers into the bay itself. The nutrients prevalent in the waste act as a “fertilizer” to promote a surplus of algae growth, which dies, decomposes, and consumes oxygen. This process creates “dead zones”: large, lifeless spans of water that constitute 40% of the bay’s volume, in which life forms die if they become trapped (“Poisoned Waters”). In addition to severely damaging the bay’s ecosystem, polluted waters themselves can be harmful even to humans—one can become sick simply by coming in contact with contaminated water (“Poisoned Waters”). Not only is environmental pollution a pressing issue due to its frequency, it is exacerbated by the very actions taken by the food industry—the use of antibiotics—to make such production (and, thus, such pollution) possible.

To oppose the industrial food system, Pollan proposes that Americans take individual action to purchase foods from sources that do not promote concentrated production, overuse of injections, and widespread pollution. He claims the current system “depends on our ignorance of how it works for its continued survival,” which is to say, consumers only continue to take part in the industrial food system due to a lack of general education of how it functions (“Voting” 3). If individuals were better informed of the negative implications stemming from the industrial food system, he claims, they would refuse to purchase industrially produced food and would instead exercise free will to explore other options (“Voting” 3). Nevertheless, it is not only the responsibility of individuals to advocate for change in this system. Although it is becoming easier for individuals to find markets catering to more wholesomely produced food, such as Trader Joe’s and Whole Foods, these alternatives remain more expensive than traditional options. Likewise, although it is possible for individuals to find information regarding the origin of the food they purchase, the information is not always readily available, nor is it clearly stated (Niman 2). The difficulties faced by consumers in finding, interpreting, and understanding the origins of purchased food are at odds with their ability to make informed decisions.

Supporters of Pollan’s views may argue that the “cheap food” produced by the industrial food system is “dishonestly priced,” and, rather, is “unconscionably expensive,” embodied in costs to the environment, public

health of Americans, and health care (“Farmer” 2, 15; “Voting” 3). Moreover, prices are driven down by government subsidies, further contributing to their “artificial” cost. Thus, it is a worthy investment for consumers to pay more up front for their food, a price based on “value” (Niman 2). However, this argument is based on the premise that the majority of consumers have both the monetary means and access to these resources to take advantage of them. It assumes that, despite the limited information that the food industry provides, the average family has sufficient access to what they need to know in order to make these changes.

In reality, it is difficult for many families to make the adjustments necessary to subsist on non-industrially produced food. Given the current economy, the disparity between the up-front price of industrially and non-industrially produced food can be too much for families to accommodate, as maintaining a balanced budget provides challenge enough already. There is also the question of proximity—although farmers’ markets and other alternative sources of food are becoming more common, they are not available in all areas, an inconvenience not all consumers are prepared to deal with. Finally, there is the issue concerning consumers’ desire and ability to spend time researching alternatives to industrially produced food. Even individuals with the money and accessibility to alternative markets may become disillusioned with the opaque and ambiguous vocabulary found on food labels and the difficulties with making sense of them (Niman 3, 5, 6).

Therefore, the responsibility of opposing the currently wasteful and destructive industrial food system falls on the government as well as on consumers. Although consumers have a responsibility to make informed decisions that benefit them (and, in this case, that benefit the general population), the government has a duty to oversee and verify the information made available to consumers to make such decisions possible. Furthermore, it is beyond the capacity of individuals alone to combat the pollution resulting from industry practices. Although the government is taking measures to regulate farmers’ spraying of manure over fields and polluting bodies of water, these measures are clearly not enough (Weeks 39). Additionally, if the government were to subsidize smaller-scale produced foods, they “could be as inexpensive as the [food] coming out of factory farms,” further addressing the disparities between what consumers should do and what is practical for them (Niman 2–3). It is the complementary efforts of

the government and individuals—the former assuming responsibility for more universal controls, allowing the latter to make informed decisions—that are necessary to transform the primary food production methods of America.

While Americans continue year by year to purchase their food within a flawed system, the need for trends to shift becomes increasingly urgent. The fundamental purpose of the food system, to provide a population with sufficiently nutritious food products, is unfulfilled by the current industry, which is focused on the quantity of food produced over its nutritional qualities. Indeed, Pollan claims, “Historians of the future will marvel at the existence of a civilization whose population was at once so well-fed and so unhealthy” (“Voting” 2). When taken into consideration with the scope and destructiveness of the pollution produced by this system, as well as with its inevitable burning out of natural resources, the pressure mounts to change the way we produce food. Otherwise, America potentially faces a national security risk resulting from an inability to supply its own population with sufficient food products. A nation incapable of feeding itself is extremely vulnerable to foreign pressures, losing its leverage in “international dealings” (“Farmer” 9). This concept is unprecedented for a nation with such significant standing in the international world today and, ideally, will remain so.

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From the Instructor

Albert Tawil's essay on the documentary *Capturing the Friedmans* (2003) illustrates the value of asking just the right question. The film tells the story of Arnold and Jesse Friedman, who were accused of sexually molesting boys in the 1980s, and ends ambiguously, inviting viewers to ask if they were guilty or not guilty. Albert, however, pursues a more subtle and urgent question: Why did the Friedmans videotape themselves throughout their ordeal?

Drawing on Susan Sontag's seminal book *On Photography*, Albert explores the complex and ultimately unstable relationship among camera, subject, and memory. He works from different angles, analyzing the Friedmans' varying motivations rather than attempting to simplify their moral positions. Albert judiciously selects and interprets evidence from the film and, in a final act of intellectual balance, suggests that the Friedmans are no different from us: we are all chronic self-documenters, "creating a reality that otherwise would not have existed."

— Marisa Milanese

ALBERT TAWIL

CLOWN BY DAY, DOCUMENTARIAN BY NIGHT

The documentary *Capturing the Friedmans* (2003) includes two types of footage: footage taken by the director, Andrew Jarecki, and footage taken by the Friedman family, two of whom were accused of child molestation in 1988. The father, Arnold, who once made a career performing in a band, ran popular computer and music classes in the basement of the family's Long Island home and was accused, along with his son and assistant, Jesse, of sexually abusing the students. Jarecki conducted dozens of interviews with the Friedmans' accusers, the law enforcement officials, and the Friedman family members themselves. Jarecki also includes clips of the Friedmans' home video, which documents things that most other families would not do, not to mention *film*. David, the oldest son, was the new owner of the camera and usually the one behind the lens; he lets us see almost everything that goes on behind literally closed doors (he even films a private video diary) but does not give us a clear reason for documenting these scenes in the first place. As viewers, we wonder less if they actually committed the crimes than why they would film the destruction that came after them. His camera gave his family of performers a viewer, but the effect was more than just the addition of an audience. In an attempt to capture his family naturally in action, David ultimately created what the camera saw. His filming, in turn, creates a circular logic: what he intended to record with his camera was, in fact, constructed by the camera, creating a reality that otherwise would have not existed.

One cannot address David's camera without first considering the family's circumstances. As the documentary shows, the Friedmans were responsible for an array of home video and photography almost larger than

their own story. There were not only the typical birthday-cake moments and baby pictures from the past caught on camera, but also many not-so-sugar-coated family arguments and uncomfortable dialogue amidst the family's legal trouble. After Elaine, Arnold's wife and mother of the three children, does not support her accused husband, the two sides argue constantly, often while the camera is rolling. In contrast, we also see moments of awkward happiness: Arnold dancing with his sons in the basement during his house arrest, the brothers staying up all night before Jesse's guilty plea, and Jesse joking around on the courtroom stairs before he goes to jail. This voluminous and unusual range of footage inevitably raises the question: why were they so devoted to filming?

One can't help but ask this question since the footage captures things that are hardly enjoyable to revisit. However, from the viewpoint of the family, it seems that they filmed for the same basic reason that most other families record home video: future memory. The night before Jesse goes to jail, for example, David is wearing the documentary filmmaker hat, interviewing Jesse:

Jesse: Today is the day before I went to jail—

David: Went to jail? Because we are watching it?

Jesse: Yeah, went, because we will be watching this after I am already out of jail.

Here, Jesse is consciously altering his verb tenses to satisfy the future viewer, which he assumes will be the family. They are using the video as a tool for remembering everything as they want it to be; all of what they do and say at the time purposely tailor this memory. While discussing this piece of home video in retrospect, David furthers this claim, saying,

I shut the tape because I didn't want to remember it myself . . . it's a possibility . . . because I don't really remember it outside of the tape. . . like when your parents take pictures of you. . . do you remember being there or do you remember the photograph hanging on the wall?

This is proof that David and his brothers were consciously aware of the video's effect on their memories. Instead of in their brains, their memory resides in the video camera—because that is the only place where they can choose what to remember and how to remember it.

In this way, David exemplifies a modern psychological phenomenon: the video camera lets the person believe that the recording is indeed what he remembers, when, in fact, he only remembers it through the recording. In the essay “Familiar Pursuits, Editorial Acts: Documentaries after the Age of Home Video,” Marsha and David Orgeron agree that memory gets a helping hand from film, claiming that “personal memory is made tangible . . . when a visual record appears to substantiate it” (47). They insist that video records do not exist alongside personal memory but take on the form of personal memory itself. Not only does video “substantiate” personal memories, but it also has permanence on which the temporary personal memory relies. In her book *On Photography*, Susan Sontag writes, “After the event ha[s] ended, the picture will still exist, conferring on the event a kind of immortality it would never otherwise have enjoyed” (11). In other words, while memory is ephemeral, photography and video both freeze it and make it worth freezing; Sontag believes that these moments only become important because the camera generates that importance. With Jesse talking to David in the basement about future events in past tense and David shutting off the camera to disallow the memory, they are writing in stone what would otherwise be written in chalk—or not even written at all.

Although it seems as though the Friedmans are filming for the sole purpose of helping to remember, this does not explain why they would record family arguments. Who would want to preserve the moment of the entire family in chaos? When it comes to these moments that most people would rather forget, David must have a reason for filming other than for the sake of remembering. Marsha and David Orgeron attempt to answer the question: “Aggressive, confrontational, and propagandistic at the microscopic level, David’s videography teases out familial chaos in search of affirmation of his own beliefs” (53). They maintain that David’s real motive behind the camera was to elicit—by provoking conflict and argument—confirmation of his mother’s guilt and his father’s innocence. Throughout the story, the brothers continually blame their mother for not standing behind the family, and David looks to prove that point with his camera. For example, when Arnold is home on house arrest to prepare for his trial, David convinces his father on camera that Elaine has betrayed them:

Mommy believes you did it and she believes that you should go to jail and she believes that she should deserve everything that's left and you shouldn't have any part of it . . . We lived with her for two months while you were in jail and we learned not to trust her.

These very beliefs lead David to seek visual evidence of his mother's wrongdoing. An example of this evidence is the night before Jesse is to enter his guilty plea: the three brothers are in the house helping him pack and sharing some last moments with him. But the brothers also share a heated moment with their mother, which was, not surprisingly, recorded on tape. While the brothers are sitting around in the basement, Elaine comes downstairs only to demand that her children leave first thing in the morning. The children hostilely snap back, much for the purpose of the camera:

David: We're here for Jesse—

Elaine: I don't give a shit why you're here. . . I want you out of this house tomorrow morning.

David: Can't you put your anger aside for one minute?

Elaine: I cannot put my anger aside about you. You have been nothing but hateful, hostile, and angry ever since this began!

The brothers capitalize on a key moment to frame their mother as being against her family. The pieces of home video such as this one seemingly try to find her in a culpable state and to record it, almost for the sole purpose of proving their mother's guilt to whoever comes across the film.

