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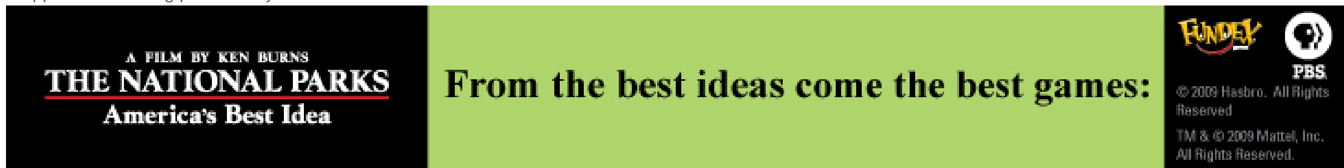

September 21, 2007

BILL MOYERS: Welcome to the JOURNAL, and a very different JOURNAL it is. We're going to spend most of our broadcast tonight in the company of a remarkable woman who would have been 100 years old this year.

Our lives are different because of her. She wrote a book that changed the country. This book: SILENT SPRING. Her name: Rachel Carson.

SILENT SPRING was published in 1962, and it was a blockbuster. This quiet biologist and nature writer delivered a bracing and alarming story of how pesticides and other toxic chemicals were poisoning the Earth.

VOICE: Window cartons, textiles, stationary, baby garments.

In a booming economy built around chemistry, with farmers using pesticides to control ravenous pests and Americans in love with their bug spray, SILENT SPRING fell like a ton of bricks on a wedding party. The chemical industry struck back hard:

DR. WHITE STEVENS, CHEMICAL INDUSTRY SCIENTIST: The major claims in Miss Rachel Carson's book, SILENT SPRING, are gross distortions of the actual facts, completely unsupported by scientific, experimental evidence, and general practical experience in the field...

BILL MOYERS: Carson had opened a ferocious debate and found herself the target of vicious attacks. But she stood her ground. "Man's attitude toward nature," she said, "is today critically important simply because we have acquired a fateful power to alter and destroy nature.

Rachel Carson awakened us to the fact that our wondrous new technologies came with some destructive side effects. SILENT SPRING was followed by a string of new public policies aimed at protecting human health and the environment. Today, one hundred years after her birth, Carson's critics are back with a vengeance, blaming her for half a century of government regulations they don't like, and accusing her of scaring the world away from useful chemicals that could be saving lives.

Who was this woman so generously praised by so many and so loathed by some? To find out, you need to spend an evening, as we have, with Rachel Carson's kindred soul, the actress and playwright, Kaiulani Lee.

KAIULANI LEE: Every show is different and this is a beautiful theater...

BILL MOYERS: It seems Kaiulani Lee is always searching for the right dressing room.

KAIULANI LEE: I think this is the right way...

BILL MOYERS: In her three decades in the theater, she's won acclaim on and off Broadway, and has guest-starred on television and in films.

KAIULANI LEE: Mechanical that's where they are putting me, in mechanical room — but

it's locked!"

BILL MOYERS: But her singular passion — her mission — is bringing Rachel Carson to life. For 15 years now, Lee's been traveling the country with the play she wrote and performs... called 'A Sense of Wonder.'

KAIULANI LEE: This particular part is unlike anything I've ever done on the stage or film. I'm terrified every night, every day that I perform this show, that I won't be able to make that transformation. I have never felt that about another part. So it's a matter of... she comes in and takes over.

BILL MOYERS: The play is set in 1963, the year after SILENT SPRING has rocked the country. Rachel Carson has spent the summer in her tiny cabin on the coast of Maine with her adopted son, Roger. Now, with fall coming on, she's ruefully packing up for the trip back to their home near Washington, D.C.

KAIULANI LEE as RACHEL CARSON: This place fills me with peace. There's of course magnificent beauty. I am surrounded by the forest and the ocean, this rocky coast. And this solitude, far away from public clamor. To stand here at the edge of the sea, to sense the ebb and flow of tides, to feel the breath of a mist over the great salt marsh. To watch the flight of the shore birds that have swept up and down these continents for untold thousands of years. To see the running of the old eels and the young shad to the sea is to have knowledge of things that are as nearly eternal as any earthly life can be.

