CHRIS JORDAN

11. RUNNING THE NUMBERS

A Conversation

It seems to me that the best art is political and you ought to be able to make it unquestionably political and irrevocably beautiful at the same time. (Toni Morrison)¹

It is the mark of a truly intelligent person to be moved by statistics. (George Bernard Shaw)²

One of Chris Jordan's goal as an artist is to enable people to be affected by numbers that tell important stories about collective responsibility. He does this by digitally assembling pictorial arrays showing large numbers of objects reflective of contemporary society. While these objects are familiar to the point of being unnoticed, we lack a sense of their aggregated numbers, which are normally conveyed only through the abstraction of numbers, a representation low in impact. Accordingly, he set himself the task of devising a way to show these numbers in a more directly graspable form, and the solution he came up with was to exploit the capacity of computers to manipulate images.

By way of example, take the bare statistic that in the year 2007, 2,000,000 plastic bottles were used and discarded in the USA *every five minutes* (Fig. 11.1). We have some sense that this is a big number, but how big? As individuals, we rarely see more than a few plastic bottles. We could estimate how many we use in a year, but what would that number mean to us? Jordan's computer image shows 2,000,000 plastic bottles. In this representation, there is a one-to-one mapping between elements in the image and the objects being represented, as opposed to the compact representation of two million as a mere 7 digits. When we first look at the image, it looks like an abstract painting. However, using the capability of the computer to zoom in, we can look more and more closely, and we begin to see that the image is made up of bottles, and finally we can make out individual bottles with familiar Coke and Pepsi labels (Fig. 11.2).

Another composition, Cap Seurat (Jordan, 2011), is a take on Georges Seurat's painting *A Sunday on La Grande Jatte* (Fig. 11.3). It represents "400,000 plastic bottle caps, equal to the average number of plastic bottles consumed in the United States every minute." The very large number – the magnitude of which could be hard to grasp – is embedded in an initially aesthetically pleasing, familiar, and non-threatening image. However, zooming in, Seurat's illusion of an image created by

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Fig. 11.1 *Plastic Bottles 60" x 120"* (Jordan, 2007) depicts two million plastic beverage bottles, the number used in the US every five minutes

pointillism morphs into a mass of familiar bottle caps – blue, green, black – that are all around us (Fig. 11.4).

Although we may be vaguely aware that a large number of plastic bottles are piling up daily somewhere as waste, we can hardly comprehend the impact of its bulk. In his own words, "Statistics can feel abstract and anesthetizing, making it difficult to connect with and make meaning of 3.6 million SUV sales in one year, for example, or 2.3 million Americans in prison, or 32,000 breast augmentation surgeries in the US every month." By zooming in and out, we can start to make a connection between the individual bottle discarded, a single act of throwing away a bottle, and the cumulative effect of this individual action being replicated across the nation, and often around the world. Work in this style is collected in his Internet presentations and book under the title *Running the Numbers: An American Self-portrait* (Jordan, 2009). Story-telling numbers featured in this work include:

Number of cell phones retired in the US every day in 2007: 426,000 Number of gun-related deaths in the US in 2004: 29,569 Number of Americans incarcerated in 2005: 2,300,000

Number of plastic beverage bottles used in every five minutes in US in 2007: 2,000,000 Number of plastic beverage cups used on airlines flights in the US every six hours: 1,000,000

Number of sheets of office paper used in the US every five minutes in 2007: 15,000,000 Estimated number of plastic bags consumed around the world every ten seconds: 240,000

Amount of money spent in dollars on the war in Iraq every hour in 2007: 12,500,000 Number of Americans who die from smoking cigarettes every six months: 200,000 Number of items of junk mail that are printed, shipped, delivered, and disposed of in the US every three seconds: 9,960

Number of gallons of oil consumed around the world every second: 48,000



Fig. 11.2 Zoomed-in image of Plastic Bottles (Jordan, 2007)

Number of Indian farmers who have committed suicide since 1997 when Monsanto introduced its genetically modified cotton seeds containing terminator technology into that region: 200,000

Estimated number of pounds of plastic pollutant that enter the world's oceans every hour: 2,400,000

Recently, he has been photographing and filming on Midway Atoll, a cluster of Pacific islands 2,000 miles away from any landmass, where ocean currents bring massive quantities of the plastic detritus of today's world. The effects are tragically seen in the carcasses of albatrosses scattered across the islands, in which a few bones and feathers surround piles of plastic, which the birds have ingested from the ocean (Fig. 11.5).