Although David's desire for "affirmation of his own beliefs" leads him to take footage, this very desire directly affects the footage itself, ironically nullifying his reasons for filming. He wants to remember what happened through the camera and to show evidence of his mother's wrongdoings; however, he actually creates the memories by provoking his mother. The camera ends up filming only what the camera itself creates—the majority of the home video clips show the subjects and events behaving either for or in response to the camera. Even some of the home video footage taken years before shows Arnold or the children speaking to the camera and into a microphone. In one clip, the extended family is

sitting around the backyard when Arnold proclaims, “The whole family assembled! Great Neck, New York!” They are acting solely to entertain the camera, as their behavior undoubtedly would not have existed without it. Susan Sontag advances this idea, maintaining that photography is its own life force, not reliant upon the subject in the lens. She writes, “A photograph is not just the result of an encounter between an event and a photographer; picture-taking is an event in itself” (11). When people stop what they are doing and pose for a picture or, like Arnold, stop and announce the event to a video camera, the recording becomes its own entity. It is not catching the subjects as they act, but eliciting an action from them. The Friedmans exemplify this principle the night before Jesse is to enter his guilty plea, when David literally interviews Jesse on camera. When asked about the situation at hand, Jesse replies solemnly, “I am in the worst scenario possible.” Later on, while they are getting ready in the morning, David asks, “Jesse, what are you thinking?” to which Jesse replies, “I’m not.” Conversations like these display the family as if they are already making a documentary of themselves. By questioning and adding input, David creates his own event for the camera; instead of being a *cinéma-vérité* “fly on the wall,”—which ostensibly would have no input or effect whatsoever—David is what the Orgerons call a “fly-in-the-face” (51).

Because the Friedmans’ actions were generated by and for the camera, it might be easy to render their collection of home video as “Reality TV.” In most reality television shows, the camera is creating something, such as an argument or an emotional conversation, for the audience’s entertainment. Indeed, Kenneth Turan of the *Los Angeles Times* is troubled by how closely the Friedmans compare to the average reality television subject. In his 2003 review of the movie, Turan asks, “Is morbid curiosity. . . any excuse for intruding on and making a spectacle of these people’s lives?” Bothered by their exploitation, Turan questions the way Jarecki represented the Friedmans and claims that the space between the Friedmans and reality television is “smaller than we are comfortable accepting.” Although similarities exist between the family’s volatile home video and the typical reality television show, there are a couple of essential differences. In most reality television shows, the camera crew consists of outsiders employed by the network. However, in the Friedman home, the cameraman is somebody from within the family, and the camera itself becomes almost like

another family member. The intrusion that Turan is concerned about in the Friedmans' case is actually minimal compared to a family on a reality show; as a result, the Friedmans' footage is less invasive and less fabricated. In addition, the Friedmans are unique in that they are undeniably a family of performers. In the movie, David remembers with admiration one of his father's decisions: instead of using his engineering degree from Columbia University, he chose to travel to Canada to play in his band. Even David works as one of the most highly regarded professional clowns in New York City. Turan criticizes the fact that the documentary is "making a spectacle" of the family, but the family members are, in fact, making this spectacle of themselves, self-producing "The Friedman Show."

David ultimately invalidates his intentions to film by constructing the events that he seeks to capture. His camera is a tool to create memories and evidence of his beliefs; the act of recording gives birth to these events, rendering his documentation of true reality null and void. In the opening song of the movie, Buck Owens sings with irony, "They're gonna put me in the movies . . . and all I gotta do is act naturally." This idea cannot be further from the reality in the Friedman home, with David and his camera affecting and adding significance to every move. In his attempt to "capture the Friedmans," David actually changes the Friedmans and records their altered behavior. Although David's official occupation is a clown, he is essentially a *cinéma vérité* provocateur; the credits list Andrew Jarecki as the director of the movie, but David Friedman was recording long before Jarecki came along.

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ALBERT TAWIL, of Asbury Park, NJ, is a member of the BU School of Management Class of 2014, majoring in Business Administration. Albert also serves as a teaching assistant and is a member of the BU Sports Radio broadcasting crew. This essay was written for Marisa Milanese’s course, WR 100: Documentary Film: Theory, History, and Form.

From the Instructor

Chantal de Bakker's thoughtful essay highlights an ongoing conundrum within society: how new technologies enlarge opportunities at the same time they expand moral dilemmas. Chantal explores this tension in her essay on the use and potential misuse of ultrasound technology in prenatal care. She deftly draws on the work of scholars of innovation and technology, most notably Everett M. Rogers, to help us understand how even the most beneficial technology may have consequences that are unforeseen by its advocates.

As a teacher, I found Chantal's work inspiring for the breadth and depth of the research, for the cohesiveness of the structure and coherence of the argument, and for its author's willingness to engage with a difficult topic. Above all, her essay demonstrates the purposefulness that connects our writing topics to the broader goals of a meaningful university education.

— Deborah Breen

OBSTETRIC ULTRASOUND IN THE DEVELOPING WORLD: AN ADVANCE IN PRENATAL AND MATERNAL HEALTH, OR A FACILITATOR OF GENDER SELECTION?¹

According to a Chinese saying, “It is a blessing to bear a son, a calamity to bear a daughter.”² Unfortunately, this proverb accurately describes a view that is common in many parts of the world. Women often remain undervalued members of society, and even today, sons are considered both culturally and economically superior to daughters.³ For this reason, most prospective parents prefer to have sons, and in families with limited resources, girls are often treated with less care than their brothers. In some cases, parents will even abandon or kill baby girls in order to have another chance to give birth to a son.⁴ However, until recently, parents have had to wait until the child’s birth to discover its gender, as there were no reliable methods of fetal sex determination. All of this has changed with the advancement of ultrasound technology. Ultrasound plays an important role in health improvements worldwide, as it has allowed for early diagnosis of both fetal and maternal health conditions, leading to an increased survival rate, especially in the world’s poorer countries.⁵ However, recent advances in image quality mean that ultrasound scans can now also be used to determine a child’s sex as early as the eighteenth week of pregnancy.⁶ This knowledge of the child’s gender before birth leads many parents to choose to abort their unborn daughters.⁷ In some parts of the world, most notably Asia, this phenomenon has become so widespread that it has led to a significant imbalance in gender ratios.⁸ Although there are many positive uses for ultrasound, the combination of the technology with preexisting cultural biases has led to an inappropriate use of ultrasound scanners in sex selection, which can have a serious, negative impact on society.

The positive and negative effects that are observed in the spread of ultrasound imaging are by no means unique to this particular technology. In most cases, innovations are introduced with the purpose of improving the quality of life of the people involved. In reality, however, the growth of any new technology follows a common pattern characterized by both constructive and destructive applications. The interactions between these positive and negative factors can be analyzed in terms of the general principles laid out by Everett Rogers. In his text, *The Diffusion of Innovations*, Rogers explains some of the complex factors that determine the success of a technology in a particular culture.⁹ According to Rogers, the various consequences associated with the introduction of a specific innovation into a society can be divided into several categories, including anticipated versus unanticipated, desirable versus undesirable, and direct versus indirect.¹⁰ Furthermore, technology has often been shown to increase inequalities that were already present in a given society. Rogers argues that “a system’s social structure partly determines the equality versus inequality of an innovation’s consequences,” indicating that the unequal spread of innovation is usually not due to the nature of the technology itself, but is instead caused by cultural ideals.¹¹ Because “the effects of an innovation usually cannot be managed so as to separate the desirable from undesirable consequences,” each of these aspects must be considered any time a new technology is introduced.¹²

Despite this inseparability of the contradictory effects of an innovation, Kelvin Willoughby, a professor at Curtin Graduate School of Business, argues that society can, to some extent, choose which types of technologies to accept. Innovations can be selected based on their “suitability for specific purposes or situations,” which can be defined in terms of the idea of “appropriate technology.”¹³ Willoughby describes this concept of appropriate technology, explaining that technology is not a rigid element of change, acting independent of social interests. Instead, he argues, society should play an active role in deciding which innovations become widespread. The term “technology choice” underlies this idea that people should select the technologies which are in the best interest of their culture. Willoughby explains that society’s role in the acceptance or rejection of new technology is essential, and that the suitability of innovations

such as ultrasound imaging can only be ensured through regulations that actively consider the concept of appropriate technology.

In general, obstetric ultrasound was designed with the intent of improving maternal and prenatal healthcare since it allows for noninvasive and radiation-free visualization of the fetus, uterus, and placenta.¹⁴ Depending on the age of the fetus at the time of the ultrasound scan, many pathological conditions can be screened for. Specifically, ultrasound scans made early on in the pregnancy allow the age of the fetus to be determined and also allow large-scale abnormalities in fetal development as well as possible problems in the mother's reproductive system to be diagnosed.¹⁵ Ultrasound scans made midway through pregnancy (between 18 and 22 weeks) are important in diagnosing a wide range of fetal abnormalities, and ultrasounds made at the end of pregnancy are important in deciding how the baby will be delivered and in finding fetal health problems that need to be treated immediately after birth.¹⁶ These applications exemplify appropriate uses of ultrasound technology, as the innovation is being used in each case to improve prenatal and maternal health by providing a clear and early diagnosis of potential problems.

Although ultrasound technology is less commonplace in the developing world than in the West, its use in poorer countries has recently expanded rapidly because the equipment is relatively inexpensive and easy to transport.¹⁷ In the developing world, technological advances can be evaluated in terms of their applicability to the Millennium Development Goals, a set of eight objectives set forth by the United Nations in 2000 with the intent of improving quality of life throughout the world by the year 2015.¹⁸ In particular, the appropriate use of obstetric ultrasound has directly contributed to the achievement of the fourth and fifth Millennium Development Goals: the improvement of maternal health and the lowering of child mortality.

In poorer countries, ultrasound imaging has improved maternal health through applications in the early diagnosis of pregnancy complications. For instance, ultrasound can be used to diagnose conditions of placenta previa, ectopic pregnancy,¹⁹ and structural problems with the uterus.²⁰ Each of these conditions can seriously threaten a woman's life if it is not diagnosed and treated in time. According to the World Health Organization (WHO), a total of 536,000 women died in 2005 because

of complications related to pregnancy.²¹ Of these deaths, 99% occurred in the developing world, often due to preventable causes.²² The WHO also reports that, in 2005, 25% of maternal deaths were due to bleeding, and 8% were caused by obstructed labor.²³ Bleeding during pregnancy is often caused by placenta previa, and obstructed labor usually results from the incorrect positioning of the fetus within the uterus.²⁴ Both of these conditions can be diagnosed early using ultrasound,²⁵ leading to an increased chance of survival.

In addition to improving maternal health, obstetric ultrasound has also been shown to decrease infant mortality. Neonatal deaths are often caused by severe birth defects.²⁶ According to the WHO, worldwide “around 1% of infants have a major congenital anomaly,” with a greater proportion occurring in developing countries since malformations can be “caused by diseases such as syphilis, or by nutritional deficiencies,” which are more common in poorer countries.²⁷ Ultrasound is important in identifying structural abnormalities in a fetus and can also be used to evaluate prenatal growth.²⁸ In either case, early discovery of complications is essential. In the case of fetal health problems that are treatable, discovery through ultrasound allows for early intervention and for better planning of the pregnancy in order to improve chances of survival.²⁹ Also, if the fetus has serious abnormalities that would prevent it from surviving, early diagnosis would allow for the option of having an early abortion in order to minimize suffering.³⁰ Overall, the diagnosis of health problems in a noninvasive manner through obstetric ultrasound can improve progress towards achieving the fourth and fifth Millennium Development Goals relating to maternal and infant health and, therefore, constitutes a highly appropriate use of ultrasound technology.