I hate leaving. But we've got to get back to our winter home, outside of Washington, to our winter schedules, to our more public selves, which, for Roger, means school and for me means facing the continued uproar over my last book, SILENT SPRING.

SILENT SPRING has been a sensation since it was published a year ago. I knew that if I were to write honestly about chemical contamination, I would be plunging myself into a sort of war with the chemical industry. But I never imagined the full force of the industry's fury. Hundreds of thousands of dollars have been spent, attempting to discredit not only the book but the hysterical woman who wrote it.

Fortunately, the attack seemed to have backfired, creating more publicity than my publishers ever could have afforded. But the controversy has been exhausting. Is it any wonder I don't want to leave the state of Maine? Roger keeps hoping that I'll think up another excuse to keep us here "just one more week." His answer to leaving is to stay outside. He says, "If we don't pack, we can't go."

BILL MOYERS: Roger was eleven. The son of Carson's niece, Marjorie. But when Marjorie died of pneumonia, Rachel adopted the little boy as her own. The two of them spent many summers here in Maine exploring the woods and the rocky coast.

KAIULANI LEE as RACHEL CARSON: The first summer he came to me, we were sitting in the backroom reading by the fire, when the sounds from the outside seemed to swell and invade our evening quiet. Now, none of you with the slightest awareness of the natural world can have failed to be conscious to some degree of the insect chorus that fills the night with throbbing rhythm from midsummer until frost. But of the individual voices or the instruments that make up that elemental earth orchestra. My ignorance was complete and abysmal.

But that night, Roger and I sat there transfixed by these sounds. And then, without a word between us, we slipped on our jackets and we set out into the night to discover just what was out there. Our passport was a flashlight and our visa a suddenly awakened curiosity about those insect voices which we had heard and yet not heard all our lives.

A child's world is fresh. It's new. It's beautiful. It's-- it's full of wonder and excitement. It's our misfortune that, for most of us, that clear-eyed vision, that true instinct for what is beautiful and awe-inspiring is dimmed. Even lost before we reach adulthood.

If I had influence over the good fairy who was supposed to preside over the christening of all children, I should ask that her gift to each child in the world be a sense of wonder so indestructible that it would last throughout life. As an unfailing antidote against the boredom and disenchantment of our later years. The alienation from the sources of our strength. If our children are not fortunate enough to meet the good fairy, they need the companionship of at least one adult who can help them keep alive their inborn sense of wonder.

KAIULANI LEE: I spent almost three and a half years researching and writing this play, and I kept faltering. I couldn't figure out how to weave what I knew of her personal life, her private life, her sarcasm, her laughter, her not being able to suffer fools lightly, all of these qualities that people didn't know from her writing. How she did her hair. This incredible photograph of her with Jimmy Durante in a bar in New York. I mean to put all of that together.

BILL MOYERS: When we watch you and listen to you, are we hearing her literal words? Or is this-

KAIULANI LEE: Many of them.

BILL MOYERS: Many of them?

KAIULANI LEE: Yeah. A very large portion of the play is her words. I realized part way through this project that nobody knew her life, and that it was terribly important. People were curious. But I later found out it was important because it's such a beautiful story of the growth of a person, and such a courageous story, that I thought it would be very moving.

BILL MOYERS: What do you mean people don't know her life?

KAIULANI LEE: She was very private. She wanted people to read her books, but she didn't know they had to get to know her. She was very private. Not shy. It's different. But private.

BILL MOYERS: She was right, wasn't she? It was what was in her book that mattered. Not what — who she was.

KAIULANI LEE: But who she was after all of my digging — it's such a beautiful story. She was very poor. She had no old boy network. She was unbelievably ill. She took care of her family from the time she was in college till the day she died. She had nothing. And she changed the course of history.

BILL MOYERS: Right from the start, Rachel Carson wanted to become a writer. She grew up on a small farm outside of Pittsburgh. The woods and hills around her home were her playground; her mother her nature guide. Young Rachel wrote stories full of owls, frogs and robins. Several were published in children's magazines.