Chris Jordan does not aspire to tell people how to behave, but he does want them to have a sense of the implications of their individual actions in relation to the collective actions that are destroying our world.

On May 5, 2011, Chris Jordan and Swapna Mukhopadhyay had an informal conversation at Jordan's Seattle studio where three magnificent gongs hang from the ceiling near a work table covered with large prints. Various photos are displayed on the walls; books, musical instruments, art-related stuff are all around.

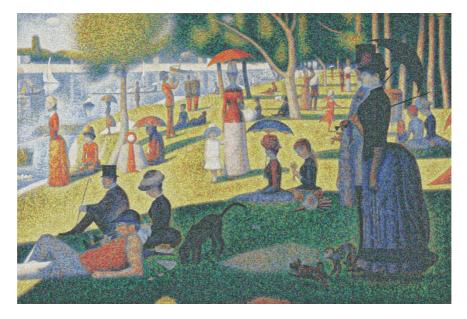


Fig. 11.3 Cap Seurat 60" x 90" in one panel, and 88" x 132" in 3 panels (Jordan, 2011). The image depicts 400,000 plastic bottle caps, equal to the average number of plastic bottles consumed in the US every minute

Chris and Swapna sat facing each other, with a bank of computers behind Chris. He lit a candle and sage smudge sticks, struck a Tibetan singing bowl, and the conversation began.

RESONANCE

- Chris: Resonance. I am a big fan of resonance. I love the metaphor of things that resonate. In a way maybe that's what we all are: resonators.
- Swapna: Do you want to talk about that and how it relates to your work?
- Chris: Well, one jumping-in place is simply to recognize how important it is to face the gravity of the times we live in. That's where my work originates, at least in part. I envy people who lived back when there wasn't such a need for global collective change. Not so long ago, artists could devote all their time to exploring beauty, or the nature of perception, and be satisfied with that as their life's work. These times feel different.
- Swapna: In what way?
- Chris: Well, leaders in lots of different fields right now are telling us that we've got only a few years to move into a radically new way of living. And if we fail, the consequence will be a shift in our biosphere over several centuries that will bring human civilization as we know it to an end. Every day our actions are



Fig. 11.4 Zoomed-in image of Cap Seurat (Jordan, 2001)

inadvertently deciding the fate of humankind, and to know that and not focus my work on it in some direct way would feel to me that I was living a useless life. And I wonder how beauty, humor, and joy fit into that picture, and what realistically can be done by one dude with a camera?

Swapna: There seems to be some humility in this approach.

- Chris: I'm not sure I would characterize it that way. I think I still have a lot to learn about humility. For me, it's a position of urgency, because there's so much at stake. How does one pose these uncomfortable questions with grace and respect, and deliver them in a way that reaches others meaningfully? It's like trying to solve a Rubik's cube.
- Swapna: So one always has to choose a conduit. How do you feel about that, your medium as a conduit?
- Chris: I like that idea, and it gets back to resonance, oscillating a vibe out into the field. But what's the deeper message that's being resonated? I don't think art's role is to give out answers, in an activism kind of way. My work aims more toward self-inquiry, looking into the unseen processes that got us where we are. I am interested in framing these issues without judgment, in a way that attempts to honor their complexity, facing our individual roles too, including my own.

But I'm also not totally hands-off in terms of having an opinion. The way I choose my subjects, there's a point of view there. I care about the state of our culture, and believe in our ability to change. I'm interested in what motivates us below the level of awareness, and about the relationship of grief and beauty in



Fig. 11.5 Midway: Message from the Gyre

our spirits. I don't want to stand back at a detached distance with a viewpoint that is fundamentally cynical or ironic. There's plenty of that out there already, and it doesn't advance the ball.

- Swapna: One of the things that appealed to many people at your lecture at Portland State University was the story you told about leaving the legal profession.
- Chris: I used to tell that story a lot, but now it's sounding kind of old to me. At its heart, the lawyer thing for me was about my fear of living. I come from an artistic family, and have been photographing and studying photography for more than twenty years. But I couldn't find the courage to take the risk of failing, so instead I went to law school and copped out of the game for a while there. I'm glad to be back in the fray. In terms of my Portland lecture³, it's so inspiring to have a student come up and say she made a decision in her life based on something I did. It makes me want to work harder than ever.