However, despite the success of ultrasonography in health-related applications, ultrasound technology does have drawbacks. In several instances, its use in developing countries has resulted in lack of communication between the doctor and patient and abandonment of effective traditional diagnostic procedures.³¹ Most significantly, ultrasound technology is commonly used inappropriately to determine the sex of a baby prior to birth so that an abortion can be performed if the baby is not of the desired gender. In many parts of the world, especially in India and China, “daughters are regarded as a liability.”³² Behind this belief lie many socioeconomic

reasons that depend on the region of the world and the economic status of the family. In some areas, notably India, daughters are expected to move in with the family of their husband when they marry and, therefore, do not contribute to their birth family after reaching adulthood.³³ In many parts of India, parents of a bride also have to pay large amounts of money for a dowry, further increasing the cost of having a daughter.³⁴ In other countries, such as China, parents not only have a deep cultural bias against daughters, but they also face legal restrictions in the number of children they are allowed to have.³⁵ The combination of cultural beliefs, laws allowing parents only one child, and disparities in the economic opportunities available to men and women, cause Chinese parents to feel a very strong preference for having a son.

In many cases, these cultural preferences for sons are so severe that they have led to skewed sex ratios. In India, there are currently 109 newborn boys for every 100 girls,³⁶ and in China, there were an average of 120 newborn boys for every 100 girls in 2009.³⁷ By comparison, the average sex ratio at birth is equal to approximately 106 to 100 when there are no outside influences.³⁸ The ratio of sons to daughters often becomes higher with increasing birth order (in South Korea in 1989, the sex ratio for the fourth child was reported to be as high as 199), indicating that this is a cultural problem since parents become increasingly desperate to have sons the more daughters they have.³⁹ Possible social causes of these shifted sex ratios include preferential treatment of sons, abandonment of daughters, under-reporting of female births, and infanticide of baby girls.⁴⁰ Additionally, the spread of ultrasound technology throughout the developing world has had the unexpected consequence of facilitating sex-specific abortion,⁴¹ since ultrasound allows the gender of a fetus to be determined as early as the eighteenth week of pregnancy.⁴²

Because it is easy for ultrasound technicians to discreetly alert parents to the sex of their child without recording the interaction, it is difficult to measure the exact effects of ultrasound technology on sex selection.⁴³ However, the fact that ratios of male to female births have been increasing since the 1980s (see Figure 1), when ultrasound was first introduced in Asia, indicates that ultrasound is an important factor in the current skewed sex ratios.⁴⁴ Furthermore, a 1991 study of Chinese hospitals showed a ratio of 110 male to 100 female births.⁴⁵ Because this study took place in

a hospital, it is impossible for this ratio to be caused by any other possible factors such as female infanticide, abandonment, or failure to report female births.⁴⁶ For these reasons, although other factors do add to the unbalanced ratios, it is likely that ultrasound-based sex selection is playing an increasingly large role in the problem.

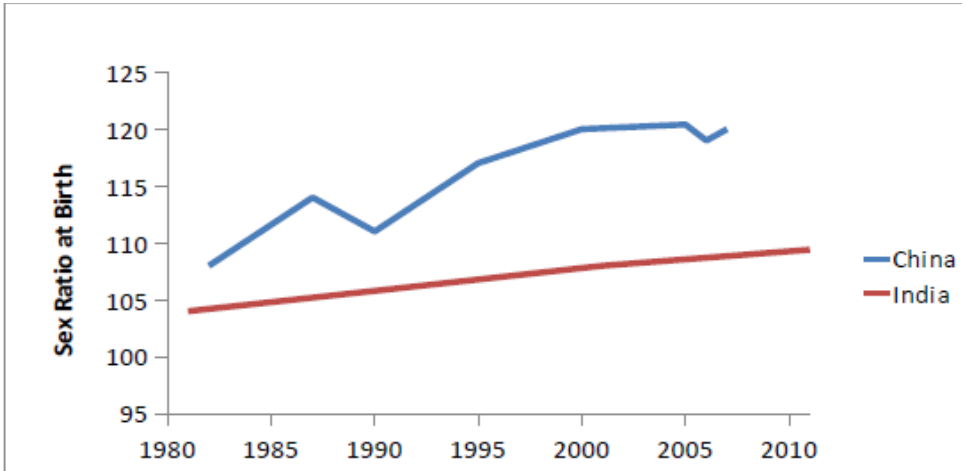


Figure 1. Trends in Average Sex Ratios at Birth. This plot indicates the increase in sex ratio that has occurred in both India and China in the past 30 years.⁴⁷

The government of India has realized the magnitude of this issue, and, as a result, it outlawed prenatal sex determination in 1994.⁴⁸ In his description of appropriate technology, Willoughby emphasizes the importance of such regulation, explaining that “conscious human effort is required to ensure that technology is appropriate.”⁴⁹ However, the difficulty in definitively proving the role of ultrasound in the unbalanced gender ratios makes it challenging for governments to enforce bans on using ultrasonography in fetal sex determination. According to a recent article in *The Times of India*, ultrasound clinics often go unregistered, and, even when the clinic is registered, information about the doctor prescribing the procedure, the fetus’s age, and the mother’s previous pregnancies, is frequently excluded from forms.⁵⁰ The Indian government is currently heading a strong initiative to limit sex-specific abortions in the 17 provinces with the most serious skews in gender ratios, but to date, only six

percent of doctors who are charged with being “involved with sex-selection practices” have been convicted.⁵¹

These challenges indicate that the appropriate use of ultrasonography can only be guaranteed if the underlying cultural practice of undervaluing daughters is eliminated. One state in India has recently started a policy of providing monetary compensation to parents giving birth to girls.⁵² A similar program in China is rewarding parents with land and money if they live in the town of the woman’s origin and give birth to girls.⁵³ It is hoped that such programs will change cultural views to make it more desirable to have daughters so that sex selection will no longer be needed.

Indian and Chinese governments are trying to limit sex-specific abortions largely because of the significantly negative impacts that skewed gender ratios have on society. For instance, large differences in the number of boys and girls lead to the problem of significant numbers of men not being able to marry.⁵⁴ In China, it is estimated that unbalanced sex ratios have caused 40 million men to be unable to find a wife.⁵⁵ According to a recent analysis by F. A. Chervenak and L. B. McCullough, this will “result in substantial social instability.”⁵⁶ Furthermore, sex selection also constitutes a form of prejudice. As Chervenak and McCullough explain, by aborting girls solely based on their sex, parents are performing “discrimination against individuals that treats them unequally for arbitrary reasons,” which is “ethically and legally unacceptable.”⁵⁷ The role of ultrasound in increasing this type of unjust treatment is significantly limiting social progress.

These serious consequences of ultrasound technology were most likely not anticipated by the well-meaning medical workers who initially introduced ultrasonography in the developing world. This unpredictability of the negative effects of ultrasound imaging is typical of the spread of technology. As Rogers states in *The Diffusion of Innovations*, “The undesirable, indirect, and unanticipated consequences of an innovation usually go together, as do the desirable, direct, and anticipated consequences.”⁵⁸ In this case, ultrasonography has resulted in the positive, predicted, and immediate consequence of improving fetal and maternal health while

simultaneously causing the negative, unpredicted, and long-term effect of adding to the gender imbalance already in place.

Besides explaining the relationship between the various effects of ultrasound technology, Rogers' theory of "consequences of innovations" also directly illuminates the negative effect of ultrasound technology on gender equality. According to Rogers, the misuse of technology can result in an amplification of imbalances already present in a society.⁵⁹ In the case of ultrasound, this means that, because the societies in India and China already had significant underlying gender biases, the introduction of ultrasound aggravated these problems. In China, for instance, it was already commonplace for parents to fail to report female births and to abandon or murder their newborn daughters even before the advent of ultrasonography.⁶⁰ The spread of ultrasound technology in recent years has only made it easier for parents to gain control in deciding the sex of their child, escalating existing problems of gender imbalances and inequalities.⁶¹

Overall, the use of ultrasound technology throughout the developing world has had mixed results in global development. Obstetric ultrasound has allowed for progress to be made in the Millennium Development Goals of lowering child mortality and improving maternal health.⁶² However, unanticipated consequences of ultrasound imaging have also resulted in an increase in sex-specific abortions, indirectly causing a decline in progress towards the Millennium Development Goal of "promot[ing] gender equality and empower[ing] women."⁶³ In order to limit these negative effects, governments need to be proactive in regulating uses of ultrasound in the short term and eliminating gender biases in the long term. When used appropriately, ultrasound imaging can be a powerful tool to advance fetal and maternal healthcare, thereby improving the overall quality of life for women and newborns in developing countries.

NOTES

1. I would like to thank my peer readers for their helpful comments. Thanks also to Mary Foppiani for her help during the research process.
2. Mineke Schipper, *Never Marry a Woman with Big Feet: Women in Proverbs from Around the World* (Cambridge: University Press, 2003), 94.
3. Amelia Gentleman, "India's Lost Daughters: Abortion Toll in Millions," *The New York Times*, January 9, 2006. <http://www.nytimes.com/2006/01/09/world/asia/09iht-india.html>.
4. Neil S. Katz and Marissa Sherry, "India: The Missing Girls: A Society Out of Balance," *PBS Frontline*, accessed April 9, 2011, http://www.pbs.org/frontlineworld/rough/2007/04/the_missing_gir.html; Zeng Yi et al., "Causes and Implications of the Recent Increase in the Reported Sex Ratio at Birth in China," *Population and Development Review* 19, no. 2 (1993): 294, 295.
5. Eugene J. Kongnyuy and Nynke van den Broek, "The Use of Ultrasonography in Obstetrics in Developing Countries," *Tropical Doctor*, no. 37 (2007): 71.
6. Robin E. Weiss, "Telling Your Baby's Sex by Ultrasound—Finding Out the Sex of Your Baby," accessed April 9, 2011, <http://pregnancy.about.com/od/boyorgirl/ss/genderus.htm>.
7. Kongnyuy and van den Broek, "The Use of Ultrasonography," 71.
8. Gentleman, "India's Lost Daughters"; Yi et al., "Causes and Implications," 283, 284.
9. Everett M. Rogers, *Diffusion of Innovations*, 5th ed. (New York, NY: Free Press, 2003), 436–71.
10. Rogers, *Diffusion of Innovations*, 442.
11. *Ibid.*, 463.
12. *Ibid.*, 445.
13. All information in this paragraph is taken from: Kelvin W. Willoughby, *Technology Choice: A Critique of the Appropriate Technology Movement*, (Boulder, CO: Westview Press, 1990), 5–11.
14. Z. Papp and T. Fekete, "The Evolving Role of Ultrasound in Obstetrics/Gynecology Practice," *International Journal of Gynecology and Obstetrics* 82, no. 3 (September 2003): 339, 340.
15. Papp and Fekete, "The Evolving Role of Ultrasound," 341, 342.
16. *Ibid.*, 341–3.
17. Kongnyuy and van den Broek, "The Use of Ultrasonography," 71.
18. The eight Millennium Development Goals are as follows: "to eradicate extreme hunger and poverty, achieve universal primary education, promote gender equality and empower women, reduce child mortality, improve maternal health, combat HIV/AIDS, malaria, and other diseases, ensure environmental sustainability, and develop a global partnership for development." See: "Millennium Development Goals," United Nations Millennium Project, accessed April 16, 2011, <http://www.unmillenniumproject.org>.
19. Placenta previa is defined as the implantation of the placenta over or near the cervix and can lead to serious bleeding. Ectopic pregnancy is defined as a condition where implantation of the fetus occurs outside of the uterus, and can also lead to serious

bleeding. See: "Abnormalities of Pregnancy," The Merck Manuals, accessed April 24, 2011, <http://www.merckmanuals.com/professional/sec18/ch263/ch263a.html>.

