DIGITAL LEGACY

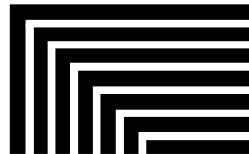## Heather Moorefield-Lang, Editor

Library Technology

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Digital Legacy

Edited by Heather Moorefield-Lang

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About the Editor

Heather Moorefield-Lang is an assistant professor at the University of North Carolina at Greensboro in the Department of Library and Information Science. She has long been interested in how technologies can enhance instruction in libraries and classrooms. Her current research focuses on makerspaces in libraries of all types. She had the honor of being nominated for the White House Champion of Change for Making in 2016 and was awarded an AASL Research Grant in 2019 for her research in makerspaces. To learn more about Heather and her work, see her website https://www.techfifteen.com, check out her YouTube channel Tech 15, or follow her on Twitter @actinginthelib.

Abstract

This issue of *Library Technology Reports* (vol. 56, no. 5), "Digital Legacy," addresses some of the following questions. How do library community members build their digital lives? Are libraries involved in the building and education of those digital lives? How do we as librarians aid our patrons in understanding the legacies they leave behind in a digital world? Death is a topic often avoided, but the legacy we leave behind in both our physical and digital worlds is important. These legacies deserve recognition. In this report we investigate digital footprints, digital legacy, and digital lives.

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Contents

Introduction

Heather Moorefield-Lang

The idea for this issue of *Library Technology Reports* was born ten years ago. I was finishing lunch with a friend who happened to be a freelance writer. We were discussing technology, and she asked me if I had heard about digital legacy. She was writing a piece on the digital information left behind following a person's death, also known as digital legacy (Digital Legacy Association n.d.). I was immediately intrigued. The first book I read on the topic was *Your Digital Afterlife: When Facebook, Flickr and Twitter Are Your Estate, What's Your Legacy?* by Evan Carroll and John Ramano. Recently, new books are starting to emerge, such as *Digital Legacy Plan: A Guide to the Personal and Practical Elements of Your Digital Life Before You Die* from Angela Crocker and Vicki McLeod. Each book gives you practical tips and ideas on how to deal after death with the lives, files, and materials that we have created, built, and saved online.

As a former school and academic librarian and as a person who has taught information literacy, I started to think about how important digital legacy should be to our students and library patrons in terms of their digital footprints. The people we work with in libraries learn how to search, investigate, glean, and cull the best information, but do they learn about their digital lives? Our students in K–12 and higher education are creating so much digital information. Will they ponder their legacy?

Death isn't a topic many wish to delve into, but the legacy we leave behind in both our physical and digital worlds is important. These legacies deserve recognition. The Order of the Good Death (2020) has eight tenets within its movement. The second tenet states, "I believe that the culture of silence around death should be broken through discussion, gatherings, art, innovation, and scholarship." It is my hope that the scholarship in this report will lead to further discussion on the topic of the digital lives we leave behind.

This Issue

In this issue of *Library Technology Reports*, we investigate digital footprints, digital legacy, and digital lives. Lucas Maxwell discusses tools that students in K–12 need in order to be responsible digital citizens and the educational technologies that assist educators in teaching students the skills they need. Dr. Nicole Cooke discusses the digital legacies created for people of color. In her words,

> We all have a digital footprint and legacy, even if we aren't the ones actively curating our own trajectories. This can be particularly salient for people of color and other marginalized people who are created, demonized, or unduly hyped by the media.

In her chapter, Dr. April Dawkins discusses the role that school librarians play in providing K–12 digital citizenship education, examines standards that focus on digital citizenship, and provides advice on how to integrate discussions on digital legacy. Katlin Seagraves covers the ways in which we store and share information and how they have changed. Her chapter explores ways in which librarians and libraries can address the growing needs of patrons in managing and preserving their digital lives. The final chapter, by Dr. Heather Moorefield-Lang and Jeffry Lang, focuses on cybersecurity and digital legacy in keeping your legacy safe. These two authors delve into methods for building a safe and secure digital legacy for your friends, family, and yourself throughout your life and after.

There is something for everyone in this report. Authors are from school, public, and academic library settings. They write from schools of library science and of other disciplines. The focus throughout is the digital lives created in the present and what happens to those lives over time.

Audience

I envision the readers of this issue of *Library Technology Reports* to be librarians, classroom teachers, preservice librarians, and professors of library science. This report is for anyone wanting to delve into ideas on digital legacy, digital footprint, and information literacy. Though we focus on library settings and partnerships, the case studies and ideas shared in this report cross disciplines. We have authors from England and across the United States represented in this report. This report was written for the express purpose of generating and sharing ideas as well as inspiring our readers to think further about lives that are created online and what happens to them in the present and the future.