And the budding writer went off to college to study English. But a course in biology changed all that. She fell in love with science. While it wasn't a field that welcomed women in the 1920s, Rachel's mind was set: She got a masters in zoology and started her PhD at Johns Hopkins University. But when the great economic depression hit, her family had to move in with her to survive. So she left graduate school, and took a writing and research job with the federal government, at what became the U.S. Fish and Wildlife Service.

KAIULANI LEE as RACHEL CARSON: When my chief asked me if I could write something of a general sort about the sea, I set to work at once, but somehow, the material rather took charge of the situation and my article turned into something that was perhaps unusual for the department. My chief read it. He handed it back to me. "This will not do at all," he said. "You'll have to start it again." But as he turned to leave, he had a twinkle in his eye. "You will be sure to send this one off to the ATLANTIC MONTHLY, won't you?"

Well, eventually I did. And to my amazement, the ATLANTIC accepted it and that was the beginning of my writing career. Simon and Schuster contacted me, wondering would I be interested in writing a book. I started at once. A biologist by day, a writer by night. I would race home from work, run upstairs, leave poor mother alone with the girls, and I would lose myself completely in my book. Finally, I was the writer I'd always dreamed of becoming. I thought that I had abandoned my writing for science. But it was the study of science that was making my literary career possible. I had had to become a biologist in order to find the material about which I wanted to write.

BILL MOYERS: She signed her early works "R.L. Carson" — hoping readers would take her ideas more seriously if they thought she was a man. But gender didn't matter to the ATLANTIC MONTHLY, which published that essay to wide acclaim. Over the coming years Carson wrote three books: THE SEA AROUND US, THE EDGE OF THE SEA, and UNDER THE SEA WIND. Given the impact of SILENT SPRING, it is difficult to remember that before it was published, these three books had gained for Carson the reputation as one of the

country's most popular and honored science writers.

KAIULANI LEE as RACHEL CARSON: My sea books. A girl from landlocked Pennsylvania.

People always comment with surprise at them. That these books of science should have such a large popular appeal. The notion that science is something that belongs in a separate compartment, apart from everyday life, is one I challenge. We live in a scientific age, and yet we assume that the knowledge of science is the prerogative of only a small number of human beings. Isolated and priest-like in laboratories. This isn't true.

The aim of science is to discover and illuminate truth. And that I take it is the aim of literature. My own purpose was always to portray the subject of the sea with fidelity and understanding. I never stopped to consider whether I was doing it scientifically or poetically. I wrote as the subject demanded. The winds, the sea, the moving tides, and what they are. If there's wonder and beauty, majesty in them, science will discover these qualities. If they're not there, science cannot create them. If there is poetry in my books about the sea, it's not because I deliberately put it there. But because no one can write truthfully about the sea and leave out the poetry.

BILL MOYERS: I wonder if we've gotten her wrong all these years. We think of her as a muckraking journalist, a crusader when, in fact, she was a gifted observer of the natural world.

KAIULANI LEE: Well, she was. And that's terribly important. But we mustn't stop there. What makes her different — there are other beautiful observers. There are great poets of the natural world, philosophers. But she, in her life, she changed. And it's very clear in her writings, the onset of the atomic bomb. She said, "I can't believe I was so naive. I thought that the heavens were large enough to absorb man's mistakes, the oceans deep enough, the soil could recover, from our mistakes." And she said, with the onset of atomic energy, I see we have the power to destroy this. And it horrified her.

VOICE: Chemistry, alchemy, magic. The modern laboratory of today's chemists, the holy of holies, where in science moves in mysterious way her wonders to perform.

BILL MOYERS: In the 1940s and 1950s, "science" had been seen as our savior. The chemical industry had helped win the second World War, and now promised us 'better living through chemistry.' That meant a new domestic war against bugs and weeds. You had to be living then to realize the bargain we'd struck with chemicals — especially insecticides and pesticides. We sprayed them on everything... And everyone.

VOICE: Chemical warfare is quick death to our enemies. Weather sprayed on a small scale or on a large scale...

