Disorder: Vocabularies of Hoarding in Personal Digital Archiving Practices

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RÉSUMÉ L'image de « l'accumulateur compulsif du numérique », enseveli sous la masse désordonnée de ses nombreuses possessions numériques, est devenue une façon de plus en plus populaire pour les individus de décrire leurs habitudes quotidiennes en matière de collecte d'information numérique. Cet article affirme qu'une telle représentation de soi offre une perspective intéressante sur la psychologie des pratiques personnelles d'archivage. Il examine les façons par lesquelles l'action d'accumuler peut mettre en évidence et remettre en question les suppositions et les préjugés entourant l'action de mettre des choses en ordre. Il trace aussi l'émergence d'une attitude culturelle vis-à-vis l'action d'accumuler, non pas comme activité effectuée au hasard et de façon désordonnée, mais plutôt comme une lutte acharnée pour se forger une identité et pour donner un sens à sa vie par l'entremise de ses possessions. Il considère ensuite comment « l'accumulation numérique », comme sous-culture de la gestion de documents, peut nous aider à comprendre comment et pourquoi les archives numériques personnelles sont constituées et maintenues. Une meilleure connaissance du phénomène d'accumulation, ainsi que du rapprochement que font les créateurs de documents entre l'accumulation et leurs propres pratiques de gestion d'information numérique personnelle (qui sont analogues à leurs yeux), peuvent aider les efforts de la profession pour sensibiliser le grand public à la gestion des documents numériques personnels. Cette connaissance encouragerait les archivistes à mieux tenir compte de la façon organique dont les pratiques de classement individuelles se développent. Ainsi, cet article tente de trouver un équilibre entre les efforts de sensibilisation faits par les spécialistes de l'archivistique et ce que le public du monde numérique peut apprendre à la profession elle-même.

ABSTRACT The image of the "digital hoarder," buried under the disorganized turmoil created by the volume of his digital possessions, has become an increasingly popular way for individuals to describe their everyday digital collecting habits. This article argues that such self-characterization offers valuable insights into the psychologies of personal archiving practices. It examines the ways in which hoarding can expose and interrogate assumptions and biases about the act of organization, and traces an emergent cultural attitude toward hoarding, not as indiscriminate and disorganized accumulation, but rather as a struggle to sculpt a sense of self and purpose through one's possessions. It then considers how "digital hoarding," as a subculture of recordkeeping, can inform our understanding of how and why digital personal

archives are shaped and maintained. A deeper understanding of hoarding, and of record creators' self-defined analogues between hoarding and their digital personal information management practices, can benefit endeavours to educate the public about personal digital records management, by encouraging archivists to take into account more fully the organic ways in which individual organizational practices have developed. In these ways, this article seeks to balance archival outreach efforts with what the digital public can teach the archival profession about itself.

In 2007, National Public Radio (NPR) host Neal Conan interviewed Mark McCluskey, products editor at *Wired* magazine, about McCluskey's self-diagnosed "digital pack-rattery":

Conan: Books, stamps, shoes, comic books – they can take up space in your closet, but there's also stuff clogging up digital closets: emails, photos, embarrassing MP3s. Like most things nowadays, pack rats are digital, too. They're hoarding e-books, music, movies, bookmarks, and it's taking up thousands of gigabytes and a few mental gigs, too.… Mark, you're a digital pack rat yourself?

McCluskey: Music is a pretty good example of my case, you know. You start to look for obscure singles from your favorite bands. You look for special editions that, you know, normally you wouldn't necessarily be able to find in a records store but, you know, maybe somebody's ripped it.… You can buy enough storage now to store every piece of music you can conceivably ever listen to in a lifetime.… You start to get to this place where the problem isn't acquisition; the problem is knowing what you have.

Conan: Organization.

McCluskey: Exactly.[1]

For psychologists, compulsive hoarding is generally thought to be defined by the acquisition of, and failure to discard, a large number of possessions; clutter that precludes activities for which living spaces were designed; and significant distress or impairment in functioning caused by the hoarding.[2] In

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1   Neal Conan, "'Pack Rats' in the Digital Age," National Public Radio, 17 May 2007, audio accessed 12 June 2014, http://www.npr.org/templates/story/story.php?storyId=10238217; transcript accessed 12 June 2014, http://www.wbur.org/npr/10238217.
2   Randy O. Frost and Tamara L. Hartl, "A Cognitive-Behavioral Model of Compulsive Hoarding," *Behaviour Research and Therapy* 34, no. 4 (April 1996): 341–50, esp. 341. See also Randy O. Frost and Rachel C. Gross, "The Hoarding of Possessions," *Behaviour Research and Therapy* 31, no. 4 (May 1993): 367–81; Gail Steketee and Randy Frost, "Compulsive Hoarding: Current Status of the Research," *Clinical Psychology Review* 23, no. 7 (December 2003): 905–27; and Jessica R. Grisham and David H. Barlow, "Compulsive Hoarding: Current Research and Theory," *Journal of Psychopathology and Behavioral Assessment* 27, no. 1 (March 2005): 45–52. Brain scans of those who hoard reveal decreased activity in areas related to memory, decision-making, spatial orientation, and emotions, and many hoarders also suffer from OCD, ADHD, anxiety, and depression; see Jessie Sholl,

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May 2013, hoarding was categorized as a distinct and separate disorder in the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*.[3] Despite the risk of too-flippantly appropriating the lexicon of a psychological disorder, however, the image of the "digital hoarder," buried under the disorganized turmoil created by the volume of his digital possessions, has become an increasingly popular way for individuals to describe their everyday digital collecting habits.

Existing archival scholarship has paid little attention to theories and practices of excessive acquisition and accumulation.[4] Instead, these behav-

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Dirty Secret: A Daughter Comes Clean about Her Mother's Compulsive Hoarding (New York: Gallery Books, 2010), 22–23. Hoarding, moreover, is associated with low marriage rates, social anxiety and withdrawal, and dependent personality traits; see David F. Tolin, Randy O. Frost, and Gail Steketee, "An Open Trial of Cognitive-Behavioral Therapy for Compulsive Hoarding," *Behaviour Research and Therapy* 45, no. 7 (July 2007): 1461–70, esp. 1462. From a clinical perspective, hoarding is not, as is commonly thought, primarily the result of the pressures of a culture of abundance or deprivation. Indeed, contrary to popular beliefs about Depression-era hoarders, Frost and Hartl, in "A Cognitive-Behavioral Model of Compulsive Hoarding," observe that "our findings have failed to support the relationship between hoarding and early deprivation experiences. Hoarders were no more likely to report financial deprivation during childhood than nonhoarders" (p. 344).

3   American Psychiatric Association, "Obsessive Compulsive and Related Disorders," accessed 12 June 2014, http://www.dsm5.org/Documents/Obsessive%20Compulsive%20Disorders %20Fact%20Sheet.pdf. Previously, hoarding had been categorized as a subtype of obsessive-compulsive disorder; see Randy O. Frost and Gail Steketee, *Stuff: Compulsive Hoarding and the Meaning of Things* (Boston: Houghton Mifflin Harcourt, 2010), 14, 100.