Swapna: You are a teacher in a way.

Chris: Hum, well I don't think of myself like that, at least not at this point in my life. What would I have to teach? But, maybe it's helpful to say here's the path I'm choosing, and here are some mistakes I have made along the way, for what's that worth.

Swapna: Do you look at the work of political artists? Does that interest you?

- Chris: You know I have to admit that I don't feel connected with a lot of what's going on in the visual art world right now. Fine art tends to live a strange parallel existence with the rest of the world, sometimes without much contact between the two. It's disappointing because art has so much potential as a means of affecting culture, but in my view a lot of that is being wasted right now, especially at the big institutional level. There are plenty of exceptions, and I do see some exciting new threads emerging lately, artists and curators who are reaching out directly to the public, engaging the issues of our time head-on. There are pockets of brilliant creativity and courage out there, especially at the fringes.
- Swapna: I think maybe there is something your work has in common with Banksy's⁴, in that it tries to present uncomfortable information in a direct way. Anyone with basic intelligence will be able to understand what is being represented because of the way you've represented it.
- Chris: Banksy! A real ass-kicker I love what that dude's up to. And yeah, I do want my work to be as transparent as possible. I'm trying to say my thing in a way that a fourth grader can get, but embracing complexity and subtlety at the same time, without oversimplifying. One influence that way is Mark Twain, who I studied extensively in college. I have huge reverence for his form of storytelling: he respects his audience, but tweaks their minds too, using sleight of hand to gently nudge them into some gnarly psychic territory. That's a powerful approach, something I aspire to. For me, part of that process is also about getting myself out of the way, making my work about the subject, not about me or about the art itself.
- Swapna: Tell us about the mathematics part of your *Running The Numbers* series. It seems to me you are interested in helping us comprehend big numbers. Can you talk about that?
- Chris: That's a part of it, but it isn't only large numbers that I'm interested in it's specifically numbers that relate to our unconscious mass culture. The issues I focus on are collective behaviors that tend to go unacknowledged, unspoken, in the shadow. Millions of people can join in a trend, like buying and driving increasingly dangerous and impractical off-road vehicles for vague reasons we can't even articulate; or objectifying women's bodies to the point where hundreds of thousands of American women come to believe they need various kinds of surgery to attract love into their lives. These kinds of phenomena can be motivated by feelings below the level of awareness, with cumulative effects that no one wants or intends.

And these behind-the-scenes feelings can reside in powerful forms, like anger and rage, building up collectively and manifesting as cultural horrors that seem to come out of nowhere. Right now American culture is permeated with hostility, and we aren't talking about it openly. It seeps into our political process as vitriol and hatred, splitting people into smaller and smaller groups and leading to a kind of public nastiness that was unheard of even a couple of decades ago. The underlying feelings are legitimate, and deserve to be talked about and worked through; but instead they remain mostly underground,

morphing into behaviors like violence. It's frightening to watch it seethe, ready to turn into an atrocity if the wrong conditions all combine.

As an artist, I'm interested in shining a light into those dark corners, illuminating what's lurking below the level of awareness. Because the moment we become aware of an unconscious process, then we have choices that we didn't have previously. So, I'm not just interested in showing what 384,000 of some random thing looks like; I want to illustrate 384,000 breast augmentations surgeries, so that as a culture we might begin to wonder into this tragedy on a deeper level. Just as we speak, I saw this horrendous news of a Barbie mom giving her seven-year-old daughter a voucher for breast augmentation when she is sixteen.⁵

These mass phenomena are everywhere we look, right in the details of our own lives. Think about the strange fact that every year Americans voluntarily buy, drink, and dispose of more than 200 billion plastic bottles of processed sugar and chemical ingredients that are toxic to our bodies. I want to hold up a mirror and reflect these things back to us. What we each do with that information is not for me to say, but let's start by facing it together.

Swapna: Where do your ideas come from?