KAIULANI LEE as RACHEL CARSON: You remember my saying that the subject chooses the writer. SILENT SPRING is a perfect example. I didn't want to write it. I was planning a book on children and nature, based on Roger. And out of the blue, I received a letter from an old friend, Olga Hawkins, about an aerial spraying of DDT which had devastated her Massachusetts bird sanctuary. She wrote in detail about the death of the birds. How they had died horribly, each in the same way, with their bills gaping opened and their splayed claws drawn up to their breasts in agony. The mosquitoes, the reason for the spray, remained. But the grasshoppers, the visiting bees, other harmless insects were all gone.

Olga hadn't wanted her property sprayed to being with. And now the State was proposing to spray it again. She wanted help. Had she no rights under our laws to protect her own land, and the sanctuary from poison? Her letter obviously concerned me. And I set out looking for any information that might help.

BILL MOYERS: What Carson discovered was disturbing: as we waged war on those pests around us, nature didn't just raise a white flag and roll over. There were growing accounts of a backlash... Disturbing anecdotal accounts from citizens and scientists alike: poisoned cattle and tainted milk... Whole watersheds contaminated. In Illinois, thousands of birds wiped out by one spraying of aldrin. Hundreds of people poisoned in California by parathion. In the south, a million fish and crabs killed by a campaign to wipe out the sandfly. In Florida and Wisconsin, evidence of children falling sick, even dying after playing with bags emptied of dieldrin.

Carson was stunned at what she was finding and alarmed that people in high places seemed so indifferent.

KAIULANI LEE as RACHEL CARSON: I think until very recently, the average citizen assumed that someone was looking after these matters. That some little understood, but carefully relied upon safeguards, stood like shields between his person and harm.

We're experiencing a rather rude shattering of those ideals. The more I read, the more alarmed I became. And I decided that I would write an article. But I couldn't find a magazine that would publish it. They were afraid of losing their advertisers, many of whom were connected to the oil companies. Or their satellites, the petro-chemical companies.

Well, if a magazine article couldn't be published due to advertising restraints, then a book would be written. It was really quite simple. Except that I wasn't going to write it. My mother was ill. She was dying. And Roger had been with me less than a year. He needed all of my attention. I didn't have the time to commit to anything more than an article. And I didn't want to. A book about pesticides would be a book about poison and death. I want to write about life.

So I contacted other writers, each well-qualified for the task. They didn't want to write it anymore than I did. E. B. White's refusal was the hardest. I was certain he'd be the one. He could've found a style that would've reached everyone.

I didn't know what to do. All that was clear to me was that the information had to get out. That people had no understanding of the risks they were being asked to take. It was only my years as a government biologist that had taught me about the chemicals. They're nonselective poisons. They'd only been used during wartime and for the emergency control of insects. They had never been tested for large-scale agricultural use.

And yet within 12 years, since World War II, their use had become commonplace. They'd made our farming efficient and profitable. They clear our yards, our forests, our homes of unwanted pests. We use them in our kitchens. We rub them on our skin. They coat our shelf paper. We sleep under mothproof blankets impregnated with dieldron. Hang strips saturated with lindane in our closets. We coat our lawns, our gardens with lethal sprays and dusts. And every meal we eat carries its load of chlorinate hydrocarbons, DDT, and other related chemicals.

We had all been made so well aware of the benefits of these pest controls. Why had no one alerted us to their dangers? Is it possible to lay down this barrage of poison on the surface of the Earth without making the Earth unfit for all life?

I decided to write the book.

KAIULANI LEE: Pesticides weren't her issue. She wasn't a chemist, she was a biologist. But she realized that this was one of the many ways we could destroy the world. And nobody else was picking up the mantle. She tried for a year to get other people to write the book. But she saw this was urgent. There was a lot of material out there. And many scientists in the government were concerned, and she was one of them.

BILL MOYERS: She was angry at the authorities who were allowing the use of pesticides to go on unchecked, right? I mean there is some indignation there.

KAIULANI LEE: In fact I think she believed that the public was being used. They were being asked to take the risk.

BILL MOYERS: Unknowingly.

KAIULANI LEE: Unknowingly. And that the public had to make the choice. And that the public could not make the choice if they didn't have the information. So she wrote out the information as clearly and, because she was such a fine writer, as poetically, as she did.