4   Archival scholarship on the collecting impulse is relatively sparse, but useful comparisons can be drawn from the abundant museum and cultural studies scholarship on the topic, which similarly marginalizes hoarding as an inferior stage of "collecting proper." For cultural theorist Jean Baudrillard, for example, "The concept of collecting ... is distinct from that of accumulating. The latter – the piling up of old papers, the stockpiling of items of food – is an inferior stage of collecting.... The next stage is that of the serial accumulation of identical objects. Collecting proper emerges at first with an orientation to the cultural: it aspires to discriminate between objects.…" See Jean Baudrillard, "The System of Collecting," in *The Cultures of Collecting*, ed. John Elsner and Roger Cardinal (Cambridge: Harvard University Press, 1994), 22. Similarly, Russell Belk distinguishes "collecting from hoarding, miserliness, possessive accumulating (the 'pack rat' tendency), and simple acquisitiveness. While these behaviors are generally evaluated negatively as aberrant forms of consumerism, collecting is generally evaluated positively." See Russell W. Belk, *Collecting in a Consumer Society* (London: Routledge, 1995), 141. For some scholars, hoarding is so markedly the opposite of "collecting proper" as to be perverse, insane, or even inhuman. Susan Stewart, following philosopher William James, who compared hoarders to California wood rats and pronounced their ownership instincts "insane," considers hoarding to be an animalistic behaviour, in opposition to the intellectual activity of the human collector: "Herein lies the difference between the collections of humans and the collections of pack rats." See Susan Stewart, *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection* (Baltimore: Johns Hopkins University Press, 1984), 153–54. On the productive application of museum studies scholarship to archivists' work, see Richard Cox, "Making the Records Speak: Archival Appraisal, Memory, Preservation, and Collecting," *American Archivist* 64, no. 2 (Fall/Winter 2001): 394–404.

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iours, when they are mentioned at all, function primarily as undesirable foils for "normal" collecting practices. Richard Cox, for example, condemns the collecting of "ordinary records and objects," finding in them little common ground with deliberate and careful archival pursuits:

How [can] archivists ... conduct appraisal by assigning value to records in a society so willing to assign bizarre and cryptic values to ordinary records and objects ...; archivists can seek to be deliberate, but can they prevail against the usually less-than-rational collecting psyche? To cacophony we can add compulsion. Cigars become important documents! What can we do to operate rationally in such a world?[5]

Popular collecting, in Cox's view, is like hoarding – a "less-than-rational compulsion" to acquire items of no value. Other archivists, acutely aware of being perceived as "uptight hoarders,"[6] oppose the use of the term as a disparaging stereotype for the archival profession. John Carlin, former Archivist of the United States, declares that "the National Archives is not a dusty hoard of ancient history,"[7] while Mark Greene implores archivists to cast off "the image of the lab-coated, dust-coated, withdrawn, and quiet archivist preciousizing over 'old stuff' in dead storage."[8]

Despite archivists' aversion to the term, however, individual record creators are using the language of hoarding with increasing frequency to describe their relationship to their digital data. I argue that such self-characterization offers valuable insights into the psychologies of personal archiving practices. Using the artist Andy Warhol's habits of acquisition as a case study and touchstone, I will examine the ways in which hoarding can expose and interrogate assumptions and biases about the act of organization. I will trace an emergent cultural attitude, extending from Warhol to television shows about hoarding to the growing ranks of self-proclaimed "digital pack rats," toward hoarding not as indiscriminate and disorganized accumulation, but rather as a struggle to sculpt a sense of self and purpose through one's possessions. I will then

5 Richard Cox, *No Innocent Deposits: Forming Archives by Rethinking Appraisal* (Lanham, MD: Scarecrow Press, 2004), 27.

6 David B. Gracy, "What's Your Totem? Archival Images in the Public Mind," *Midwestern Archivist* 10, no. 1 (1985): 17–23, esp. 19.

7 John Carlin, "The National Archives and Record Administration: New Directions," presented as part of Program Session IV, "Building New Partnerships with Federal Agencies: New Models for the Dissemination of Information," in *Proceedings of the 127th Association of Research Libraries Membership Meeting: Building Partnerships That Shape the Future*, Washington, DC, 18–20 October 1995, accessed 12 June 2014, old.arl.org/resources/pubs/mmproceedings/127mmcarlin~print.shtml. Tom Nesmith, too, calls the idea of the archives as a hoard "a hardy stereotype"; see Tom Nesmith, "Seeing Archives: Postmodernism and the Changing Intellectual Place of Archives," *American Archivist* 65, no. 1 (Spring/Summer 2002): 24–41, esp. 33.

8 Mark A. Greene, "The Power of Archives: Archivists' Values and Value in the Postmodern Age," *American Archivist* 72, no. 1 (Spring/Summer 2009): 17–41, esp. 20.

consider how "digital hoarding," as a subculture of personal recordkeeping, can inform our understanding of how and why digital personal archives are shaped and maintained. A deeper understanding of hoarding, and of record creators' self-defined analogues between hoarding and their digital personal information management practices, can benefit endeavours to educate the public about personal digital records management, by encouraging archivists to more fully take into account the organic ways in which individual organizational practices have developed. In these ways, this article seeks to balance archival outreach efforts with what the digital public can teach the archival profession about itself.

When Andy Warhol died in 1987, people were shocked to discover that his five-storey townhouse was stuffed so full of objects, many still in cartons and shopping bags, that the doors would not fully open or close, and that only two or three rooms were inhabitable. According to Cathleen McGuigan, "Jewelry was found in cookie tins; a Picasso was stuck in a closet. Another closet was stuffed to the top with stunning Navajo blankets."[9] Sotheby's organized a spectacular ten-day, 3,000-lot sale to auction off all of Warhol's belongings, which included paintings, American Federal furniture, and art deco jewellery, as well as almost 8,000 pieces of kitsch and collectibles, including cookie jars, plastic jewellery, Bakelite radios, lithographed roasted-peanut and coffee tins, and a Japanese suit of armour.[10] Other items included classical sculpture, photographs, vintage wristwatches, and novelty timepieces still "bearing original Bloomingdale's price tags."[11]

Warhol's patterns of acquisition correspond closely with those of hoarders as they are described in the scientific literature. His possessions overwhelmed his living space, spilling out of closets, stacked on the staircases, and piled on the floor, making his townhouse almost unlivable.[12] He struggled constantly to create space, but instead kept filling it up. He once said, "I want to live in a studio. In one room. That's what I've always wanted, [to] not have anything – to be able to get rid of all my junk."[13] Moreover, like many hoarders, he was secretive about his hoard, and many of his friends said that they never