20. Kongnyuy and van den Broek, "The Use of Ultrasonography," 71.

21. "Making Pregnancy Safer: Maternal Mortality," World Health Organization, accessed April 16, 2011, http://www.who.int/making_pregnancy_safer/topics/maternal_mortality/en/index.html.

22. "Making Pregnancy Safer," World Health Organization.

23. Other leading causes of maternal deaths included infections (15%), eclampsia (12%), and unsafe abortion, (13%). See: "Making Pregnancy Safer," World Health Organization.

24. Ibid.

25. Kongnyuy and van den Broek, "The Use of Ultrasonography," 71.

26. *Neonatal and Perinatal Mortality: Country, Regional, and Global Estimates* (Geneva, Switzerland: World Health Organization, 2006), 2.

27. *Neonatal and Perinatal Mortality*, 2.

28. Kongnyuy and van den Broek, "The Use of Ultrasonography," 71.

29. Ibid.

30. Ibid.

31. Siegrid Tautz et al., "Between Fear and Relief: How Rural Pregnant Women Experience Foetal Ultrasound in a Botswana District Hospital," *Social Science and Medicine* 50 (2000): 698.

32. Gentleman, "India's Lost Daughters."

33. Ibid.

34. Ibid.

35. Yi et al., "Causes and Implications," 296.

36. Kounteya Sinha, "Only 6% of Doctors Held for Sex-Selection Practices Convicted," *The Times of India*, April 20, 2011.

37. F. A. Chervenak and L. B. McCullough, "Sex Determination by Ultrasound: Ethical Challenges of Sex Ratio Imbalances and Invidious Discrimination," *Ultrasound in Obstetrics and Gynecology* 34 (2009): 245.

38. Sex ratio at birth statistics are calculated based on the number of males to females at birth. Any deviation from the natural sex ratio of 106 constitutes a significant shift. See: Yi et al., "Causes and Implications," 283.

39. Ibid., 296, 297.

40. Gentleman, "India's Lost Daughters"; Yi et al., "Causes and Implications," 285-91, 294-5.

41. Kongnyuy and van den Broek, "The Use of Ultrasonography," 71.

42. Weiss, "Telling Your Baby's Sex by Ultrasound."

43. Sinha, "Only 6% of Doctors."

44. Yi et al., "Causes and Implications," 283-4.

45. Ibid., 292-3.

46. Ibid.

47. Data for this plot was compiled from the following sources: Mara Hvistendahl, "Making Every Baby Girl Count," *Science*, 323 (2009): n.p., accessed April 30, 2011, doi:

- 10.1126/science.323.5918.1164.; Riaz Haq, "Female Genocide Unfolding in India," *Haq's Musings Blog*, July 5, 2009, <http://www.riazhaq.com/2009/07/female-genocide-unfolding-in-india.html>.
48. Gentleman, "India's Lost Daughters."
 49. Willoughby, *Technology Choice*, 7.
 50. Sinha, "Only 6% of Doctors."
 51. Ibid.
 52. Ashley Bumgarner, "A Right to Choose?: Sex Selection in the International Context," *Duke Journal of Gender Law and Policy* 14 (2007): 1289, accessed April 9, 2011.
 53. Hvistendahl, "Making Every Baby Girl Count," n.p.
 54. Chervenak and McCullough, "Sex Determination by Ultrasound," 245.
 55. Gentleman, "India's Lost Daughters."
 56. Chervenak and McCullough, "Sex Determination by Ultrasound," 245.
 57. Ibid., 246
 58. Rogers, *Diffusion of Innovations*, 449.
 59. Ibid., 460–7.
 60. Yi et al., "Causes and Implications," 285–91, 294–5.
 61. Kongnyuy and van den Broek, "The Use of Ultrasonography," 71–2.
 62. "Millennium Development Goals."
 63. Ibid.

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CHANTAL DE BAKKER is a member of the College of Engineering Class of 2012 and is majoring in Biomedical Engineering. Chantal would like to thank her peer readers for their helpful comments and Mary Foppiani for her help during the research process. This essay was written for Deborah Breen’s course, WR 150: Technology, Innovation, and International Development.

From the Instructor

When *Exit Through the Gift Shop*, directed by British street artist Banksy, hit theatres last summer, critics asked: Was it an actual documentary film, as promoted, or an elaborate hoax? Our class—“Documentary Film: History, Theory, and Form”—came to different conclusions. The inspiration for Ethan Dubois’s inventive essay emerged from class discussion when someone mentioned the word authenticity. He began to wonder not just whether the documentary was authentic, but what makes any piece of art “authentic.”

As Ethan’s paper demonstrates, the status of artistic authenticity is vexed, dependent upon a complex calculus of internal and external forces. Authenticity is especially tenuous for street art, which often divides its audience. To some, street art merits appreciation; to others, it is grounds for arrest. Banksy’s documentary shows how the art market further complicates the status of street art: If a hack like Exit’s protagonist can make a million bucks in a day, how does that affect the integrity of others’ artwork?

Ethan’s essay succeeds not only because it takes on an ambitious set of questions about the intersection of art and commerce, but because its lively pace sustains narrative interest. Logical, eloquent, and arresting, his argument engages the formal and theoretical complexities of documentary film and the modern desire for authenticity.

— Marisa Milanese

ETHAN DUBOIS

BANKSY'S *EXIT THROUGH THE GIFT SHOP*: STREET ART AND OUR QUEST FOR AUTHENTICITY

Many in our modern culture have become concerned with the idea of authenticity. Some argue that we have lost our sense of authenticity and can no longer find a “center of self” (Erickson 122). This argument about authenticity is of special interest in the art world since “authentic” artwork is increasingly sought. No longer is it enough for a piece to employ special craftsmanship or an artistic touch, but it must be “authentic” to be worthy of exhibition (Phillips). But what makes a piece of art “authentic”? According to professor and philosopher Dr. Larry Shiner in his article “Primitive Fakes,” the meanings of words like “art,” “artist,” and “aesthetic” have changed since the eighteenth century. By classical definition, “art” means any skilled handicraft, “artist” means any skilled maker of an artifact, and “taste” means any set of values for ranking artifacts” (225). However, Shiner explains, these common words have come to take on different meanings: when used in modern discussion, “Art” suggests a distinct realm of works or performances of elevated status, “Artist” implies innovation, individualism, and a devotion to Art as a vocation, and “Aesthetic” suggests disinterested appreciation” (225). This change in our understanding of art over the past two centuries is significant because it illustrates our developing desire for authenticity. In art, we look more for individualism and originality—that is, authenticity—and, in the process, we devalue craftsmanship.

But what is authentic art, and, even more, what makes an authentic artist? In his recent documentary *Exit Through the Gift Shop* (2010), British street artist Banksy weighs in. He tells the story of French videographer Thierry Guetta, who begins to film Banksy for a potential movie about street art. Instead of creating the revealing film that he promised, however,

Guetta ends up becoming an aspiring street artist and then the center of Los Angeles pop art hype for several weeks after the opening of his 2008 art show, “Life is Beautiful.” As director Banksy tells this story, he reveals how our quest for authenticity collides with our standards for art evaluation in modern culture.

Defining Authenticity

In order to properly discuss the concept of “authenticity,” a term which has evolved over the course of many years, it is necessary to properly define it, and to look at some recent developments in research about the subject. Sociologist Andrew Weigert suggests that our modern conception of authenticity took hold about 70 years ago (qtd. in Erickson 123), although he points out that conversations about it have taken place for several centuries. According to professor and sociologist Rebecca Erickson, the easiest mistake when attempting to define “authenticity” is to confuse the term with “sincerity.” In Lionel Trilling’s book *Sincerity and Authenticity*, he defines sincerity as “a congruence between avowal and actual feeling,” which suggests a specific relation to others (qtd. in Erickson 124). Sincerity, in other words, has to do with one’s feelings and thoughts being in agreement with what one says. Authenticity, however, is simply being true to oneself. As Trilling says, “A work of art is itself authentic by reason of its entire self-definition: it is understood to exist wholly by the laws of its own being” (qtd. in Erickson 124). Thus, authenticity is a concept of self-reference; it has nothing to do with one’s relationship to others.

Although deeply rooted in many classical and academic fields, authenticity as a social aspiration has only mainly evolved over the past few decades (Erickson 121). Our interest in authenticity today is a result of several factors that have influenced its change in recent years. According to Jeanne Liedtka in her article “Strategy Making and the Search for Authenticity,” theories about the “driving forces behind this interest” are in great supply and come in two categories: those that focus on external factors and those (adopted mostly by psychologists) that concentrate on internal development (237). Several external factors, Liedtka explains, include a desire to fight back against the mass media and create a unique identity, the rise of “consumer culture,” “fears of loss of meaning and freedom amidst the rise of instrumentalism and institutionalism,” and the

reduced influence and significance of family and other traditional norms in our increasingly tolerant society (238). On the other hand, many developmental psychologists attribute the rising significance of authenticity to a “natural human urge that seeks psychological health, rather than as a reaction to external factors” (238). In other words, our desire for authenticity is motivated not by environmental reasons but by biological ones. In addition, Erickson argues that, most importantly, our increased attention to authenticity is a result of “the transition from industrial to postindustrial society and from modern to postmodern culture” (121).

Whatever the cause, scholars and psychologists alike agree that our modern culture does indeed place great value on authenticity—especially in the Fine Arts. Liedtka explains that a dominant theme of the authenticity discussion in the art world is “the notion of the authentic as both highly original and simultaneously rooted in familiar traditions” (239). In other words, art critics and analysts bestow authenticity on artwork based on both its originality and its relation to culture and tradition. This method of art analysis could be a result of many of the aforementioned influences, but the importance of both originality and rootedness suggests that it comes from both external factors (finding individuality and uniqueness) and internal ones (seeking psychological health).

Banksy’s Perspective

Banksy uses his film to contribute to this conversation about art and authenticity. A street artist since 1992, Banksy is known throughout the world as one of the primary proponents of graffiti art. He is also known for his contempt towards those who label graffiti art as “vandalism.” In *Exit Through The Gift Shop*, the British street artist focuses on the life of Thierry Guetta, a French cameraman who crosses paths with Banksy and ends up documenting a large amount of Banksy’s work with the intention of creating a documentary about street art. However, as *Exit* progresses, it seems to turn upon itself, as it focuses on Guetta’s entry into the street art world and his success as a copyist of Banksy. Ultimately, through the use of specific scenes and characteristics of the film, Banksy reveals the inauthenticity of Guetta’s art.

In the very opening of the movie, we see a montage of clips of street artists creating art, set to the tune of Richard Hawley’s “Tonight

The Streets Are Ours.” This brief foray gives us a privileged look into the worlds of famous “masked” artists and their craft. We see everything from artists making detailed paintings, to tagging, and even to spraying paint onto the side of a train. The viewer can almost feel the attitude and emotion of the artists as they express themselves in such a public and rebellious fashion. However, a significant question to ask is: is this authentic art? More importantly, what does Banksy think?