BILL MOYERS: It took her four and a half years, but when she finished she had found the perfect metaphor for the ominous, if unintended, consequences of the chemical revolution. The book's title comes from the opening chapter - 'A Fable for Tomorrow' - in which Carson imagines a future American town where all the sounds of spring have been silenced by the death of nature itself.

KAIULANI LEE as RACHEL CARSON: I'll never forget the night that William Shawn telephoned me. Mr. Shawn is the editor of the NEW YORKER Magazine. He had decided that he wanted to publish large sections of the book in serial form. He had just read my

manuscript and he telephoned me, saying everything I could've asked or hoped for.

And that night, after Roger was asleep, I came back in here. And I put on the Beethoven violin concerto. It's one of my favorites. And suddenly the tension of the four years was broken. And I let the tears come. And that night, the thoughts of all the birds and the other creatures, all the loveliness that is in nature, came to me with such a surge of deep happiness. I'd done what I could. I'd been able to complete it. And now it has its own life.

BILL MOYERS: And what a life. SILENT SPRING was a phenomenal success. Chosen for the influential Book-of-the-Month- Club, it spent weeks atop the bestseller list. The pubic was riveted by Carson's warning. But that success also made SILENT SPRING political dynamite.

Furious chemical companies launched a propaganda blitz to discredit the book and its author. There were threats of lawsuits against the publisher. Magazines and papers that ran favorable reviews were told they would lose advertising. One critic wrote, "We can live without birds and animals, but we cannot live without business." Never mind that Carson had not called for banning all pesticides, only for their judicious use. It didn't matter. To the industry, she had to be stopped.

DR. ROBERT WHITE STEVENS: If man were to faithfully follow the teachings of Ms. Carson, we would return to the Dark Ages and the insects, and the diseases, and the vermin would once again inherit the Earth.

BILL MOYERS: Carson was accused of communist sympathies and of being a 'peace nut,' 'a fanatic,' even...a woman. Said one critic, "SILENT SPRING. "Kept reminding me of trying to win an argument with a woman. It can't be done." And a former secretary of agriculture and prominent leader of the Mormon Church asked: "Why is a spinster with no children concerned with genetics?"

KAIULANI LEE as RACHEL CARSON: I'm trying to write a speech I'm giving next week. But I read an article this morning that so annoys me, I'm having difficulty concentrating. It was an editorial written by a senior editor from NEWSWEEK, comparing me to Senator Joseph McCarthy. And accusing me of stirring up the latent demons of paranoia.

I've been called so many unpleasant things this last year, you'd think I'd be used to it. I am. But there's often this initial irritation at the stupidity. Hopefully by tonight, I'll find it amusing. Add it to my list of favorite quotations on Carson. "Rachel Carson doesn't write as a scientist, but as a fanatic. A defender of the cult of the balance of nature. Her book is more poisonous than the pesticides she condemns. It should be ignored. Maybe scientists sympathize with Miss Carson's love of wildlife. Even with her mystical attachment to this balance of nature, but they fear that her emotional and inaccurate outburst may do harm by alarming the public. If one were to faithfully follow the teachings of Rachel Carson, we would return to the Dark Ages. And the insects, and the diseases, and the vermin would once again inherit our Earth."

I'm feeling better already.

You should've seen the reviews for SILENT SPRING. The book actually offended a relatively small segment of our society. But a very rich one. The chemical and other related industries such as food processing and the federal government's immensely powerful Department of Agriculture. To these formidable foes, I am a publicity problem to be dealt with by any means at hand. Law suit, slander, you name it. Of course, the attacks are not pleasant. But they don't really get to me. The difficult part for me was writing the book, and that's done with.

KAIULANI LEE: To know that she was going to be vilified I mean, the courage that every one of her friends, powerful friends, Justice, Supreme Court, you know, people, powerful friends encouraged her not to write this book. They said "You will be vilified for this. You can write anything you want. And this is not going to be fun." And she knew that. But she didn't know how awful it was going to be.