9   Cathleen McGuigan, "The Selling of Andy Warhol," *Newsweek*, 18 April 1988, 62.
10   Rita Reif, "Warhol's World on View: Gems and Cookie Jars," *New York Times*, 15 April 1988, http://www.nytimes.com/1988/04/15/arts/auctions-warhol-s-world-on-view-gems-and-cookie-jars.html.
11   McGuigan, "The Selling of Andy Warhol."
12   Jonathan Flatley, "Like: Collecting and Collectivity," *October* 132 (Spring 2010): 71–98, esp. 80.
13   McGuigan, "The Selling of Andy Warhol." Warhol wrote at length about his desire for empty spaces: "I really believe in empty spaces, but on the other hand, because I'm still making some art, I'm still making junk for people to put in their spaces that I believe should be empty … I go even further in not following my own philosophy, because I can't even empty my own spaces." See Warhol, *The Philosophy of Andy Warhol (From A to B and Back Again)* (New York: Harcourt Brace Jovanovich, 1975), 144.

saw the inside of his home while he was alive.[14] Warhol's long-time partner, Jed Johnson, described his acquisitiveness as "inconspicuous consumption"; his friend Henry Geldzahler called him an "indefatigable accumulator"; and Frederick Hughes, Warhol's friend and business manager, claims that Warhol spent more than $1 million a year on auctions alone.[15] Nor could Warhol bring himself to part with any of his belongings, even though he was always promising to do so.[16] Suzie Frankfurt, another long-time friend, remarked, "As for trading or selling – never, never, never. He believed in holding onto everything, squirreling it all away."[17]

Warhol's tendencies toward hoarding have discomfited those more comfortable with seeing hoarder and artist as mutually exclusive identities. Most scholars have avoided the term "hoard" altogether, opting instead for the more socially acceptable "collection." For Simon Watney, for example, Warhol "collected anything and everything, without regard to classification. Hence, by extension, he 'collected' nothing, for his collection is indiscriminate – as void of central purpose or subject as the Andy Warhol *persona*."[18] Yet even as Watney deprecates Warhol's "indiscriminate collecting," he acknowledges its relationship to Warhol's artistic identity. Other scholars have observed that many of the items Warhol acquired reflected his artistic interest in advertising, packaging, and mass culture; have drawn connections among the "trajector[ies] of desire" in Warhol's prodigious accumulation, personal life, and artistic work; and have interpreted his hoard as a mode of artistic practice in itself.[19] Warhol's acquisitive practices, then, cannot easily be separated from his creative impulse and output.

In fact, psychologists have found a great deal of correspondence between hoarding and artistic creativity. When one of psychologist Randy Frost's patients, Madeline, was in college, she began piling clothes, papers, books, and memorabilia in the middle of her dorm room. She kept putting off organizing it, until finally the dome-shaped pile began to remind her of an ancient burial mound, with an aesthetic mixture of textures and colours. Both she and her roommate came to see it as a piece of art – what she called a "stuff structure." According to Frost, "The shape and colors pleased her, and the things sticking out seemed to contain the memories of the events they represented. From that

14 Michael Lobel, "Warhol's Closet," *Art Journal* 55, no. 4 (Winter 1996): 42–50. On the secretiveness of hoarders, see Frost and Steketee, *Stuff*, 152–53, 186.
15 Flatley, "Like: Collecting and Collectivity," 79–80.
16 Ibid., 80.
17 Ibid.
18 Simon Watney, "The Warhol Effect," in *The Work of Andy Warhol*, ed. Gary Garrels (Seattle: Bay Press, 1989), 120–21.
19 See McGuigan, "The Selling of Andy Warhol"; Lobel, "Warhol's Closet," 41; and John W. Smith, "Andy Warhol's Art of Collecting," in *Possession Obsession: Andy Warhol and Collecting*, ed. John W. Smith (Pittsburgh: Andy Warhol Museum, 2002), 16.

point on, taking the pile apart was unthinkable."[20] Hoarders also tend to suffer from "under-inclusiveness": they see each possession as unique, so it cannot be categorized with other possessions, and thus cannot be organized. The resulting clutter does not reflect a lack of organizational principles but an overabundance of them: each object in a pile of clutter is its own category.[21]

Yet this perspective of under-inclusiveness also suggests that hoarders approach the world from a more aesthetic point of view than do most people. Another one of Frost's patients, Irene, exhorted him to admire her extensive bottle cap collection: "Look at these bottle caps – aren't they beautiful? Look at the shape and the color."[22] Frost speculates that people who hoard see and appreciate features of objects that others overlook, perhaps because of their propensity for visual and spatial qualities, and that their ability to see uniqueness and value where others see indiscriminate duplication may stem from particularly inquisitive and creative minds.[23]

Similarly, when Andy Warhol was asked to curate *Raid the Icebox I*, an exhibition at Rhode Island School of Design (RISD) meant to showcase RISD treasures that were kept in storage because of the shortage of permanent display space, according to RISD professor Deborah Bright,

Warhol selected for display entire collections of objects in their impromptu storage containers and arrays: all the shoes in the large wooden cabinet, plus the cabinet; all the hatboxes and bandboxes piled on a table; all the paintings in gilt frames stacked against a wall; all the old piles of auction catalogues stacked on a desk; all the parasols strung up on wires or stuffed in the shoe cabinet; the entire row of Windsor chairs used for spare parts; the whole group of mixed statues on pedestals; a chest full of Indian blankets; two shelves of ancient Indian ceramic pots and a cluster of baskets.[24]

When the curator of the costume collection learned that Warhol wanted to display the entire shoe collection, she objected: "Well, you don't want it *all* because there's some duplication." Warhol "raised his eyebrows and blinked" in reply.[25] Where the curator saw a lack of differentiation, Warhol saw a riot of singularity. To this end, and even more irritating to the museum staff, Warhol specifically requested that each item in the exhibition, regardless of its value, be individually catalogued.[26] This meant writing a separate catalogue record

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20   Frost and Steketee, *Stuff*, 223–24.
21   Frost and Hartl, "A Cognitive-Behavioral Model of Compulsive Hoarding," 345.
22   Frost and Steketee, *Stuff*, 66.
23   Ibid., 66, 101.
24   Deborah Bright, "Shopping the Leftovers: Warhol's Collecting Strategies in *Raid the Icebox I*," *Art History* 24, no. 2 (2001): 278–91, esp. 284–86.
25   David Bourdon, "Andy's Dish," in *Raid the Icebox I with Andy Warhol: An Exhibition Selected from the Storage Vaults of the Museum of Art*, *Rhode Island School of Design* (Providence: Rhode Island School of Design, 1969), 20.
26   Bright, "Shopping the Leftovers," 286.

and exhibition label for each of the almost two hundred pairs of shoes, fifty-seven umbrellas and parasols, and so on. Daniel Robbins, the museum's director, wrote, "There were exasperating moments when we felt that Andy Warhol was exhibiting 'storage' rather than works of art."[27]