Chris: Mostly they just appear out of nowhere. Like the idea for my latest piece came when I was standing naked out in my garden at about 2:00 am, looking up at the full moon and thinking about all the Americans who are losing their homes right now. I was reflecting on the old cliché that whatever good or bad things are happening in our various lives, we all look at the same moon. And right then an image hit me: the moon made of thousands of credit cards, representing all the people in the US who are being forced into bankruptcy. It felt like a strong idea because it contained a dark humor, with layers of horror and sadness, plus visual interest and some potential for beauty, all wrapped up together so you can't tell them apart anymore. Those are the ingredients I look for.

It's a bizarre experience, that moment of creation. Creation isn't even the right word, because it's something that comes *to* me, rather than *from* me. A lot of artists describe their ideas like that, where you can't really claim credit for having thought it up, it just arrives, with a zapping sound. Then from that point, it's just a matter of executing the work, which for that image meant collecting hundreds of credit cards, photographing each one individually, blurring the names and numbers one by one in Photoshop, and then building 29,000 of them into a giant image. A hundredth of a second of creative spark, followed by hundreds of hours of pure tedium. I like the final result of that one though – from a distance it looks pretty convincingly like the moon.

- Swapna: The relationship between the individual and the collective. What would it be like if you could click on one of those credit cards and get the story of one of the individuals?
- Chris: Hey, nice one, I love that idea, it would really bring the issue home. I'm always searching for ways to make these global issues more personal. It's a challenge, and as you suggest, at bottom it's about the individual's place in the

collective. I'm interested in how we each fit in. Like, do I matter? Can one person's behavior really make a difference? When you look behind the cliché that every vote counts, our insignificance is hard to face. How can we feel empowered as individuals when we are each just one of 6.8 billion, with the world's population increasing by 200,000 new people every day? Our collective behavior is causing a multi-leveled catastrophe, but each one of us is so small that our own impact is abstract and infinitesimal. How do we make sense of that? One thing that's clear is that humanity's collective power is immense, whether in a negative or positive way. What is the key to triggering a new kind of collective consciousness that could change everything? I think art could play a role.

Swapna: How do we take that next step?

Chris: Well that's a big question, isn't it? I think a key ingredient could be our feelings, and perhaps that's where art comes in. As individuals, our feelings are our connection with the world. If we can't find the part of ourselves that feels something about these issues – our fear and anger about the extinctions and wars, our love and joy for the tremendous beauty of our world, our grief about what is being lost – then it's no wonder we aren't acting more decisively. I think as Americans we've become frighteningly disconnected from how we feel about things. It's not that we're unfeeling people; I think we've just gotten lost, and are overwhelmed with abstract information and surface noise. Our news comes to us as vast numbers that have no meaning: millions of that, billions of that, and whether it is deaths or crimes or amounts of money or whatever, it becomes hard to feel any of it.

Running The Numbers tries to point in the direction of comprehending some of these issues so we can relate to them more consciously, and perhaps feel something more directly and openly. I think if we could actually stand in front of a pile of the dead bodies of all the people we have killed in the Iraq war, or a mountain of all the money we have spent on it – an actual pile of a trillion dollars, or stand in front of all the schools that could have been built with that money, or all the food that could have been given to people who need it, I think we would feel something quite profound. It might not be a happy feeling, but it sure would wake us up. Otherwise it's just a big abstract concept characterized by numbers we can't comprehend, that we read on our computer screens before clicking on to the next thing.

- Swapna: Abstraction can take away from feeling. Your pieces have an interesting play that way, abstract, and yet pointing toward something that's not abstract. How do you think about it?
- Chris: That part of *Running The Numbers* is a source of dissonance for me. To illustrate global issues, the images are forced into some degree of conceptual abstraction, but I'm trying to shape them so they have a personal impact. They attempt to point in the general direction toward comprehension of these issues, but I'm constantly aware of how limited they are in their ability to really convey what I want to say.

For example, take the image of 11,000 jet trails that depicts eight hours of our commercial flights. If you were really to look at the resources being expended by our jet travel, you would have to consider all the metals extracted from the earth in mining operations all over the planet to create the machines and factories that build the jets and all of their components; the operation of the airports, including all the vehicles and buildings, and the mining and manufacturing behind that; and all of the power and fuel being consumed at all those stages, and so on. Air travel is an incomprehensibly massive and impactful global process, and my *Jet Trails* piece gestures toward all that only in a vague way. When I look at it like that, I realize how much further there is to go to in facing these issues.