BILL MOYERS: Throughout the controversy that swirled around SILENT SPRING, the Rachel Carson the public saw was a calm and determined figure, confident of her facts and firm in her convictions. But Carson was fighting another battle...A private battle she didn't want to talk about. She was dying of cancer.

KAIULANI LEE as RACHEL CARSON: I'm not getting anywhere, am I. I haven't even

finished one room. Maybe if I don't pack I won't have to go.

For the last three years, I've battled with cancer, successfully. But my doctors are telling me now that every month is precious, and that my body will begin to fail me. I don't look particularly ill. I'm still able to care for Roger. And I do the cooking, the cleaning, the household chores. I keep up with my work. I believe in the old Churchillian determination, you fight each battle as it comes. And I believe that determination may well postpone the final battle. But for how long?

That's why we're going back. I've got to get things settled. I haven't started. I don't know what to do with Roger. I've no one to raise him. I haven't even told him.

I have lectures to give. I have articles I'm contracted to write. I have bags and bags of mail, all requiring some kind of a response. There's so much to be done. And there's so much that could be accomplished right now. If only I'd reached this point in my career ten years ago. Now when there's an opportunity for me to do so much, my body falters.

If the truth be known, I've spent these last weeks pacing this little room, wishing I had nothing to do. That I had no responsibilities to anyone. I want to stay here. Abraham Lincoln said, "To sin by silence when they should protest makes cowards out of men." Pack up your house, Rachel. You have one more trip into the public arena, and a little boy who needs you.

BILL MOYERS: This would be her last visit to her beloved cabin in Maine. She was spent... A grueling season of speeches and Congressional testimony had taken its toll.

CONGRESSIONAL CHAIRMAN: Would you please proceed as you see fit...

BILL MOYERS: It was clear that SILENT SPRING had awakened the public, but Carson had always set for herself another goal: to light a fire under federal officials. As she was nearing the end of her life, she witnessed the first spark.

KAIULANI LEE as RACHEL CARSON: Last week, I missed an air pollution conference and the morning paper carried a fairly conspicuous article under the heading, "Author of SILENT SPRING Silenced by Cold." It was good news in the chemical circles. I'm reaching that state of eminence where my sniffles, like the President's, are news.

Speaking of our President, last winter when SILENT SPRING was at the height of controversy, President Kennedy and the scientific advisory committee set up a special panel to study pesticides. And their report, which was issued this last spring, criticized both the industry and the agencies of the federal government and vindicated SILENT SPRING's thesis completely. And that was the turning point. It was immediately followed by Congressional hearings which underway today, examining what legislative action is required to deal with this pesticide problem. We are witnessing the creation of federal policy to safeguard the environment. It thrills me.

REPORTER AT JFK PRESS CONFERENCE: There appears to be a growing concern among scientists about the possibility of dangerous long-range side effects of the wide-spread use of DDT and other pesticides. Have you considered asking the Department of Agriculture or the public health services to take a closer look at this?

PRESIDENT KENNEDY: "Yes, and I know that they already are. And in particularly, of course since Ms. Carson's book, but they are examining the matter."

BILL MOYERS: It's impossible to do justice today to Rachel Carson's impact. I was in government at the time, and I remember all over Washington, people were talking about this book.

President Kennedy knew he had to act. His science advisor Jerome Wiesner and several cabinet secretaries took on the mission. A new consciousness was forming...part of our long and continuing struggle to balance our place in nature with our footprint on it. Rachel Carson would not live to see the rippling influence of her work. She died in 1964. But now we knew we must treat the planet with care. This most diligent scientist, this most courageous of women and gifted of writers, left us that legacy.

KAIULANI LEE as RACHEL CARSON: I believe that natural beauty has a necessary place in the development of any individual or any society. I believe that whenever we destroy

beauty, whenever we substitute something man-made and artificial for a natural feature of this Earth, we've retarded some part of man's spiritual growth. In contemplating the exceeding beauty of this Earth, I have found calmness and courage. For there is symbolic as well as actual beauty in the migration of the birds, in the ebb and flow of tides, in the folded bud ready for the spring. There is something infinitely healing in the repeated refrains of nature. The assurance that dawn comes after night, and spring after winter.