Robbins called the cataloguing an "extremely difficult and painstaking task," and the chief curator, Stephen Ostrow, had the texts from the registrar's office catalogue cards typed onto lists without further research, though this "bothered [him] terribly" at the time.[28] Warhol's curatorial decisions, in demonstrating that purposeful meaning may underlie what appears to be indiscriminate disorganization and needless duplication, unnerved the museum staff because of the ways in which his approach disrupted institutional assumptions and practices. The museum, however, eventually came to celebrate the merits of Warhol's show. Both Deborah Bright and Liza Corrin, in an article published several decades later in RISD's own journal, recuperate Warhol's curatorial choices to expose and question assumptions about organization as a worthwhile artistic endeavour, in line with his general aesthetic viewpoint.[29]

Likewise, archivists at the Andy Warhol Museum in Pittsburgh have embraced Warhol's time capsules despite their potentially problematic relationship to conventional standards of archival arrangement. Warhol probably began the time capsules during his 1974 move from his studio at 33 Union Square West, New York, to a new space at 860 Broadway. He kept a box beside his desk as a time capsule in progress, into which he would periodically sweep the detritus that had accumulated on top of the desk: correspondence, magazines, newspapers, gifts, photographs, business records, collectibles, and other ephemera. When a box was complete, an assistant taped it shut and dated it.[30] Warhol left behind over six hundred such boxes upon his death in 1987; they are still being catalogued at the museum. Although he may not have consciously started the boxes as art, there is evidence that he began to think of them as such. Warhol considered exhibiting and selling them as art pieces; in 1978, he wrote in his diary, "I really ought to auction off some of my time capsule boxes, that would be a good thing to do in an art gallery."[31] According to Matt Wrbican, he also had an idea "to make a very small drawing to be placed in each box and then selling each for an identical price, with

27   Daniel Robbins, "Confessions of a Museum Director," in *Raid the Icebox I with Andy Warhol: An Exhibition Selected from the Storage Vaults of the Museum of Art*, *Rhode Island School of Design* (Providence: Rhode Island School of Design, 1969), 15.
28   Bright, "Shopping the Leftovers," 286.
29   Liza Graziose Corrin, "The Legacy of Daniel Robbins' *Raid the Icebox I*," in *Rhode Island School of Design Notes* (June 1996): 54–61. Quoted in Bright, "Shopping the Leftovers," 280.
30   Smith, "Andy Warhol's Art of Collecting," 11.
31   Thomas Sokolowski, "Foreword," *Andy Warhol's Time Capsule 21* (Cologne: Dumont Literatur und Kunst Verlag, 2003), 8.

the box's contents unseen by the buyer."[32] Despite, or perhaps because of, the sly winks toward art's dependence on commerce that were embedded in these comments, one critic declared that "as witnesses of Warhol's everyday life they are both documents and memorabilia of the star cult, so they attain the rank of artworks in the context of Pop Art aesthetics,"[33] while another wrote that "by boxing up and labeling what he bought, and by attaching to those labeled boxes an irresistible narrative, Andy turned chronic acquisitiveness into something profoundly artful."[34] Hoarded into boxes, the time capsules transmute Warhol's disorder into art.

Accordingly, archivist Richard Hellinger declares of the Warhol Museum archives that

Researchers will not find the linear archival formats of more traditional collections. The apparent chaos within each category will be preserved because it accurately reflects the atmosphere of feverish activity that characterized the daily life of the artist and his studio.… Like a contemporary-culture archaeological dig, the layers of disorder will reveal valuable insights into Warhol and his time.[35]

Warhol, as Watney acknowledges, "achieved a collection which draws attention to collecting, both as an instinct and a taxonomical system."[36] In these ways, collecting institutions and critics came to recognize and even embrace Warhol's interrogation and disruption of the organizational impulse itself.

Of course, Warhol's now-entrenched reputation as an artist with undeniably significant influence affects the views of at least some critics, who seek meaning in his acquisitiveness because he was an artist, rather than the other way around. Nevertheless, perhaps because of Warhol's reputation, his practices of excessive acquisition and accumulation, which both influenced and were inflected by his artwork, have encouraged museum and archives staff and art historians, in his own time and ours, to re-examine their assumptions about traditional dichotomous hierarchies: between fine art and kitsch, certainly, but also between collection and hoard, creator and hoarder, linear narrative and tumultuous disarray.

Since *Raid the Icebox I*, a growing number of art installations on the theme of hoarding attest to an emergent attitude toward disorganization: not as a

32 Matt Wrbican, "A Guided Tour of Time Capsule 21," in *Andy Warhol's Time Capsule 21*, 23. See also Wrbican, "Warhol's Hoard a Treasure Trove," *Sydney Morning Herald*, 20 November 2007.
33 Sokolowski, "Foreword," 8.
34 Allen Kurzweil, "Booked for Possession: Andy Warhol as Collector," in *Possession Obsession*, 38.
35 Richard Hellinger, "The Archives of the Andy Warhol Museum," in *The Andy Warhol Museum* (Pittsburgh: Andy Warhol Museum, 1994), 197.
36 Watney, "The Warhol Effect," 120.

"less-than-rational" or inhuman failing, nor as indiscriminate accumulation, but rather as an all-too-human endeavour to excavate and sculpt a sense of self and purpose through one's possessions. In fact, psychologists note that one of the primary features of compulsive hoarding is an excessive emotional attachment to possessions because hoarders view many of their possessions as extensions of themselves.[37] As one compulsive hoarder explained, "If I throw too much away, there'll be nothing left of me."[38] Similarly, Song Dong's installation *Waste Not*, shown recently at the Museum of Modern Art in New York (2009) and at the Vancouver Art Gallery (2010), consisted of more than 10,000 household objects that his mother had accumulated over the course of her domestic life, a habit that intensified after her husband's death.[39] Song attributed his mother's "need to fill the space with those objects of daily life rather as a need to fill the emptiness left after my father's death."[40] Marjan Teeuwen's photographs depict spaces crammed with papers and other materials built into geometric three-dimensional shapes and hollows. With titles that evoke the tensions and parallels between the archive and the home – *Huiskamer* ("Living Room," 2005), *Archief* ("Archive," 2008), *Verwoest Huis* ("Destroyed House," 2008), and *Archief Sheddak* ("Archive Shed Roof," 2010) – her art depicts the plight of many modern record creators: personal spaces both invaded and sustained by turbulent, unruly recordkeeping systems.[41] Most recently, Sara Cwynar's *Accidental Archives* at the Cooper Cole Gallery in Toronto (2010) traced the artist's struggle to make sense of her life through her expanding and increasingly unmanageable personal archive.[42]

These more sensitive re-examinations of disorganization have, in turn, been accompanied by a recent spate of American television shows about the management of personal possessions, which have also helped to bring these new considerations of order and disorder to a broad audience.[43] *Hoarders*, on

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37 Frost and Hartl, "A Cognitive-Behavioral Model of Compulsive Hoarding," 342, 347.

38 Frost and Steketee, *Stuff*, 117.

39 Wu Hung, "Waste Not: Xiangyuan and Song Dong," in Song Dong, *Dad and Mom, Don't Worry About Us, We Are All Well* (San Francisco: Yerba Buena Center for the Arts, 2011), 17; and Ou Ning, "The Experience of Family and Social Change: Song Dong's Home and Art," in Song Dong, *Dad and Mom, Don't Worry About Us*, 73–74.