With our previous definition of authenticity in mind (being “true to oneself”), it follows that street art’s authenticity, or inauthenticity, has much to do with the artists’ motivations. In her article “Writing on Our Walls,” Marisa Gomez, editor of the *University of Michigan Journal of Law Reform*, says, “Different motivations drive different types of graffiti, and graffiti cannot be understood or controlled without an understanding of the motivations behind its creation” (634). According to Gomez, because artists’ motivations distinguish graffiti art from vandalism, they are extremely important when seeking to understand street art. In “Our Desires Are Ungovernable’: Writing Graffiti in Urban Space,” Dr. Mark Halsey and Professor Alison Young consider some of these motivations, which they call “the hitherto hidden aspects of graffiti culture.” They argue that graffiti is, first and foremost, about pleasure—whether the emotional pleasure of expressing oneself in a public place, or simply the physical pleasure of holding a can of spray paint (276). They explain that, initially, motivations for street art included its aesthetic appeal and shared peer activity. However, as this art continued, its motivations began to include pride, pleasure, and recognition. Ultimately, street art is a form of “Identity Art” which reflects the motivations of its creators (Fine 155).

By definition, then, street art seems to be authentic—and, indeed, one of Banksy’s main focuses in *Exit* is to establish it as such. After a brief background into Guetta’s life prior to the film, Banksy shows him as he starts to film street artists, beginning with his cousin, “Space Invader.” Guetta documents the street artist’s work incessantly and starts to follow the paths of other artists like Shepard Fairey—best known for his Obama campaign poster—and Borf. These stories of real street artists, who have perfected their craft, emphasize to the viewer Banksy’s appreciation for street artists like himself, who have spent years and years developing their own styles and devoting their time to expressing themselves. This charac-

teristic of street art—true self-expression on the part of the artist—is what makes much of it authentic, according to Banksy.

However, although Banksy argues in favor of the authenticity of art made by street artists like him, he calls into question Guetta's art. While we enjoy secret shots of other street artists at work, Banksy creates an atmosphere of contempt surrounding Guetta, the filmmaker. Each time Guetta pushes his camera into the face of a celebrity or artist at work, we cringe. Tacky music plays as Guetta talks about how he wants to record every second possible, and Banksy includes a testimonial from the videographer's wife about how Guetta privileges his filming over his family: "We worry, but he doesn't care. We need him. He doesn't think!" We're similarly overcome with discomfort as Guetta begins to plaster all over town drawings of himself holding a camera, copying the styles of Banksy and the street artists he has followed for so long. We wonder if Guetta is doing this for fame or for self-expression. At this moment, we begin to understand Banksy's point of view: not all street art is authentic.

Another point that Banksy raises about the question of authenticity is street artists' emotional motivations. One example of this theme is the street artist Borf, whom Guetta interviews early in the film. Borf explains that his art is in memory of his late best friend, and it holds great emotional value to him. Laidtka points out that, since emotions are such a critical reflection of self, they are important to consider when judging authenticity:

Social psychologists...emphasize the role emotion plays in their discussions of authenticity. Because of the primary role that self-knowledge plays in uncovering the authentic self, emotions are seen as delivering critical messages to the cognitive mind about the self's true state. For them, such "undistorted perception of immediate psychological reality" serves as the foundation of the authentic. (239)

In other words, because emotions are such basic indicators of self and identity, they reflect authenticity. The emotion of pleasure, one of the primary motivations behind graffiti, seems to speak to street art's authenticity. However, Banksy's opinion differs with that of Laidtka. Guetta clearly has emotional motivations, mainly that of pleasure, as he pastes those printouts and stickers that show him holding his camera. However, Banksy still calls

into question the authenticity of Guetta's art. He believes that merely the artist's pleasure while creating art does not make it authentic; there must be something more that establishes its authenticity.

In his article "Crafting Authenticity: The Validation of Authenticity in Self-Taught Art," Gary Allan Fine, an American sociologist and author, explores how self-taught artists' identities affect their art. Especially relevant is his discussion on how authenticity is bestowed and, specifically, how an artist's personal legitimacy is used to support his artwork's aesthetic authenticity in the minds of the cultural elite. This idea is specifically referenced in relation to an artist's biography. Fine says that, in addition to motivation and inspiration, artists' biographies prove the authenticity of their work:

Closely tied to the motivations and inspirations of artists are the presentations of their biographies. The biographies of self-taught artists justify their authenticity, serving as a primary criterion of evaluation. To be sure, the work itself matters, as many people have interesting biographies, but the biography invests the material with meaning. (162–3)

In other words, the biography and experience of an artist, not just his motivations, define the authenticity of his art, and an artist's background gives his work meaning. Banksy's biography, and those of the other street artists that the film follows, is lengthy. However, Guetta's biography, as an artist, is a short one. Prior to his work as a street artist, he was a videographer with hardly an artistic desire, but now he suddenly rises to prominence. Banksy objects to Guetta's lack of artistic experience; this, he claims, is an important part of an artist's identity and must be taken into account when we judge the authenticity of his work.

Ultimately, Banksy feels as if he and other street artists have been cheated. And it only gets worse, as Guetta (or Mr. Brainwash, as he begins calling himself) becomes famous and opens an enormous art show in Los Angeles (called "Life is Beautiful"), making almost one million dollars on an artistic style that he has developed in almost no time at all. One art enthusiast at the show says of Guetta's art, "It's a triumph, it will go down in history—I'm glad my friends turned me on to this." All the glowing praise of Guetta's artwork, according to Banksy, just shows how eager we can be to believe in an art piece's authenticity. Mr. Brainwash, Banksy

claims, is nothing but a hoax—he's in it for the money and the fame. As critic Peter DeBruge says, "Clearly, Banksy's big beef with the contempo art scene is the idea of selling out. Like many modern artists, Banksy began as a renegade, whereas Guetta aims straight for the iconic status of guys like Andy Warhol and Salvador Dali" (28).

Authenticity vs. Entertainment

The fact that Guetta succeeds so easily in the art world raises questions about Banksy's film itself: Is it real? Is it *authentic*? Many reviewers suggest that the film is just an elaborate, if entertaining, hoax—a "prankumentary"—created by Banksy to get artists and art critics alike to reconsider their methods for placing value on artwork. Not only does Banksy address this issue through the events of the film, but he uses a new artistic medium, the documentary itself, as well.

A central problem of the documentary form is the question of authenticity versus entertainment; in the same way that collectors desire authentic artwork, we desire an authentic experience when we watch a documentary. As Barry Grant says in his book *Documenting the Documentary: Close Readings of Documentary Film and Video*, "The question of the performative has always dogged documentary. Traditional wisdom maintains that one should not stage or imitate reality; instead, the documentary filmmaker is supposed to capture it" (429). In other words, we don't want a fake, or a copy: we want to watch a film that *authentically* captures reality—a film that is true to the event it depicts. However, reality is, in fact, boring. What we ultimately desire, then, is an experience that is authentic to *us*: relevant, interesting, *and* true. Yet we are so quick to believe in the authenticity of *Exit* that we ignore its hints of artificiality—namely, the success of the bumbling and easily distracted Guetta seems too coincidental—and believe that it actually happened. By the end of the film, it seems that Banksy has played a trick on us: the authenticity of the film itself is called into question. Banksy is drawing a parallel between our approach to visual art and our approach to his film. In the same way that our eagerness to bestow authenticity on *Exit* causes us to miss the point of the film, our eagerness to call art authentic results in the success of sellouts like Guetta.

Concluding Thoughts

If Banksy has created his ultimate hoax in this film, there's no way to know for sure because, as he avows in interviews, it's a true story. However, if Guetta's career was just an elaborately created, filmed prank, it takes Banksy's questions to a whole new level: essentially, he calls on us to question the way we evaluate art. He illustrates that, just as our desire for an authentic experience when we watch a documentary influences us to place value on what may only be a complicated hoax, our desire for authenticity in art influences us to sometimes ascribe value to objects that we probably shouldn't. At the end of the film, in Banksy's last interview, he mentions one of the consequences of placing value on inauthentic art: its influence on other artists:

I don't think Thierry played by the rules, in some ways, but then . . . there aren't supposed to be any rules. So I don't really know what the moral is. I mean . . . I used to encourage everyone I met to make art. I used to think everyone should do it. I don't really do that so much any more.

In other words, because of modern standards for art evaluation, people like Guetta stifle the creativity and motivation of other artists because they rise so quickly—and yet their art isn't authentic. Banksy has been led to question even his own art as a result of Guetta's fame, and he no longer encourages other artists. Banksy alludes to these consequences but doesn't come up with a concrete answer: "I don't know what it means, Thierry's huge success and arrival in the art world. Maybe it means Thierry was a genius all along, maybe it means he got a bit lucky. Maybe art is all a big joke."

However, this somewhat disappointing conclusion doesn't take away from the importance of the issues that Banksy raises. He has influenced us to consider why we call a piece of art authentic and how that affects the livelihoods of other artists. In an increasingly changing fine arts culture where it seems as though artists learn the rules to break them, it is becoming more and more important for us to assess our standards for art evaluation, especially in the context of our quest for authenticity. This assessment may well affect the vitality of street artists—and all artists—for decades to come.

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ETHAN DUBOIS is a computer science major, in the class of 2013. In Spring 2011, he transferred from the College of Fine Arts, where he was a violin performance major, to the College of Arts and Sciences. Ethan would like to thank Professor Marisa Milanese for all of her inspiration, and for the time and energy that she spends in order to make writing and research enjoyable and fruitful for her students. This essay was written for WR 150: Documentary Film: Theory, History, and Form.

From the Instructor

Matt Lavallee is a student from Lowell, Massachusetts who participated in my WR 150 equivalent course “Anti-Immigration Sentiment in the United States” that also functioned as an American Studies 200-level course. Due to the shared listing, the course carried a heavier reading load. Matt demonstrated a thorough, thoughtful engagement with each reading. He seemed to particularly connect with the way nativist sentiments manifested in different ways depending upon a particular region or historical moment. Unsurprisingly, he chose to trace this theme in his third paper for the course.

The assignment asked the class to take up an interpretation of American identity and argue whether nativists portrayed the United States as inherently fragile or strong. Matt chose to delve into the history of his hometown to examine how the cry of nativists connected to various labor movements, defining American identity primarily through an economic lens. In earlier drafts, his authorial voice became lost between his sources and he struggle with an effective conclusion. In this published final draft, Matt made his own arguments with greater clarity of purpose. The conclusion also brings the movements of the past to the present day interactions between longtime residents and newer immigrants in this traditionally industrial city.

— Rachel Schneider

IMMIGRATION IN LOWELL: NEW WAVES OF NATIVISM

America's engagement with industrial capitalism began in the early nineteenth century, as the convergence of capital, labor, waterpower, and innovative technology produced the great textile mills of Lowell, Massachusetts. In Lowell's early years, the mills largely depended on young women of English descent for labor. Lowell garnered a reputation for the high standard of living of its working class and was considered an "industrial utopia."¹ Some associated this high standard of living with an exclusively "American" standard of living, as working conditions and wages were poorer in Europe. However, rising competition to Lowell's textile corporations forced that high standard of living to decline. Beginning in the mid-nineteenth century, successive immigrant groups filled jobs, starting with the Irish in the 1840s and 1850s; French Canadians in the 1860s and 1870s; and Greek, Polish, Portuguese, Jews, and other nationalities in the 1890s and early 1900s. Each new ethnic group arriving in Lowell faced anti-immigrant sentiment and opposition as they were employed by the mills as strikebreakers. Frequently, an ethnic group employed as strikebreakers in one generation worked towards labor reform in subsequent generations, therefore becoming nativists themselves. According to nativist restrictionists who opposed the arrival of immigrants in Lowell, this high "American" standard of living was fragile and threatened by immigrants who would allegedly destroy the progress of labor reform movements as they were used by corporations as strikebreakers. However, the threat to a fragile and uniquely American way of life in Lowell came not from new immigrants, but from economic competition and the movement of capital to the South.