Mankind has gone very far into an artificial world of his own creation. He has sought to insulate himself in his cities of steel and concrete, away from the realities of earth, water, the growing seed. And intoxicated with a sense of his own power, he seems to be going farther and farther into experiments toward the destruction of himself and his world. There is certainly no single remedy for this condition. And I can offer no panacea. But it seems reasonable to believe, and I do believe, that the more clearly we can focus our attention on the wonders and the realities of this universe about us, the less taste we shall have for its destruction.

That's what I want to say.

BILL MOYERS: Forty three years after her death, Rachel Carson's work is under attack again. Critics like to point out she was incorrect about the cancer rates of some pesticides, but they go further to claim her warning about the widespread use of toxic chemicals has allowed diseases like malaria to make a comeback. If you go to our website at pbs.org, you'll find the charges laid out, and responses to them from scientists, historians and public health officials.

CHRIS JORDAN: The warnings on this one are all written in Chinese characters. Do not recharge, put in fire, disassemble, put in backwards or mix with used or other battery types. May explode or leak.

CHRIS JORDAN: Our consumption looks like something from a distance, and then, when you get up close, it looks like something very different. From a distance it looks like all these nice, shiny things that we get to own. And these great lifestyles that we get to live. When you zoom in close, and you learn about the toxic metals, and the world-wide pollution, and the details look different than it looked when you stood back at a distance.

My name is Chris Jordan, and I used to be a photographer and now I'm some kind of digital photographic artist.

IMAGE: "Plastic Bags"

CHRIS JORDAN: This is called Plastic Bags 2007. This is 60,000 plastic bags, which is five seconds worth of plastic bag usage in the United States. That's five seconds worth of plastic bags.

IMAGE: "E-waste, New Orleans 2005"

CHRIS JORDAN: All of my work is meant to evoke a whole bunch of different layers of discord between the attraction and repulsion that we feel toward our consumer habits and our consumer lives. It's like there's this tremendous power in our culture that has a dark side to it that has surfaced lately. And that's kind of what I'm working with.

CHRIS JORDAN: Yep, that's exactly how I'm gonna shoot em..

CHRIS JORDAN: I find myself walking these lines. Like I might be an artist, but I also might be an activist. And I'm trying to be both in a way that honors both and doesn't stray too far into either.

IMAGES:
"Container Yard and Mt. Rainier, Tacoma 2004"
"Container yard #2, Seattle 2004"
"Crushed Cars #3, Tacoma 2004"
"Boxcar, Seattle 2003"
"Gas Cylinders, Seattle 2003"

CHRIS JORDAN: For many years, all I was interested in about photography was aesthetic beauty. And so, I would go out looking for that. And actually what I would do is go out driving around the Port of Seattle or I'd go down to Tacoma and drive around the port

there. What I was interested in at the time was just color, places where color appears inadvertently or places where there's this color that appears in a very complex and beautiful way, but nobody intended it.

CHRIS JORDAN: A lot the photographs I took back then, I had to trespass. I had to sneak in or climb over gates or over fences on Sundays to take these photographs. I worked with this camera that was about, I don't know, three and a half or four feet wide. It was an 8x10 view camera. And a tripod that went up 11 feet.

IMAGE: "Mixed Recycling, Seattle 2004"

CHRIS JORDAN: And one day, I found a pile of garbage that was really beautiful, I thought, and so I photographed it. And I made a big print and hung it on my wall. And people would come over and look at it and they would start talking about consumerism. And they'd walk up and say, "Oh, look, there's an Altoid's can." Or there's a, whatever particularly consumer product that they recognized in the photograph. And then they would start talking about garbage and waste and they would tell me, "Chris, this is a different kind of image that you haven't made before." And they would sort of urge me to follow the thread. And I told them "I'm not interested in all that. Like, don't talk to me about modern art. And don't tell me to come up to date. Just check out my cool cosmic color theory."

And it really took a while for me to assimilate that this was a new kind of path I could follow. And as I look back, it's something that I truly cannot take credit for -- is finding my way to consumerism as a subject, because it found me. My own idea of it started to change. And it went from these brightly colored things, and it slowly started to get a little darker.