40 Wu, "Waste Not," 24.

41 Saatchi Art, "Marjan Teeuwen," accessed 12 June 2014, http://www.saatchionline.com/teeuwen.

42 Cooper Cole, "Exhibition Sara Cwynar: Installation View, accessed 14 June 2014, http://www.coopercolegallery.com/exhibitions/16/sara-cwynar/select-works.

43 As Katherine Feo Kelly writes, "In the last decade, television shows documenting the over-abundance of material culture in American homes have become increasingly popular with U.S. audiences." See Katherine Feo Kelly, "Container Culture: Organizing the American Domestic Interior, 1978–2010" (PhD diss., University of Texas at Austin, 2013), 1. Although the home improvement show is not a new television genre – media scholars generally agree that it began in the United States with Bob Vila's *This Old House* – its recent resurgence can be traced to the overwhelming popularity of *Trading Spaces*, imported from Britain in

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A&E, began airing in 2009, followed by *Hoarding: Buried Alive*, which began airing on TLC in 2010. According to writer Carina Chocano, the creators of *Hoarders* had originally imagined that it would be a comedic home-makeover show. It evolved, however, into what she describes as "the reality horror show it is today when the producers realized that their guests were, in fact, mentally ill. The show was accordingly reoriented to focus on their psychological rescue, emphasizing the looming piles of junk as the physical manifestation of psychic clutter."[44] Although hoarding is, as these television shows acknowledge, a pathology, the shows are popular in large part because of the ways in which they resonate with their mainstream audiences. As Chocano writes, "Watching the televised hoarders gingerly scale the hostile terrain of their modest rooms … it's hard not to get anxious and apocalyptic about materialism and junk culture.… We judge them, but we're like them too."[45] For Chris Jones, the people featured on these shows are "even scarier because most of the rest of us could pretty easily find ourselves under similar burdens."[46] Robert Sharenow, then A&E's senior vice-president of programming, declared, "There's just a core relatability that people feel for this subject.… People look at this show [*Hoarders*] and see themselves to a degree, or see people they know."[47] Indeed, these shows have prompted viewers not only to evaluate their own relationships to their physical possessions, but also to use the vocabulary of physical hoarding to describe their *digital* storage habits. According to Stanton Sloane,

We are fast becoming compulsive data keepers – and the costs are considerable.… As you channel surf this evening, watching shows about homes bursting with stuff, families flooded with things, people marooned by their mounds of merchandise, and think to yourself, "not me," consider this: the nation's data centers have been consum-

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2000 on TLC. By 2005, TLC had also added to its lineup *Moving Up*, *Town Haul*, *Clean Sweep*, *In a Fix*, and *While You Were Out*. See June Deery, "Interior Design: Commodifying Self and Place in *Extreme Makeover*, *Extreme Makeover: Home Edition*, and *The Swan*," in *The Great American Makeover: Television, History, Nation*, ed. Dana Heller (New York: Palgrave Macmillan, 2006), 163. ABC's *Extreme Makeover: Home Edition*, which first aired in 2003, became another huge success, and in 2005 there were at least twenty home make-over shows on HGTV. See Anita Gates, "These Old Houses: A TV Genre Is Built," *New York Times*, 11 February 2005.

44 Carina Chocano, "Underneath Every Hoarder Is a Normal Person Waiting to Be Dug Out," *New York Times Magazine*, 17 June 2011.

45 Ibid.

46 Chris Jones, "Why We Hoard," *Esquire*, 23 March 2010, http://www.esquire.com/features/the-screen/excessive-hoarding-0410.

47 "Compulsive Hoarders Suddenly in the Spotlight," *MSNBC*, 17 December 2009, http://today.msnbc.msn.com/id/34112617/ns/today-entertainment/t/compulsive-hoarders-suddenly-spotlight. For more audience responses in the same vein, see Jones, "Why We Hoard"; and Tess Lynch, "Inside the Strange World of 'Hoarders,'" *Salon*, 6 September 2010, http://www.salon.com/2010/09/06/interview_hoarders.

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ing more power than all of the television sets we watch combined, and have been for
nearly five years. That's in large measure because we save every byte, and it has to be
stored somewhere. Still don't think you are a hoarder? Think again.[48]

During Conan's NPR interview with McCluskey, which began with Conan's
description of a physical hoard, numerous listeners called in to talk about their
own "digital pack-rattery." And in an article on *Jezebel*, which was accompa-
nied by a photograph of a disorganized mountain of papers, clothes, and other
physical detritus, Dodai Stewart declared:

I admit it: I am a digital hoarder … I blame society! And my pack-rat DNA…. Though
I am working on the accumulation issue when it comes to household stuff (moving
helps with that), I do *not* have a grip on the digital hoarding. I just find it *so hard* to
delete. And with oodles of megabytes in my email accounts, I don't really have to. But
sometimes I look at the number of unread emails (right now it's jumped to 91,509) and
I feel vaguely ill.… Is digital hoarding actually a problem? Or is saving everything
a pretty smart way to deal with today's information overload? (Please say it's the
latter.)[49]

Stewart's article attracted over one hundred comments by readers eager to
discuss their own digital organization challenges. Studies confirm what these
news pieces suggest regarding the connections individual record creators
are making between pathological hoarding behaviours and their everyday
digital organizational activities. In a study by Sarah Kim on personal digital
archiving, for example, many participants described themselves in hoarder-like
terms when asked to talk about their digital data, suggesting to Kim that the
removal of physical storage limitations allowed them to indulge more freely in
"pack rat" tendencies:

Participant: I am rather a pack rat. I don't throw [digital] things away.

Interviewer: Does it apply to your physical –?

Participant: Yeah, physical too, a little bit. But more constrained in a physical world
than I am in a digital world. You know, my house doesn't double [in] size every couple
of years like hard drives.[50]

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48 Stanton Sloane, "Problem with Packrats: The High Costs of Digital Hoarding," *Forbes*, 25
    March 2011, http://www.forbes.com/sites/ciocentral/2011/03/25/the-problem-with-packrats
    -the-high-costs-of-digital-hoarding/.
49 Dodai Stewart, "Hello, I Am a Digital Hoarder," *Jezebel*, 16 September 2011, http://jezebel
    .com/5841123/hello-i-am-a-digital-hoarder.
50 Sarah Kim, "Personal Digital Archives: Preservation of Documents, Preservation of Self"
    (PhD diss., University of Texas at Austin, 2013), 103.