- Swapna: Your work is not just about large numbers, it's also about how things are scaled up in a reality that we otherwise don't see.
- Chris: Yea, that's another piece of the puzzle these issues are invisible. The scale of our mass culture is never collected in one place where we can go and see it, and behold it with our senses. There is no way to photograph the millions of tons of plastic in our oceans, or all the Americans who are losing their health insurance coverage, and so on. To try to grasp these phenomena on their full scale, the only information we have to work with is statistics giant numbers with lots of zeros that our minds and hearts cannot relate to in any meaningful way. And yet the phenomena themselves are profoundly important for us to connect with, so how do we do it?
- Swapna: Can we act and think both locally and globally at the same time, is it becoming impossible at this point?
- Chris: That's an interesting question that I was talking with some Chinese artists about recently. They come from a two-thousand-year tradition that subverts the importance of the individual in favor of the smooth functioning of the collective. Western culture, especially America, is all about empowering the individual with as few limits as possible for better or worse. And yet, despite coming from these two diametrically opposite philosophical directions, our two cultures face the same problem right now: We have hundreds of millions of individuals acting on their own, and collectively we are inadvertently contributing to a disaster that threatens humanity's very existence.

So how do we foster what futurists call "global collective intelligence?" We are still operating under top-down management, shaped like a pyramid, with so-called leaders at the top, the power elites, who in most cases lack integrity or wisdom, and who control massive amounts of resources and people. That paradigm clearly is not working anymore, if it ever did in the first place.

- Swapna: Power structure we live in a hierarchical world. If that's gone, it could get us to a place where we're on the same page. Do you feel hopeful about that?
- Chris: Lately, not so much. For a while there, I felt like my work was part of a bigger movement that was on the cusp of a big, spreading transformation. I heard lots of names for it and my favorite was the Great Turning. People around the globe were tuning in to the fragility of our world, our interconnectedness with it, our reliance on the balance of nature for our own continued existence,

and new paradigms of ethical stewardship and compassionate social justice. These ideas seemed to be catching on and propagating fast, like new grass growing up through an old cracked parking lot. It looked like in a decade or two we would see a deep change in human culture, an evolutionary step that would transform society within our lifetimes.

What I and a lot of other people hadn't anticipated is the incredibly powerful pushback from the boardrooms of corporate America: big oil, big chemical, big coal, military-industrial, factory farming, the finance and insurance industries, Fox News, and so on. They have effectively bullied the American psyche into a paralyzed state of fear and shame, and meanwhile the big deadline is passing. It's such a tragedy. And what for, after all? I suspect all those guys are secretly leading alienated and joyless lives.

- Swapna: But what about young people, and the power of education, both formal and informal? Informal learning it's what your work is about, no? How is it, what responsibilities do we have?
- Chris: Well, you could say that education is the big hope, particularly mass communication like television and films. Nothing else can reach so many people so fast. But look at the appalling effect the right wing is having on the media and education right now. They've got us back to arguing creationism and denying the validity of science, while we emit another nine gigatons of carbon into our atmosphere this year.

One thing that's clear is the people who are alive now aren't the ones who are going to bear the brunt of what we're doing. Scientists say it's going to take a couple of hundred years for the disaster to fully take hold. I've sat with the world's leading climate scientist Pieter Tans of NOAA in Boulder and heard the straight scoop about global climate change. He said there is currently enough oil in the known reserves (and we're still drilling) to bring the carbon in our atmosphere up to 2,000 parts per million, assuming we burn it all. And that will alter the chemistry of the atmosphere and the oceans, and change the climate enough to set off an already cascading extinction that is likely to kill off most of life on Earth except for algae and fungus and those scary fish at the bottom of the sea. How do we tell that to our children? It is stunning to think about the destruction we're causing.

And yet, maybe it actually is us who are bearing the brunt, on a spiritual level. Knowing the harm we are doing to our world, and not addressing it, in my view is causing us an extremely deep psychic pain. We can all pretend we're having fun, laugh loud and clink our beer mugs, but our collective failure of integrity is always there, like the proverbial bloody rhino head in the corner of the room. Coming out of our denial looks from a distance like a bad experience, but I think it would be an ecstatic one, if we could find the courage to take the risk together.