IMAGES:
"Cell phones #2, Atlanta 2005"
"Circuit boards, Atlanta 2004"

CHRIS JORDAN: There's this contrast between the beauty in the images and the underlying grotesqueness of the subjects. And it's something that I put there intentionally because I was using beauty as a seduction, to draw the viewer in to sit through the piece long enough that the underlying message might seep in. It was frustrating because I would show my work to people and they would tell me how beautiful it was. But, they wouldn't get that it's about consumerism. Then, I would think, okay, I can go further. I wanna make an image that is affirmatively ugly.

IMAGE: "Cell phone chargers, Atlanta 2004"

CHRIS JORDAN: A visceral pile of twisted wires â€“ supposed to look like monster guts, or something like that.

I couldn't really show the scale of American mass consumption - I could only hint at it. I would always have to say, "And this photograph only represents a tiny drop in the bucket compared to the actual quantity of things that we use or we discard." And as it came time for me to start thinking about doing a new series, it occurred to me, what if I could show the actual quantities of the things that we consume? One of the dilemmas I faced was that there's nowhere where there are massive piles of the actual detritus of our entire country's consumption. And so the only way I could possibly depict those things was to create digital images that put together lots and lots of little photographs.

IMAGE: "Toothpicks, 2007"

CHRIS JORDAN: This one is called "Toothpicks". We have 100 million trees in the United States that are cut every year for mail order catalogues. Each toothpick in this image is one tree cut just to make mail order catalogues in one month. Eight million toothpicks.

IMAGE: "Plastic Bottles, 2007"

CHRIS JORDAN: Our minds are just not wired to be able to really comprehend and make meaning of and feel numbers that are that huge. And if the only way we're getting all of this information about these profoundly important phenomena that are going on in our society is through statistics, then we aren't going to feel what we need to feel in order to make the radical changes we need to make.

This one is called "Plastic Bottles" and it depicts two million plastic bottles â€" the number that we use in the United States every five minutes. This is the equivalent of eight entire football fields, completely covered. And that's five minutes worth of plastic bottles.

IMAGE: "Jet Trails, 2007"

CHRIS JORDAN: This is an image of 11,000 jet trails. And what this represents is eight hours of commercial jet flights in the United States. And the way I made this image is I just went outside on a clear day and took pictures of jets flying overhead. And when I had a couple hundred pictures of jets then I started pasting them all together into one great big canvas.

I wanted to show a full 24 hours, one full day of jet flights which is 33 to 34,000 flights. And I tried 34,000 on one page, and it just came out to be a solid white mass. And so I had to back off until there was some visibly - a visually comprehensible number of them which turned out to be about eight hours worth of jet flights.

CHRIS JORDAN: So I'm just curious what lots and lots of these are gonna look like.

CHRIS JORDAN: I think of other artists who get to create for long periods of time. Like painters who might take 'em a month of actual - the creative process of putting paint on the canvass. And, with my work, the way it happens, is I have a flash of an idea that'll just be this instantaneous "I got it." And it might be weeks and weeks of just the most incredibly obsessive work in PhotoShop. But that's the only way that I can realize the idea that I had. And so I really don't - it doesn't feel like there's a lot of creativity in my work. It's mostly just pure, obsessive tedium in PhotoShop.

As I released the first few images in my Running the Numbers series, I got some really negative feedback. One person said this "This is computer shenanigans that my 12 year old daughter could do." But I'm just willing to be with that, because what I care about is the message.

IMAGE: "Prison Uniforms, 2007"

CHRIS JORDAN: This one is called "Prison Uniforms, 2007" and it depicts 2.3 million folded prison uniforms, equal to the number of Americans incarcerated in 2005. We have the largest prison population of any country on earth. There's also no other country that has that percentage of its population in jail. And that includes all of the dictatorships that we think of as the enemies of freedom.

I want people to realize that they matter. Because, to me, that's the key. When you stand back from the print you see the collective. And as you walk up close, you can see that the collective is only made up of lots and lots of individuals. There is no bad consumer over there somewhere who needs to be educated. There is no public out there who needs to change. And that's kind of the underlying message that I'm trying to convey. It's each one of us.

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