The mills at Lowell were created by the Boston Associates, a group of industrial manufacturers responsible for the early construction and financing of the mills. They did not want their project to be tainted by a newly created urban proletariat similar to that of the European mills. The degraded conditions and social unrest found in English mill towns made many Americans wary of industrial manufacturing.² Therefore, as Benita Eisler writes in an introduction to a compilation of literature written by Lowell “mill girls” and published in *The Lowell Offering* in the early nineteenth century, “The Boston Associates resolved to create a labor force that would be a shining example of those ultimate Yankee ideals: profit and virtue, doing good and doing well.”³ They accomplished this aim by attracting young women from the farms of Massachusetts, New Hampshire, Vermont, and Maine, enticing them with the highest wages offered to female employees anywhere in the United States.

Women were additionally attracted to leave farms to work in mills as their position in farming families was undermined by the growth of the factory output of cotton and woolen textiles. In the introduction to *Farm to Factory: Women's Letters, 1830–1860*, historian Thomas Dublin, who has extensively documented Lowell's early history, writes, “Before 1820 spinning and weaving had been the primary domestic occupations of farmers' daughters. But with the expanded output of the new mills the home production of cloth became increasingly unprofitable.”⁴ The employers boasted that they were the most superior class of factory operative to be found in any industrialized nation, causing Boston Associate Nathan Appleton to refer to them as “a fund of labor, well educated and virtuous.”⁵ Early on, Lowell gained a reputation as an “industrial utopia” for the high standard of living of its factory operative and provided cultural and intellectual stimulating activities, such as a lecture series that attracted Emerson, Hawthorne, and Thoreau.⁶

Lowell expanded, becoming one of America's largest centers of industry. Correspondingly, conditions changed for the working women as well. Pressure of growing competition caused overproduction to become a problem, which in turn caused the prices of finished cloth to decrease. Dublin writes, “The high profits of the early years declined and so, too, did conditions for the mill operatives.”⁷ Not all women workers agreed with the mill owners regarding the virtues of what they claimed was an “indus-

trial utopia.”⁸ Women entered labor reform activism as their conditions worsened. Factories reduced wages, and the pace of work within the mills increased. Female workers did not accept these changes without protest: in 1834 and 1836 they went on strike to protest wage cuts, and between 1843 and 1848 they mounted petition campaigns aimed at reducing the hours of labor in the mills. However, while some responded by demanding reduced hours of labor, others left the mills in a growing migration from the region to the Midwest that left fewer native-born women to work on the factory floor. This forced mill owners to look elsewhere for labor, and they hired Irish immigrants, who began to take the Yankee women’s place in 1845.⁹ Yankee mill girls also began to look to the arriving immigrants for the cause of the decline of the standard of living as not only wages decreased along with rising outside competition. Elements such as the educational seminars that distinguished Lowell’s factory operative from that of Europe’s proletariat disappeared as mill owners reinvested less in their mills in the face of growing competition. However, mill girls overlooked the consequences of growing competition and the instability attendant with the rapid growth of industrial capitalism, instead proposing that Irish immigrants threatened their fragile American way of life in Lowell.

Although immigrant workers were originally not employed inside the factories, they arrived in Lowell even before the Yankee women were recruited by manufacturers. In 1823, 30 Irish laborers who walked from Boston finished Lowell’s first canal. Dublin writes, “These first Irish made do in the roughest of conditions.”¹⁰ They lived off wages of 75 cents a day and crowded into tents and shacks in “paddy camp lands.” The location of these “paddy camp lands” would eventually become the Acre, a gateway neighborhood where various following immigrant groups would settle. In Lowell’s early years amid soaring profits and the climax of the aforementioned “American” standard of living in Lowell, Lowell’s officials viewed the unskilled Irish laborers as impermanent residents during the construction of more mills and canals. The Yankee officials and mill owners’ belief that the Irish presence was impermanent is reflected by the development of a “leave them alone” policy towards the paddy camps where the Irish retained their native culture independent of the mill village.¹¹ There was little friction between Irish and Yankee groups when jobs were readily available for both groups as Lowell enjoyed little to no competition in

American textile manufacturing. While the mill girls enjoyed the high standard of living in the “industrial utopia,” an Irish middle class developed that also enjoyed opportunities for social mobility and maintained cordial relations with Yankee officials.

However, life for Lowell’s Irish soon changed as growing competition to the mills caused Lowell’s “American” standard of living to decline for the factory operative. In 1831, only about 500 Irish lived in Lowell, but this number rose dramatically in the 1840s and 1850s following potato famines in Ireland. In this period, the Yankee women expressed nativist sentiment and opposed Irish immigration. Dublin writes, “Yankee hostility toward the Irish was partly attributable to their effect on the relations between workers and owners.”¹² The great numbers of the Irish and their economic need undermined the labor protest of Yankee women. For example, a large number of Irish strikebreakers had allowed mill agents to disregard the campaign for the ten-hour workday in the 1840s and reduced pressure on mill agents to compete with improving wages in other occupations, which reduced wages in this period. By 1860, Lowell’s women workers earned less than they had in 1836, despite great increases in productivity.¹³

Dublin also notes that mill owners understood and actively encouraged the hostility between the two groups at their profit’s benefit: “Mill management purposely kept Yankees and immigrants apart, and in periods of labor unrest, they played the groups against one another.”¹⁴ A number of confrontations highlight the nativist hostility towards the newly arrived labor force. In 1831, Yankee laborers attacked the construction site of St. Patrick’s Catholic Church in the Acre and were confronted with rock-heaving Irish.¹⁵ These nativists also charged that the growing Catholic schools in Lowell were “un-American” in the 1850s. These charges reflected a broader fear common in America’s northeastern industrial cities at this time: Catholic voters would elect politicians with a subversive agenda that would lead to the tyrannical Papal hierarchy’s infiltration of the American political system, thus threatening America’s egalitarian institutions. Public officials and nativists alike considered public schools a significant source of patriotism and a way for immigrant children to learn civics and English as part of a Protestant, moral education. Nativists thus feared an absence of these features in parochial schools. Nativist fears of

Irish enfranchisement also led corporations to intimidate Irish voters. Although most of Lowell's Irish in the 1840s and 1850s were not naturalized citizens and could not vote, the Hamilton Company still warned that "whoever, employed by this corporation, votes the Ben Butler ten-hour ticket... will be discharged."¹⁶ This attempt to dissuade the few Irish who could vote from supporting the ten-hour workday advocated by Civil War general and future presidential candidate Benjamin Butler's congressional platform further reflects that Lowell's capitalists actively used immigrants to impede the progress of labor reform. Nonetheless, Yankee nativists and mill girls proposed that Lowell's famed standard of living was not damaged by the rising competition that forced profits to decline, but by the influx of Irish immigrants in the 1840s and 1850s used as strikebreakers.

As anti-Catholic mobs continued to attack St. Patrick's Church throughout the 1850s, French Canadians faced great economic difficulties in Québec. Following the Civil War, French Canadians fled economic turmoil and flocked to the mills with approximately 600,000 coming to New England between 1860 and 1900.¹⁷ Their numbers grew steadily during these decades, and by 1905, they were the largest immigrant group in the city. As the Irish before them, French Canadians roused fear and resentment among Lowell's population. An 1881 report of the Massachusetts Bureau of the Statistics of Labor described French Canadians as "sordid and low" and referred to them as "the Chinese of the Eastern States," associating them with "coolie" labor on the West Coast. These Chinese laborers arrived in California around the same time as French Canadians in Lowell and were charged by nativists with taking jobs and lowering wages, who cited the immorality of the Chinese and physically attacked them. Great opposition towards the Chinese came from Irish laborers who had previously been opposed by nativists on the East Coast. In *Whiteness of a Different Color: European Immigrants and the Alchemy of Race*, historian Matthew Frye Jacobson notes the irony of the "despised Celt in Boston . . . gallantly defending U.S. shores from an invasion of 'Mongolians'" in San Francisco.¹⁸ By the time the Chinese and French Canadians arrived in America, the Irish had established themselves in society, and these new immigrant groups gave them a target on which to take out their economic frustrations. The same charges brought against the Chinese on the West Coast were brought against the French Canadians in Lowell. Nativists and

laborers blamed them for lowering standards in the mills and in the city as a whole. Dublin notes that they were looked down upon by the earlier Irish arrivals and were barred from St. Patrick's, forcing them to found their own Catholic Church, St. Jean Baptiste in 1868, also in the Acre.¹⁹

In the aforementioned report of the Massachusetts Bureau of the Statistics of Labor, French Canadian immigrants were further labeled as "a horde of industrial invaders" and "a deceitful people who seek their amusements in drinking, smoking, and lounging."²⁰ This title of "invaders" implies that they are a group with a culture and way of life that is entirely "un-American" and that they have no intention to assimilate into "American" culture. The use of "un-American" further distinguishes Lowell's high standard of living from that elsewhere and implies these immigrants directly threaten this way of life. The report also notes that "they care nothing for our institutions, civil, political, or educational."²¹ This echoes charges against the Irish immigrants who had arrived years before, who allegedly threatened to uproot fragile American institutions through radical and subversive voting and educational practices. Despite previously being the targets of anti-immigrant opposition, Irish nativists decried the arrival of French Canadian immigrants who would destroy the fragile "American" way of life and standard of living. Ironically, the Irish who had previously been subject to nativist hostility when used as strikebreakers during the Yankees' quest for labor reform in the 1840s had become nativists themselves with the arrival of the French Canadians. Thus, a pattern developed in industrial cities like Lowell where an ethnic group employed as strikebreakers in one generation often becomes a committed part of the labor movement in subsequent generations and, therefore, opposes the next group of immigrants that will be used by capitalists as strikebreakers.

At the time of the arrival of French Canadian immigrants to Lowell, the Irish had gained some political control and had become a part of the labor reform movement as the Yankee mill girls had done before them. However, like the first Irish who had arrived in Lowell forty years before, the French Canadians were looking for steady employment and were not eager to involve themselves in campaigns against low wages or poor working conditions. This led the Irish to resent the arrival of French Canadians because they could be used as strikebreakers and an impediment on a quest towards labor reform. Fortunately, a memoir written by a French Canadian

immigrant was found in a Lowell attic in the late twentieth century, providing insight into the views of immigrants on their participation in labor reform movements. Félix Albert first arrived in Lowell from Québec in 1881 in a quest for economic security. In his memoir, *Histoire d'un Enfant Pauvre*, he describes initial plans to go to Fall River, a Massachusetts industrial city close to the ocean that had entered into competition with Lowell following the advent of steam power. However, his brother convinces him to choose Lowell, arguing, "Lowell was preferable because... strikes were not frequent there, and that I could probably find work there for myself and some of my children."²² Albert describes a desire to avoid labor reform and chose Lowell because of its alleged reputation for having few strikes. Early immigrants of an ethnic group first arriving in Lowell did not want to participate in strikes and unions; they just wanted to work and be paid. This won them the enmity of organized labor. In *Québec to 'Little Canada': The Coming of French Canadians to New England in the Nineteenth Century*, Iris Saunders Podea notes that their unwillingness to participate in strikes and unions and "the fact that they were frequently introduced into New England as strike breakers did not endear them to their coworkers."²³

Other physical confrontations erupted in the industrial communities of New England outside of Lowell. In West Rutland, Vermont, bloodshed resulted after French Canadians were imported into the marble quarries during a strike of Irish quarrymen in 1868.²⁴ During another strike in Fall River in 1879, employers had to build special houses in the mill yards to isolate French Canadian laborers out of fear that strikers would persuade them to leave town.²⁵ As Irish workers embarked on a campaign to improve wages and working conditions, their progress was met with French Canadian strikebreakers, whom they then often opposed with physical confrontations. However, the Irish presented these same challenges to Yankee labor reformers decades before, resulting in the same nativist opposition.