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Digital Literacy and Digital Legacy

Lucas Maxwell[*]

Technology is an ever-present factor for students, as they are immersed in a world of digital influences. The foundation of digital literacy has four factors—technological skills and access, authorship rules, representation rules, and online social responsibility. For students and employees to interact responsibly in a digital society, it's imperative that they understand all four parts of the puzzle. It is suggested that by 2020 77 percent of jobs will require digital competency (Lynch 2017).

A report conducted by the New York City Comptroller's Office in 2013 found that in 42 percent of households without broadband students achieved less than high school graduation and only 5 percent earned a bachelor's degree (Liu 2013, 6).

Digital literacy will become a major factor in the success of our future students. Additionally, students must be aware of the importance of their digital legacy and what this digital life means as they age. Librarians have a critical role to play in developing the digital literacy of students so that they can create a digital legacy of which they can be proud. Libraries managed by a professionally trained librarian provide a space where students learn, grow, create, and become responsible citizens, both in person and online. Having regularly scheduled library classes with students starting at age six ensures they learn these crucial skills.

Developing technical skills is crucial for students when considering their future employment capabilities. Therefore, teaching students strong technical skills in today's tech-driven society is key. However, technical skills make up only one small piece of the puzzle. Digital literacy and legacy are vital if today's students are going to become responsible absorbers of information, proficient in their careers and serving as morally driven citizens.

In the library, I teach digital literacy skills with students who range from eleven to nineteen years of age. I started teaching digital literacy and legacy on a continual basis in 2016, specifically after the wave of clown sightings that took place in the US, Canada, and the UK (Rogers 2016).

If you're unfamiliar with this event, there were reports of people dressed up like clowns hanging around schools, malls, and quiet roads. Reportedly, they scared people and, in some extreme cases, attacked them. I didn't pay these reports too much attention until four students came rushing into the library, asking if I'd heard the news. They were convinced that a killer clown had murdered thirty people in Canada. I asked them where they saw this information. They told me "on some page" or "someone showed us a news story." I took it as an opportunity to talk to the students about clickbait, fake news, and how to spot a headline that is trying to simply get you to click on it.

I felt as if something needed to be done to ensure students were aware of the mass amount of misinformation that existed on the internet. I also wanted students to be aware of their online permanence. Every keystroke, every search, every comment can ultimately be traced back to them. It was because of this that I decided to incorporate digital literacy and legacy into the school's library lessons on a more regular basis. To begin with, I ensure that students understand the meaning of the term *digital footprint*. In my opinion it is vital that they comprehend the importance of this term and what it can mean for them as they age. In addition, a digital footprint ties directly

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to their digital legacy. Digital legacy is what is left behind online after someone passes away. It is crucial for students to consider this legacy because it is one of the things that will last after they are gone. Building an accessible digital legacy will allow their family to remember them in ways not thought possible before (Billingham 2016). What I try to stress to the students is that you cannot assume that social media pages will hold on to your digital information after you are gone. It is important to find someone you trust to look after your online life when the time comes.

Digital Footprint

A digital footprint is, at its root, the trail you leave behind when you scour the internet. What's important for students to understand is that every search they complete can be traced, every post they make should be considered permanent, and future employers will most definitely be googling them to see what they've been up to online. In fact, a study in 2017 found that 70 percent of employers are looking at the social media profiles of potential employees (Salm 2017). It is easy to surmise that this percentage will only increase as time passes. I share this startling statistic with my students to try to drive home the fact that pausing before you post is something we all need to consider.

A digital footprint doesn't have to be a negative thing, however. It can be a portfolio of your life, and I explain this to our students. Most of us are using the internet responsibly and being polite and considerate while posting information. Your digital footprint is not just about having the right privacy settings (although I do mention this to students). It's also about leaving behind footprints that are positive. This doesn't mean you can't be thought-provoking or passionate, but I stress to students that sitting behind a keyboard or phone gives some people a lot of courage to say things that they normally wouldn't say. I ask students to act as if they were saying this to the person's face when they respond to things online. In the end, we all are leaving a trail of our online activities, we are all trackable, and considering it is now near impossible to extract yourself from the internet, everyone must be considerate when publishing anything.

An exercise I use in the library is a simple yet effective one. I discuss the fact that most employers will be searching their social media content and that, quite frankly, when they get older, they will be googled by employers. I then show them real-life examples of people losing their jobs and even having their lives threatened over what they at the time perceived as funny, harmless, or private messages. My goal is not to scare them, but it's impossible not to be frightened by some of these stories, which are not hard to find. I remind the students that these are extreme cases, but they must be careful when they post.