And on another plane, when you think more broadly about the beauty and miracle of our existence, about what's actually happening – that right now you and I are embodied conscious beings sitting on the surface of a round planet in outer space, with hundreds of trillions of miles of cold emptiness in every

direction, then we can remember that this truly is a wondrous place. Our biosphere is the only known sanctuary of its kind in the Universe, and we're damaging it irreparably for reasons that are very difficult to justify, or even articulate.

From that perspective, the damage we are doing is so far beyond tragic that there aren't even words. When I think about that, the only response I can come up with is to focus on living locally and in the present, and channel my feelings into my work. Do the work and resonate it out there into the field. It feels impotent, but what else is there to do?

Swapna: Do you find it depressing?

- Chris: Yeah, maybe. It's hard to admit, I guess. There's a lot of talk about the need to stay hopeful these days, and I have been taking a close look at the nature of my own hope as part of my work on Midway Island. I have found that for me hope pretty much turns out to be an empty puff of smoke. It's a weak and disempowering feeling, a kind of passive optimism or faith that things will get better someday, independently of anything I do. It's a moving target, rooted in the future instead of the present; vague and abstract, like happiness with a not-yet quality to it, always just beyond reach. So with some relief, I'm learning to give up on hope lately, not in favor of negativity or hopelessness, but just trying to live more with whatever I'm experiencing from moment to moment, as uncomfortable as that can be at times. Of course that's all easy to say, but depression is a risk when you make a practice of looking honestly at the state of our world.
- Swapna: How do you deal with the sadness of knowing what is coming and the anticipation of all of that? And our roles?
- Chris: On a personal level, it's difficult to balance the layers of horror and grief along with the ironic fact of my own complicity – against the privilege and love and fulfillment I feel in my own life. I love my family, my friends, my work, and the sacred gift of being alive. I am trying to learn what it means to live ethically, as messy and hypocritical as that frequently turns out to be. I want to allow myself to feel joy and celebrate close relationships; and yet a part of me never stops thinking about the plastic in our oceans, those dolphins on the beaches with their ears bleeding, the five million children who are dying right now from malnutrition, the thousands of women raped in the Congo, and so on. And despite everything that's happening, the downward trend, life remains mysterious and wondrous and more beautiful than there are words for. I want my heart to grow big enough to bear it all, but I don't know how. Not even a clue.

Swapna: Have you thought about making books for children?

Chris: I would love to do that. Children really get this stuff. I think they have evolved one step beyond us, and when I get to hang out with kids, I see their minds are pre-wired for the new paradigm in a way that constantly amazes me. There are lots of cool projects I'd love to do if I had more resources to work with. Right now I'm directing a film about my experiences with the plastic-

filled birds on Midway Island. What a stunning place that is, a multi-layered mirror for humanity, an acupuncture point for our globe. Stay tuned. . . . Swapna: Thank you so much for an engaging conversation. Chris: And you. Cheers.

NOTES

- ¹ Morrison, T. (1984). Rootedness: The ancestors as foundation. In M. Evans (Ed.), *Black women writers (1950-1980): A critical evaluation*, p. 345. New York: Anchor.
- ² http://thinkexist.com/quotation/it_is_the_mark_of_a_truly_intelligent_person_to/207497.html.
- ³ Jordan, C. (April 30, 2009). Running the Numbers. Lecture at Portland State University. http://www.media.pdx.edu/dlcmedia/events/AFK/.
- ⁴ This British street artist with an international reputation shows and explains some of his best work at www.banksy.co.uk
- ⁵ http://www.phillyburbs.com/lifestyle/moms/mom-gives-the-gift-of-breast-augmentation-to-heryear/article_32ab5b5c-92af-11e0-bcdf-001a4bcf6878.html and http://www.huffingtonpost.com/ 2011/06/09/human-barbie-boob-job-voucher_n_873705.html?ncid=edlinkusaolp00000008.

REFERENCES

Jordan, C. (2009). Running the numbers: An American self-portrait. Prestel, Germany & Pullman, WA: Museum of Art, Washington State University.

Jordan, C. Chris Jordan: Photographic Arts.

http://www.chrisjordan.com/gallery/midway/#CF000313%2018x24.