Certainly, the abundance and low cost of digital storage are changing what people keep: retention, rather than destruction, is now the norm.[51] "Keeping, however," as Kim argues, "is not the end but rather the beginning of the recordkeeping. More documents kept means more objects to manage and more decisions to make regarding organizing, retrieving, and reusing."[52] These concerns have helped to shape the field of personal information management (PIM), which seeks to understand and meet the challenge of managing an increasing, and potentially overwhelming, overabundance of physical and especially digital data.[53] Although personal digital records are still relatively unexplored in archival theory and practice, the profession is becoming increasingly cognizant of the importance and particular challenges of understanding what Jeremy Leighton John has called "archives in the wild," the personal digital archives that exist outside an official work or institutional environment.[54] However, such boundaries between corporate and personal information spaces are becoming more difficult to maintain, and several archivists have suggested that in the future all recordkeeping, both organizational and personal, may become personal recordkeeping.[55] As a result, more attention is beginning to be paid to the psychologies of personal archiving practices,[56] at

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51 Viktor Mayer-Schönberger, *Delete: The Virtue of Forgetting in the Digital Age* (Princeton: Princeton University Press, 2009), 2.

52 Kim, "Personal Digital Archives," 7.

53 See, for example, Steve Whittaker, "Personal Information Management: From Information Consumption to Curation," *Annual Review of Information Science and Technology* 45, no. 1 (2011): 1–62; William Jones, "Finders, Keepers? The Present and Future Perfect in Support of Personal Information Management," *First Monday* 9, no. 3 (March 2004), accessed 12 June 2014, http://firstmonday.org/ojs/index.php/fm/article/view/1123/1043; Catherine C. Marshall, Sara Bly, and Francoise Brun-Cottan, "The Long-Term Fate of Our Digital Belongings: Towards a Service Model for Personal Archives," in *Proceedings of Archiving Conference 2006,* Society for Imaging Science and Technology, accessed 21 July 2014, http://ist.publisher.ingentaconnect.com/content/ist/ac; and Sharon Hardof-Jaffe, Arnon Hershkovitz, Hama Abu-Kishk, Ofer Bergman, and Rafi Nachmias, "Students' Organization Strategies of Personal Information Space," *Journal of Digital Information* 10, no. 5 (2009).

54 Jeremy Leighton John, Ian Rowlands, Pete Williams, and Katrina Dean, "Digital Lives: Personal Digital Archives for the 21st Century – An Initial Synthesis," Digital Lives Research Paper, Beta Version 0.2 (3 March 2010), accessed 31 July 2014, http://britishlibrary.typepad.co.uk/files/digital-lives-synthesis02-1.pdf 5. For recent overviews of scholarship on personal digital archives, see Jordan Bass, "Getting Personal: Confronting the Challenges of Archiving Personal Records in the Digital Age" (MA thesis, University of Manitoba, 2012), 11–46; and Kim, "Personal Digital Archives," 21–30.

55 Adrian Cunningham, "Ghosts in the Machine: Towards a Principles-Based Approach to Making and Keeping Digital Personal Records," in *I, Digital: Personal Collections in the Digital Era*, ed. Christopher Lee (Chicago: Society of American Archivists, 2011), 81; and Verne Harris, "On the Back of a Tiger: Deconstructive Possibilities in 'Evidence of Me,'" *Archives and Manuscripts* 29, no. 1 (May 2001): 8–22.

56 See, for example, Jordan Bass, "A PIM Perspective: Leveraging Personal Information Management Research in the Archiving of Personal Digital Records," *Archivaria* 75 (Spring 2013): 49–76; Catherine Hobbs, "The Character of Personal Archives: Reflections

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the same time that the different technical requirements of digital records are compelling archivists not only to adjust to greatly accelerated accumulation rates and amounts of data, but also to reformulate traditional archival assumptions about original order[57] and develop new approaches to preservation to guard against the rapid obsolescence and decay of digital materials.[58]

Understandably, individuals' failure to organize their digital records according to conventional archival principles has made archivists' work more difficult. Ben Goldman, for example, laments "the state of the collection when it comes to us. The disks … exhibit an almost complete lack of organization of files and folders. Many of the disks appear to be data dumps, and in many cases file and folder names are not very helpful in determining the contents of the records."[59] As a result, the call for "early intervention," the practice of educating the digital public about archives-friendly organizational practices while its members are still creating and managing their own digital records, has emerged as an urgent chorus in the archival literature. As Rachel Onuf and Thomas Hyry explain, "When working with creators, archivists must also contact them early in their careers, and strive to influence how they create and keep records,"[60] while Adrian Cunningham, a long-time advocate of precustodial intervention, argues that "all archivists should have an interest in helping individuals to become digital auto-archivists."[61]

Numerous educational efforts and outreach initiatives have accordingly been developed to better align individuals' digital organizational habits with established archival practices. These range from International Research on Permanent Authentic Records (InterPARES)'s sixteen-page booklet of

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on the Value of Records of Individuals," *Archivaria* 52 (Fall 2001): 126–135; Hobbs, "Reenvisioning the Personal: Reframing Traces of Individual Life," in *Currents of Archival Thinking*, ed. Terry Eastwood and Heather MacNeil (Santa Barbara: Libraries Unlimited, 2010), 222; and Sue McKemmish, "Evidence of Me," *Archives and Manuscripts* 24, no. 1 (May 1996): 28–45.

57   For an overview of archival scholarship on original order in digital records, see Jane Zhang, "The Principle of Original Order and the Organization and Representation of Digital Archives" (PhD diss., Simmons College, 2010), 11–43, 152–53.

58   Two influential projects investigating the curation and preservation of personal digital archives include the Personal Archives Accessible in Digital Media (Paradigm) project, led by the University of Oxford and the University of Manchester from 2005 to 2007, www.paradigm.ac.uk/index.html, and Digital Lives, led by the British Library, in partnership with University College London and the University of Bristol, and completed in 2009; see John, Rowlands, Williams, and Dean, "Digital Lives."

59   Ben Goldman, "Bridging the Gap: Taking Practical Steps Toward Managing Born-Digital Collections in Manuscript Repositories," *RBM: A Journal of Rare Books, Manuscripts, and Cultural Heritage* 12, no. 1 (Spring 2011): 11–24; 22.

60   Rachel Onuf and Thomas Hyry, "Take It Personally: The Implications of Personal Records in Electronic Form," in *I, Digital: Personal Collections in the Digital Era*, ed. Christopher Lee (Chicago: Society of American Archivists, 2011), 252.