The hostility of the Irish towards both the Chinese in San Francisco and the French Canadians in Lowell reflects a broader trend: an ethnic group employed as strikebreakers in one generation often becomes a committed part of the labor movement in subsequent generations. Thomas Dublin writes, "Just as the Irish had entered the mills in large numbers

during the unsuccessful ten hour work day campaigns of the 1840s, so too French Canadians undermined renewed efforts to reduce the work day in the early 1870s. Greek and Polish millhands in the early 1900s helped to defuse labor unrest in that decade as well.”²⁶ The charges of each new wave of immigrants-turned-nativists reflect a view that their uniquely “American” way of life and high standard of living were at risk of destruction by an influx of new immigrants. However, these charges were echoed by groups who were once subjected to them, refuting claims that immigrants threatened America’s standard of living. The real threat to the “American” way of life and high standard of living came not from new immigrant groups, but from the movement of capital and jobs to the South.

Lowell, like other northeastern industrial cities rapidly declined into economic depression in the early twentieth century. However, the decline of Lowell was not caused by the influx of immigrants as nativists charged, but was a symptom of the capitalist system that propelled Lowell to notoriety in the first place. Mill owners knew as early as the 1890s that their mills were aging and becoming increasingly unable to effectively compete.²⁷ However, they chose not to modernize and reinvest in their Lowell mills and, instead, used Lowell profits to finance modern textile plants in the South. A confluence of advantages enticed capitalists to the South: abundant land, cheap labor, energy sources, lower taxes, and transportation.²⁸ Most importantly, the South was free of union influences that would fight for better conditions and wages for workers at the expense of capitalists’ profits and also lacked restrictive laws concerning the health and safety of industrial workers. Ethnic divisions among Lowell’s immigrant working class were overcome in the successful 1912 general strike when management offered a ten-percent wage increase.

Still, Lowell’s capitalists had the last laugh, disinvesting in the mills after the strike and leaving Lowell workers to face unemployment after the mill closings of the 1920s and 1930s.²⁹ Dublin writes, “It is a story as old as capitalism—the movement of capital often leaves misery in its wake.”³⁰ The famously high standard of living among the faculty operative at Lowell was gone long before the mills could no longer compete with Southern textile manufacturers and closed their doors. According to the *Annual Statistics of Manufacturing in Lowell*, there were 120,737 spindles and looms in the city in 1835 handled by 6,563 workers.³¹ By 1888,

960,739 spindles and looms were handled by 21,049 workers. Therefore, in 1835 when Lowell faced little outside competition in textiles, there were approximately 18 spindles and looms for every worker. However, in 1888 when Lowell was facing great external competition from the South and immediately surrounding area, there were approximately 45 spindles and looms per worker. This increased responsibility and productivity for fewer workers did not come with an increase in wages. Despite the evident turmoil caused by the movement of capital, new generations of immigrants turned nativists blamed new immigrants for their troubles.

Throughout Lowell's history, various immigrant groups have faced opposition when coming to the city. Nativists placed the blame for Lowell's economic difficulties on these new immigrants. Ironically, when immigrants in Lowell once subject to nativist opposition became established in the new society, they often opposed new immigrants arriving later. This pattern is seen in other northeastern industrial cities. The competition inherent in industrial capitalism ultimately left Lowell's workers unemployed and impoverished. Frustrations were nonetheless taken out on immigrant groups that workers blamed for Lowell's economic collapse. The aforementioned pre-competition cordial relationship in the 1820s and 1830s between Lowell's first Irish immigrants and Yankees raises the question: If external mills from communities in the South and elsewhere had not competed with Lowell's mills, driven profits down, and therefore degraded wages and working conditions in the "industrial utopia," would conflict between the two groups have arisen? Only after conditions worsened for the mill girls, correspondent with growing competition, did Irish-Yankee relations become strained. Would the Irish have opposed the French Canadians if their working conditions and wages were the same as the original mill girls? Would these conflicts have existed if Lowell's capitalists had not exploited immigrant groups at the expense of labor reform movements to preserve their profits? Would Lowell's mills have remained competitive if mill owners had reinvested in new technologies instead of fleeing to the non-unionized South?

It is arguable that opposition to different immigrants stemmed more from social or religious reasons, as Lowell's Protestants feared the arrival of Irish Catholics. Yet Lowell's Protestant leaders actively encouraged Catholic priests to visit the early paddy camps. Conflict between immi-

grant groups was economically rooted, stemming from the constant quest for profit by Lowell's capitalists. Workers striving for labor reform disliked new immigrant groups for their use as strikebreakers, but the need for strikes stems from poor working conditions and wages brought on by economic pressure under capitalism. Understanding the reasons behind early anti-immigrant sentiment is beneficial in understanding nativism in modern Lowell. Still in search of its post-industrial identity and with a population still struggling with unemployment, Lowell has received new groups of immigrants from Southeast Asia and South America. In a 2011 opinion piece published in *The Lowell Sun*, Lowell's daily newspaper, an anonymous Lowell resident wrote, "It's sad when you have to leave the city you were born and raised in because it has become a foreign country. All American ideals, heritage and morality has [sic] gone. It's time for me to go."³² Over 150 years later, these charges of not sharing supposedly "American" ideals and being immoral echo the same charges nativists brought against the Irish in similar times of economic struggle amid competition for jobs.

NOTES

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3. Eisler, 15.
4. Thomas Dublin, *Farm to Factory: Women's Letters, 1830–1860*. (New York: Columbia UP, 1981), 16.
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6. Brian C. Mitchell, *The Paddy Camps: The Irish of Lowell 1821–61*. (Chicago: University of Illinois Press, 1988), 11.
7. Dublin, *Farm to Factory*, 16.
8. Ibid.
9. Dublin, *Lowell*, 56.
10. Ibid., 33.
11. Mitchell, 22.
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13. Ibid., 66.
14. Ibid., 66.
15. Mitchell, 32.
16. Ibid., 49.

17. Ibid., 67.
18. Matthew Frye Jacobson, *Whiteness of a Different Color* (Cambridge: Harvard University Press, 1998), 5.
19. Dublin, *Lowell*, 68.
20. Carroll D. Wright, *Uniform Hours of Labor* (Boston: Rand, Avery, & Co., 1881), 470.
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26. Dublin, *Lowell*, 75.
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28. Ibid., 82.
29. Ibid., 76.
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31. "Appendix B" in *Cotton Was King*, ed. Arthur L. Eno, Jr. (Lowell: Lowell Historical Society, 1976), 256. Eno uses *Annual Statistics of Manufacturing in Lowell; Statistics of Lowell Manufacturers*.
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From the Instructor

Namank Shah's analysis of the One Laptop Per Child (OLPC) project reminds us of the important lessons of failure. As Namank ably points out, in development projects, idealism is not enough: it must be accompanied by a careful and detailed assessment of need that is in turn complemented by cultural understanding and awareness of community acceptance.

Namank's essay carefully outlines the failures of the OLPC project. His assessment draws on the tenets of appropriate technology, one of which is community control of engagement with new technologies.

As Namank suggests, in a methodical and clear-sighted manner, the limitations of the OLPC project can teach us a great deal about our assumptions of the uses of technology in developing countries and about the rightful place of humility alongside knowledge in the pursuit of development goals.

— Deborah Breen

A BLURRY VISION: RECONSIDERING THE FAILURE OF THE ONE LAPTOP PER CHILD INITIATIVE¹

In 2005, MIT professor Nicholas Negroponte unveiled an idea so innovative that it had the potential of improving the lives of millions of people in developing countries around the world—a \$100 laptop. His vision was to distribute this low-cost, rugged computer to the poorest children in elementary schools in developing nations, help them gain access to knowledge, and allow them to explore and experiment with the latest technologies. He founded the One Laptop per Child organization to transform his vision into reality. Backed by the United Nations Development Programme, OLPC received a lot of commendation and acceptance from various leaders and the media. However, as the time of shipment neared, problems began to surface. Among other issues, the cost of the laptop rose to \$188, the initial buyers began to back out, and IT support was minimal. As a result, the OLPC foundation failed to achieve its expected sale of 150 million laptops by the end of 2007. By 2009, only a few hundred thousand laptops had been shipped to the developing nations.² Today, the OLPC initiative is often cited by critics as a failure. However, instead of dismissing the laptops as disappointments, it is important to examine the cause of their decline. This understanding can prevent impediments in the future when trying to implement some other form of information and communication technology in developing nations. Careful analysis about the culture and necessities of the children needs to be done in the countries before shipping the laptops. Laptops need to be customized to local traditions and customs, so that they are appropriate in their new context. Despite its initial setback, the OLPC initiative can improve its success rate by letting

go of its Western ideals and adapting its laptops to the appropriate needs of the children who are using them in the developing countries.

The actual distribution of the laptops points to an obvious failure of the program. When OLPC was first founded, it only took orders in lots of 1 million. However, no developing nation could risk the capital necessary to buy these 1 million laptops, especially if there was no data proving the benefits of the program. OLPC was then forced to lower the minimum purchase number to 250,000 laptops.³ The founders initially thought that a lot of countries would be willing to pay for these laptops *en masse*, which would ensure cheaper production costs for individual laptops. However, the target nations do not have that much money; therefore, the minimum deployment size had to be lowered over time. As a result of such unrealistic goals, delivery of the laptops was low. Figure 1 shows the actual number of laptops distributed in specific countries by the OLPC foundation.

Country	OLPC Web site	Actual Deployments	Date of Actual Deployment Information/Detail
Uruguay	202,000	150,000	November 2008
Peru	145,000	40,000	100,000 in distribution
Mexico	50,000	50,000	Starting to be shipped
Haiti	13,000	Dozens	Pilot began in summer 2008
Afghanistan	11,000	450	Expected to rise to 2010
Mongolia	10,100	3,000	G1G1 laptops beneficiary
Rwanda	16,000	10,000	Arrived, not deployed; infrastructure issues
Nepal	6,000	6,000	Delivered April 2007
Ethiopia	5,000	5,000	Three schools
Paraguay	4,000	150	4,000 planned next quarter
Cambodia	3,200	1,040	January 29, 2009
Guatemala	3,000	—	Planned before third quarter 2009
Colombia	2,600	1,580	January 25, 2009; agreement to buy 65,000 XO's
Brazil	2,600	630	February 6, 2009
India	505	31	January 20, 2009

Figure 1. Worldwide Distribution of XO Laptops⁵

The first number is the data shown on OLPC's main website, and the second number is the actual number of laptops in the various schools. A major cause of discrepancy between the two numbers is that the OLPC website does not distinguish between ordered, shipped, or delivered laptops. Even then, the actual numbers are low, and the global distribution is sparse. Out of the machines that were delivered to the various schools, it is not safe to assume that they are all actually being used by the children. In Uruguay, "27.4 percent of machines were out of commission in a recent poll, or more than 100,000 out of the 400,000 in the country."⁴ Of the laptops deployed within Uruguay, one in every four laptops was not used by the schools because of malfunctioning and lack of technical support. This issue further reduces the number of active laptops within the OLPC project and amplifies the failure of the project. Similar numbers would also be found in other countries; however, no research has been done yet to support this claim. The evidence clearly suggests that the OLPC project fell significantly short of its initial goals of providing millions of children with its XO laptops.