61   Cunningham, "Ghosts in the Machine," 82.

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complex and stringent recommendations for creators of digital records, to Personal Archives Accessible in Digital Media (Paradigm)'s equally lengthy but more colloquial "Guidelines for Creators of Personal Archives," the U.S. Library of Congress preservation division's "Personal Archiving: Preserving Your Digital Memories" website, which offers a constellation of digital preservation resources and advice, and streamlined single-page handouts like the Beinecke Rare Book & Manuscript Library's "Author's Guidelines for Digital Preservation."[62]

Such efforts, however, have had limited success in changing individuals' behaviours.[63] Even the Beinecke Library's simplified recommendations are ambitious in their expectations of users' organizational zeal, encouraging users to name their files "consistently" by embedding information about title, type, version number, date (in year-month-day order), and file extension within their naming conventions. The document further reminds readers that "the management of your digital materials can be enhanced if you handle them in groups and organize them in a logical manner. This structure should be consistent with the organization of any paper records you have, or records in other media."[64] Paradigm similarly advises its readers to "organise your email into subject folders with concise and relevant titles."[65] Yet it is precisely the achievement of this consistency and logical organization for their digital records with which individuals struggle. Even archivists who advocate educating creators about the importance of well-organized digital files acknowledge that "piling," rather than "filing," is becoming the norm in personal digital archives.[66] For example, in a recent study by Devin Becker and Collier Nogues

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62   InterPARES, "Creator Guidelines: Making and Maintaining Digital Materials – Guidelines for Individuals," accessed 12 June 2014, http://www.interpares.org/ip2/display_file.cfm ?doc=ip2(pub)creator_guidelines_booklet.pdf; Paradigm, "Guidelines for Creators of Personal Archives: Caring for Your Personal Digital Archive," accessed 12 June 2014, http:// www.paradigm.ac.uk/workbook/appendices/guidelines.html; Library of Congress, "Personal Archiving," accessed 12 June 2014, http://www.digitalpreservation.gov/personalarchiving; and Beinecke Rare Book & Manuscript Library, "Digital Preservation: Authors' Guidelines for Preserving Digital Archives," accessed 12 June 2014, http://beinecke.library.yale.edu/ about/blogs/poetry-beinecke-library/2008/02/26/digital-preservation.

63   For other problems that precustodial intervention poses, see Bass, "Getting Personal," 33–34, 44–45, 110–11.

64   Beinecke Rare Book & Manuscript Library, "Digital Preservation: Authors' Guidelines for Preserving Digital Archives," accessed 12 June 2014, http://beinecke.library.yale.edu/about/ blogs/poetry-beinecke-library/2008/02/26/digital-preservation.

65   Paradigm, "Guidelines for Creators of Personal Archives: Practical Tips," accessed 12 June 2014, http://www.paradigm.ac.uk/workbook/appendices/guidelines-tips.html.

66   For a discussion of "piling" and "filing" as PIM terms, see William Jones, "How People Keep and Organize Personal Information," in *Personal Information Management*, ed. William Jones and Jaime Teevan (Seattle: University of Washington Press, 2007), 35–56, 42–43. The terms were first coined by T.W. Malone, "How Do People Organize Their Desks: Implications for the Design of Office Information Systems," *ACM Transactions on Office*

that explored writers' digital recordkeeping habits, respondents described their haphazard or nonexistent file- and folder-naming conventions:

Respondent: My naming conventions are a mess. [I] name things with a new title, then the same title with successive draft numbers (Thing 1, Thing 2), and sometimes just numbers or letters for drafts contained in a folder bearing the poem's name.

Respondent: Nothing that organized.

Respondent: God, if only I could answer this.[67]

Becker and Nogues conclude that "the real danger regarding writers' personal digital archiving practices is the unchecked, unsystematic proliferation of digital files across various storage and access locations,"[68] evoking the expansion, overabundance, and under-inclusiveness of the hoard.

Other research has drawn similar conclusions regarding personal digital organization habits. In a study conducted by Catherine Marshall, one participant, when asked to explain how his files were organized, confessed that

I keep telling myself that maybe one day I'll basically do the computer equivalent of spring cleaning. I'll just find all these scattered directories and files and sort of clean them, create a fresh hierarchy of "here are my pictures," "here are my movies," "here are my documents," "here is my music" and get them all cleanly laid out along those lines. And I just never seem to find the time.[69]

For some creators, this disorganization may indeed simply be the result of never "find[ing] the time" to organize ever-expanding amounts of data. But acts of deletion, which, as studies show, individuals consider a subset of organization, demonstrate that often people have surprisingly complicated relationships to the organization of their digital records, which have little to do with the time or effort the organization would take. During the interviews she conducted, Marshall found that "participants will spontaneously delete a few files as a symbolic act, declaring their distaste for clutter. However, this unpremeditated act does not mean that a participant is committed to spending the next week sorting through her files."[70] One participant, going through his

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Information Systems 1, no. 1 (January 1983): 99–112.

67   Devin Becker and Collier Nogues, "Saving-Over, Over-Saving, and the Future Mess of Writers' Digital Archives: A Survey Report on the Personal Digital Archiving Practices of Emerging Writers," *American Archivist* 75, no. 2 (Fall/Winter 2012): 482–513, esp. 498.

68   Ibid., 509.

69   Catherine C. Marshall, "Challenges and Opportunities for Personal Digital Archiving," in *I, Digital: Personal Collections in the Digital Era*, ed. Christopher Lee (Chicago: Society of American Archivists, 2011), 101.

70   Ibid., 99.

old files, found a possible candidate for deletion that, once opened, brought back memories of a seminar he did not attend. Although he declared that in the future he would "become a lean, mean organizing machine," he did not delete the file once he remembered what it was, nor did he delete any of the other files he assessed as clutter.[71] Meanwhile, a participant in Kim's study distinguished between different kinds of duplicate records when considering which ones to delete. Although the individual deletes some duplicates, "she keeps e-mails with the same content but sent by different people. She gives priority to *who* sent the message since knowing who sent the message makes her read the message from different perspectives. Therefore, for [this partici-pant], the messages are not duplicative documents."[72] Like the compulsive hoarder Irene, who saw unique beauty in seemingly identical bottle caps, and Warhol, who wanted to display all the shoes in RISD's storage room despite the curator's objection that "you don't want it *all* because there's some duplica-tion," so do some everyday record creators also maintain subtle but significant distinctions between digital copies. Others who could not bring themselves to delete anything echoed hoarders' views of their belongings as extensions of themselves: "It's not like I want [old digital materials] because they are needed … Because they are traces that I left, I cannot dump them like old clothes. They are the outcome of my thoughts. I keep them because I cannot throw them away."[73]

At the same time, when people do delete materials, this, too, can occur for reasons other than to facilitate organization. One participant in Kim's study said he feels an urge to clean his computer once or twice a year, which provides him not with a sense of tidiness but with entertainment: "When I delete files, I can see how much more space I have in my hard drive. It is fun to see that … it is like a game."[74] Similarly, when people make the effort to organize their digital files, this work, too, can serve purposes other than ease of access. Another participant, for example, described the performance of organization as part of his daily practice of self-discipline:

In my mind, like, living is a process of putting everyday activities in order, documents from the past and documents that will be created in the future.… If you want to plan to do something in the future, you have to organize them, right? I see it in that way. There is no excuse for being disorganized. It's sort of my sense of value or my view of life, right? So I think, as, like, we try to live an everyday life worthy of a human being, it would be meaningful to organize documents with a similar mindset. Like, live a

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71   Ibid., 99–100.
72   Kim, "Personal Digital Archives," 120. For a discussion of other non-organizational reasons for deletion, including the desire for privacy and the emotional value of forgetting, see Kim, "Personal Digital Archives," 145–58, 182–86; and Mayer-Schönberger, *Delete*.
73   Kim, "Personal Digital Archives," 134.
74   Ibid., 119.

well-regulated life, right? [My organizing activity] is related to my view of life or the meaning of life.… Making things easier to use and find, that would be like a secondary purpose.[75]

Others who acknowledged having "a tendency to organize" said they "feel good" when their digital documents are in order. As Kim notes, organizational activities can provide feelings of comfort and confidence that serve to enhance these participants' sense of self.[76]

In these ways, organization, as well as the lack thereof, can occur for meaningful and unpredictable reasons. Where physical space constraints forced creators to make choices about which values and criteria were the most important in evaluating whether to save or discard their papers, the abundance of digital storage space has catalyzed the ever-closer alignment of personal digital organizational practices with those of hoarders. Creators who are increasingly engaging in "digital pack-rattery" are not accumulating without thought or intellect, but rather indulging, like hoarders, in a multiplicity of values – emotional, psychological, and practical – that can be assigned without hierarchical privilege to a much wider array of objects and actions. Records can be saved because they represent nuanced social relationships, arranged as an expression of self-identity or deleted simply because doing so is "fun."

Future digital design choices may encourage, as well as reflect, the divergence of individuals' digital organizational behaviour from physical organizational practices. Some PIM scholars even suggest that, as the capacities of digital storage and the power of digital search facilities increase, traditional organization is no longer necessary to ensure digital accessibility. In particular, folders as an organizing construct for digital files will become obsolete.[77] Other studies argue that folder-file structure organization actually impedes access and retrieval of older personal digital items. A study by Deborah Barreau and Bonnie Nardi found that participants used directories and folders to store and retrieve files on which they were actively working. Inactive files, however, were rarely organized systematically, and participants depended on text-search queries to retrieve them. What is more, those who attempted to establish logical filing structures for inactive files ended up abandoning them because of the amount of mental overhead required to maintain them: organizing documents according to such rules required two parallel systems, one for the organizational scheme itself, and the other for the documents that fit into it.[78]

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75   Ibid., 115.
76   Ibid., 114, 116.
77   Jones, "How People Keep and Organize Personal Information," 47. Jones is referring to the research of Edward Cutrell, Susan Dumais, and Jaime Teevan, "Searching to Eliminate Personal Information Management," *Communications of the ACM* 49, no. 1 (January 2006): 58–64.
78   Deborah Barreau and Bonnie A. Nardi, "Finding and Reminding: File Organization from

One archivist expressed hope that "ideally … information organization systems, such as Windows, would encourage creators to use the folder structure to arrange documents so that fewer of the digital records coming to the [Wellcome] Library would be completely disorganized."[79] This imagined scenario, however, may be unlikely to become reality, as technologists strive to develop new tools that leverage the unique characteristics of the digital environment, such as multiple organizational schemes and easy duplicability, which work against tenets of conventional analog organization.[80] Instead, successful digital personal information and archival management technology should fit more organically into human activity and everyday practice.[81] In this article, I have attempted to further refine our understanding of the nuances of that everyday practice as articulated by creators themselves, who compare their organizational habits not to conventional filing systems but to physical hoarding behaviours. For this reason, I have argued that encouraging individuals to apply analog filing and organizational structures in a digital environment may have limited utility and success: not only do the different behaviours of digital and analog records impede users from following these instructions, but accumulating and organizing one's personal documents can also, like hoarding, be an idiosyncratic, complex, and emotionally significant act that serves many purposes beyond expediting access and retrieval. Existing advice, such as Paradigm's recommendations for deletion (which instruct readers to "delete what's not important," not "waste time and space on material that has outlived its utility," and "delete email that has no long-term value as

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the Desktop," *ACM SIGCHI Bulletin* 27, no. 3 (July 1995): 39–43; and Barreau and Nardi, "'Finding and Reminding' Revisited: Appropriate Metaphors for File Organization at the Desktop," *ACM SIGCHI Bulletin* 29, no. 1 (January 1997): 76–78.

79 Zhang, "The Principle of Original Order," 76.

80 MyLifeBits, for example, a software platform to manage captured information, began in part when its developers recognized that users were not simply unwilling to organize their increasing quantities of saved information, but in fact unable to do so. One of its key goals has been to circumvent the shortcomings of folder-file organization, including lack of user access through innovative metadata, and inability to classify and organize items in multiple ways; see Jim Gemmell, Gordon Bell, and Roger Lueder, "MyLifeBits: A Personal Database for Everything," *Communications of the ACM* 49, no. 1 (January 2006): 88–95. Google Glass is another recent, well-publicized attempt to integrate computing invisibly into users' everyday routines; see Matt Honan, "Google's New Tools Show How Deep Glass Will Embed in Our Lives," *Wired*, 19 November 2013, http://www.wired.com/2013/11/google-glass-sdk/. The trend by designers of digital products away from software skeuomorphism (see David Pogue, "Out with the Real," *Scientific American*, 14 January 2013) may also portend the potential obsolescence of folder-file structures, since they do not represent the actual behaviour of the bits and bytes that make up a user's digital files, but rather, skeuomorphically, provide him with an increasingly outdated metaphorical comparison to the analog concept of physical filing.

81 Cunningham, "Ghosts in the Machine," 85; Catherine Marshall, "Rethinking Personal Digital Archiving Part 2," *D–Lib Magazine* 14, no. 3–4 (March/April 2008).

soon as possible"[82]) do not adequately account for these complex and mutable values that people assign to their records over time. More research about what Kim has called donors' delicate and dynamic life-long relationships with their digital material[83] will help to ensure that, in archivists' well-meaning haste to manage and preserve digital records in advance of their obsolescence, they do not lose the evidence that they wished to capture in the first place.

Onuf and Hyry advise archivists to "probe into what sorts of digital creation, collaboration, and interaction the potential donor has produced and discuss ways to capture it for the archives."[84] In these conversations, prompting donors to document and explain their organizational – or disorganizational – practices, asking questions that take into account both practical and emotional factors for their digital disorder, may yield surprising and useful insights. Archivists' endeavours to educate the digital public can thus be productively balanced with their own education, provided by creators, not only about the ways in which their records have been generated, used, and maintained, but also about the ways in which any emotional relationships to their data have developed and the extent to which these relationships continue to influence the state of their personal archives.

I do not suggest that a lack of apparent order in a personal archive always indicates an underlying psychological rationalization. Not all disorganization is deeply meaningful. What I do propose is that record creators' self-defined analogues between hoarding and digital personal information management practices suggest that the archival profession has much to gain by a closer examination of what hoarding can reveal about how an increasing number of people understand their relationships to their digital possessions. Although the extreme disorganization associated with hoarding may seem, at first glance, antithetical to archives, it also represents an opportunity for archives to learn from a public captivated by the struggle to organize their own digital lives.

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82   Paradigm, "Guidelines for Creators of Personal Archives: Practical Tips."
83   Sarah Kim, "Notes from Personal Archiving 2012, Internet Archives," *Personal Digital Archives, Research Blog: Exploring Personal Digital Archiving Practice in Everyday Life*, 23 February 2012, http://personaldigitalarchives.blogspot.com/2012/02/notes-from-personal-archiving-2012.html.
84   Onuf and Hyry, "Take It Personally," 251.