A major reason for the failure of the OLPC program, which would account for its low distribution numbers, is the belief of the recipient nations that the laptops were not appropriate for them. When implementing new technologies, it is important to look at whether or not the technologies are appropriate for the target region in order to avoid unwanted consequences. As Kelvin Willoughby, a professor at Curtin University, Australia, explains, "The Appropriate Technology notion points to the need for knowledge of a diversity of technical options for given purposes, careful analysis of the local human and natural environment, normative evaluation of alternative options, and the exercise of political and technological choice."⁶ This definition shows that there are a lot of factors about the technologies and the environment they are to be raised in that should be considered before bringing the technologies to the new region. The governments of the developing nations did not carry out this "careful analysis," and, therefore, the adoption of the laptops led to unforeseen consequences. This inappropriateness of the OLPC laptops "might stem from [their] being deployed in a context quite different to that for which [they were] designed."⁷ When existing technologies are transferred from one region to another, they may be inappropriate because of the new culture in that region. It is necessary to evaluate the differences and anticipate problems

before moving the technology. Although the OLPC laptops were designed and tested for use in developing nations, the mere idea of laptops is a Western one, which contributed to its inappropriateness.⁸

Willoughby also claims that “there is frequently a range of alternative technological means available which are suitable for the attainment of primary objectives within a given field.”⁹ It is not enough for the technology to work—it needs to achieve the goals in the most efficient manner, with the least detrimental effects on the society. Therefore, a careful analysis of several candidates needs to be done before selecting a particular technology. According to the concept of technology choice, users need to assess short-term and long-term advantages and disadvantages of each of the options before adopting new technologies. However, “in this project there was no evaluation of competing technologies. In fact there was not even a slight consideration given to alternative solutions.”¹⁰ When the OLPC was founded, there was no significant competition. No other laptop distribution project had done work on such a global scale. However, the lack of competition does not guarantee that OLPC’s laptops are appropriate. With the development of the Intel Classmate and other netbooks, which tapped into the same market as OLPC, the governments were now faced with more choices to assess for their needs. OLPC was no longer their only option, and this increased competition also played a role in the downfall of OLPC. OLPC was unable to evaluate the needs of the people that were to get these laptops, and therefore lost to its competition.¹¹ As G. Zachary, a professor at Arizona State University, notes, technologies are “push[ed]” at Africans “that are inappropriate for them simply to benefit [Westerners’] own need for vanity and for moral reinforcement.”¹² Especially in Africa, critics claim that there are several issues, such as HIV/AIDS and malnutrition, that are more immediate and need to be addressed before education. Forcing the technologies on developing nations leads to several undesirable consequences.¹³ These unwanted results can lead to further resentment and to the dismissal of the OLPC laptops.

One specific example of an undesirable consequence with the OLPC projects was the rise of curiosity in the children, which could lead to rejection of support from parents. David Tablot, a proponent of OLPC, writes that “when . . . students own the computer, they begin finding ‘why.’ They realize they can actually do something that is meaningful to them.”¹⁴

The Internet opens up a world of possibilities for the children using the laptops. They begin to question things around them and try to be like others. The founders of OLPC think of this curiosity as appropriate and encourage it even more. However, in the context in which these laptops were deployed, they may sometimes bring forth unwanted consequences among the children. One such undesirable result is the westernization of the children. Some researchers are concerned about “the possible influence of western ideas on local cultures . . . With access to the [Internet], children were more vulnerable to disorientation from their cultural beliefs and to migration towards a more westernized culture.”¹⁵ The children’s curiosity also expanded to their cultural beliefs, and a lot of them questioned their customs and adopted Western standards. In conservative nations, which are the developing countries targeted by OLPC, culture is very important to the people, and the introduction of this new technology threatens to deteriorate that among the children. Therefore, the parents are skeptical toward, and often resent, the new technologies that their children are using in the schools. Without support from parents, future expansion of the program may be in danger.

Another drawback of the OLPC project was the forcing of Western ideas on children in developing nations, which often led to criticism and resentment about the project. In her paper, Victoria MacArthur notes that “the personal computer . . . [has] been designed with western metaphors in mind, and . . . the interface is quite natural for [Westerners]. [Companies] cannot deploy these same interfaces ‘as is’ without any regard for cultural differences.”¹⁶ Computers were designed to be used by people in the English-speaking world. From the layout of the keys on the keyboard to the display of the icons on the screen, the computers show a great deal of Western culture and influence. OLPC’s target is developing nations, which do not have the same cultural understanding as Westerners and therefore do not benefit as much from the same laptops. As researcher Emmanuel Yujuico concludes, “OLPC’s design . . . reflects Western biases toward individual agency, but studies in social psychology and anthropology have found meaningful differences in Eastern and Western cognitive processes.”¹⁷ The specific hardware and software designs of the XO laptops used by OLPC reflect predispositions toward Western ideologies about individualism, which are not understood by the people from other cul-

tures who are the actual users of these laptops. Therefore, they receive the laptops with confusion and ambiguity, which is not what OLPC expected in its vision. Professor Zachary, a critic of OLPC, argues that companies “tell [Africans] that they ought to accept these technologies . . . They ought to have more personal computers. They ought to have better seeds. They ought to do this and they ought to do that.”¹⁸ It is important not to force the new technologies on developing countries just because some innovators and leaders in developed nations have a new idea to transform these countries. Zachary claims that the developing nations need to accept the technologies on their own in order to ensure long-term sustainment of the new technologies. He gives the example of the quick and successful adoption of cell phones by Africans, which was because they themselves wanted these phones. Similarly, when developing nations realize the need for laptops, they will readily accept them. Thus, OLPC can avoid criticism by rethinking its vision and ideals and making sure that it is not forcing the laptops on the children in developing nations.

In order for the OLPC laptops to be appropriate in their new environments, and to make future OLPC projects successful, it is necessary to make sure that the laptops adapt to the local standards and culture. Researchers from Italy concluded that “strategies of ICT integration . . . must be rethought and readapted to the cultural context, avoiding giving a laptop the whole responsibility for the success of the project for school innovation.”¹⁹ With the current strategy of OLPC of merely giving the laptops to the governments, there is a lot of pressure on the laptops themselves. People expect the laptops to bring changes and to empower the children. However, it is important to integrate the laptops to better fit the context and customs of the target nations. Several studies have concluded that the primary reason for the failure of the OLPC project was its lack of consideration for and adaptation to the local cultures and societies.²⁰ An analogy can be made to the advertising industry, where marketers specifically make different commercials for the same product to be seen in different cultures in order to appeal more personally to their target audience. If OLPC is to improve its success rate in future projects and deployments, it must address this cause of failure and adapt its laptops to the needs of the children. For example, the OLPC laptops include the Tam Tam suite—a range of applications that allow the children to create their own

music. However, children from Uruguay “noted that the music authoring program was unable to create music which matched the beats of their local music.”²¹ Children felt that they could not customize the music to play the sounds they were accustomed to hearing in their cultures. As a result, they were reluctant to use the software again, which limited their creativity and showcased the need for OLPC to integrate cultural values more into their products. The OLPC partly utilizes the Bottom of Pyramid model.²² However, it is important to note that “the BOP is not a monolithic block of 4 billion people. Entrepreneurs must learn to segment and leverage the enormous variation within even the local BOP.”²³ Although OLPC is a nonprofit foundation, it still serves the same market. Currently, OLPC has the same deployment, support and design strategy for all children, regardless of the backgrounds of its users. Therefore, OLPC needs to understand the variations in its users in order to better serve them and gain more acceptance in the future. For example, a recent study concluded that “the possibility exists of using [the laptops] as a shared community resource between education and health care: one laptop per child equals one laptop per clinic.”²⁴ In some countries, education is not on the top of the agenda. Problems like disease and hunger are more prominent and need to be solved urgently. Therefore, OLPC should be open to using their laptops for these purposes, which would better help the people than the intended use in the classroom. Then, OLPC’s laptops would be more welcome among the children in the developing nations.

The One Laptop per Child program received a lot of praise during its unveiling but failed to meet its idealistic expectations. In order to ensure success in the future, OLPC needs to redesign not only its laptops but also its ideals and mission. With more understanding of the local customs and traditions, OLPC can provide customized laptops to the children, which could actually empower them and help Nicholas Negroponte’s vision come true. The introduction of new technologies to a region is a highly sensitive process, and even a small mistake could lead to dire consequences. Especially with information and communication technologies, the principles of appropriate technology and technology choice can ensure the success of these new technologies and help prevent undesirable consequences. These concepts not only work for the XO laptops of OLPC, but they could also serve as a framework for other projects that aim to improve life for people

in developing nations. These ideas can guide the installation of the new programs and ensure their success. With careful analysis of and adaptation to local cultures, the new technologies can actually succeed in their goals and help make the world a better and developed place, one nation at a time.

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NOTES

1. I would like to thank Owen Dean and Professor Breen for their insightful comments and feedback for my draft during the group review process.
2. Kenneth Kraemer, Jason Dedrick and Prakul Sharma, "One Laptop per Child: Vision Vs. Reality," *Communications of the ACM* 52, no. 6 (2009): 66.
3. Mark Warschauer and Morgan Ames, "Can One Laptop Per Child Save the World's Poor?" *Journal of International Affairs* 64, no. 1 (2010): 36.
4. Warschauer and Ames, "Can One Laptop," 41.
5. Kraemer, Dedrick, and Sharma, "One Laptop Per Child: Vision," 68. This data is as of June 2009. More laptops have been shipped since then, but the data in the table has not been adjusted.
6. Kelvin Willoughby, "Introduction: The Concept of Technology Choice," in *Technology Choice: A Critique of the Appropriate Technology Movement* (Boulder, CO: Westview Press, 1990), 7.
7. *Ibid.*, 5.
8. For further analysis, see page 6.
9. Willoughby, "Introduction," 8.
10. Linus Andersson and Thomas Norrmalm, "Finding the Formula for Sustainable ICT: Lessons from the One Laptop Per Child Project in Rwanda" (Thesis, Uppsala University, 2010): 30. <http://uu.diva-portal.org/smash/record.jsf?pid=diva2:300573>.
11. For analysis of this drawback, see page 8.
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17. Yujuico, "Cautions from One Laptop Per Child," 10.

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19. Andrea Mangiatordi and Magda Pischetola, "Sustainable Innovation Strategies in Education: OLPC Case Studies in Ethiopia and Uruguay," *Organizational, Business, and Technological Aspects of the Knowledge Society Pt II* 112 (2010): 99.

20. See Kraemer, Dedrick and Sharma, "One Laptop Per Child (OLPC): Novel," 4; Kraemer, Dedrick and Sharma, "One Laptop Per Child: Vision," 66; Mangiatordi and Pischetola, "Sustainable Innovation," 95; and Victoria MacArthur, "Communication Technologies," 912.

21. McArthur, "Communication Technologies," 913.

22. Under this model, companies try to serve their products to those who make less than \$2 a day. By targeting the untapped market of the poor, the idea is to make a profit while also doing charity.

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HONORABLE MENTIONS

Mikhail Bulgakov: Preaching His Own Religion

SIERRA BROWN

Teleconsultations: Treating Pathologies through Technology

CATRINA CROPANO

Interactions With the “Other”: Japanese Responses to Orientalism
in the Early 20th Century

LINSEY HUNT

The Inexcusable Legal Truths

ADELIA ILIEV

Legislating Happiness: Exploring How Government Restrictions
on Choice Can Influence Its People

JUSTIN MORSE

Pushing the Red Button: Banksy’s Use of Counterculture in
Exit Through the Gift Shop

LIA PAGLIUSO

The Role of Voice: Reconsidering Zora Neale Hurston’s Narrative Style
in *Their Eyes Were Watching God*

MADLYN POWELL

Men are from Mars, Women are from . . . the Wild?

KEVIN WONG