I also discuss the importance of deleting accounts they no longer use because failing to delete an account leaves the slim possibility that it will be accessed by malicious users, resulting in a form of identity theft. That said, I tell them that they should keep a list of every account they have so they won't forget about any accounts as time passes. I also go over privacy settings; I don't go into details as it's impossible to know which social media platforms every student is using or is going to use. I use Instagram as an example, ensuring that students at least understand the importance of this feature and how it can be used to their benefit.

I create a wall on Padlet, which is a very useful free site that allows users to create a wall where students can post information in real time. Think of a Padlet wall as an online bulletin board where the students can post virtual sticky notes. I give my wall the name "If Someone Googled You 10 Years from Today, What Would You Want Them to See?" I ask students to discuss in small groups why this is important. I always hope they are thinking back to the news stories on people losing their jobs, but I also want them to think about how everything we do online is permanent and how important it is to leave a positive legacy in general. I ask them to hold on to their answers, and I then provide students with the Padlet access code and inform them that they can post images or add text to the wall to describe what they want to portray.

> *Padlet*
> https://padlet.com

It's a very interesting and informative exercise that allows students to express their dreams, their fears, and their career goals. We had students posting pictures of themselves as famous soccer players, the emblems of the universities that they hope to attend, descriptions of careers for their family, musical dreams, books they hope to write, cars they hope to own, and much more. What I learned from this lesson was that many of our students, even at an age of eleven, had very concrete career plans in mind for when they become adults, much more than I did at that age. I hope they learn that the internet can be an amazing place to learn virtually anything they want, but the flip side is a dark reality that can lead down a very dangerous path.

To end this session, I have students create a word cloud on Tagxedo, which generates word clouds in specific shapes. Not surprisingly, I ask students to use the footprint template to complete this task. The students use the words and ideas that they generated during the Padlet exercise to make their word clouds.

It's a great way to create a display based on a positive digital footprint message.

Disinformation

Disinformation is an issue that is projected to only become worse in the coming years. New research shows an alarming surge in the creation of videos known as deepfakes, where someone's face is swapped with another so seamlessly it is nearly impossible to detect. The number of these online videos doubled between 2018 and 2019. There is huge concern that deepfake videos will become political in nature (Cellan-Jones 2019).

To combat disinformation, I introduce students to fake news articles and discuss ways to detect and avoid them. I start with an image of the world; the image shows various countries lit up in different colors. Some countries are very bright; some are completely black. I ask the students what they think this image represents. We discuss various answers until the correct one is revealed: the image represents internet usage in one day in 2012 on the planet.

I use this image to illustrate how fortunate we are to have this incredible resource at our fingertips and that unfortunately some countries still struggle to access not just the internet but also basic human necessities. It does come as a surprise to some students that not everyone can access something like YouTube whenever they want.

I ask students to guess how many websites are in existence, again seeing which student can come the closest. They are usually surprised to find that there are close to two billion websites in existence and that in fact over 380 websites are created every minute (Mill for Business 2019).

Using this number, I explain to students that the potential for disinformation and outright lies is very high. Finding reliable information quickly and effectively can be tough. Therefore, I walk them through a variety of Google search tips. These include using quotation marks to search for exact phrases, the site function to ensure your search results come from one specific trusted website only, and the in-title feature, which allows you to have every search result contain a specific word or phrase in the title of the article. Filetype is another effective Google search method. By searching for a phrase and adding `filetype:pdf` at the end of the search, it will ensure every result is in PDF format. This technique can be used to search for PowerPoint, MS Word documents, whatever file type you'd like.

I also discuss using keywords and have students do a quick exercise. This is one I adapted from Tiffany Whitehead's (2015) "Google It Better" lesson. I started this lesson after I noticed students coming into the library and using the computers to type full-length questions into Google. My goal was to show them that Google doesn't really need questions like these and that their goal should be to reduce the number of results. I broke the class up into five groups. Each group received a piece of flip-chart paper with a question on it. They were also given markers and told to cross out unnecessary words, circle important words, and add words if need be. This was a great opportunity to explain to the students that things like commas, periods, and in some cases question marks are unnecessary with Google. The favorite question was "Is there really a bus that is powered by cow poo?" That group ended up narrowing it down to "bus poo," and we received the results we were looking for. (It's true: there is a bus out there that is powered totally by cow manure.)

I also schedule these lessons to coordinate with an author visit at our school. For example, in March 2018 author Onjali Q. Raúf visited Glenthorne High School to discuss her novel *The Boy at the Back of the Class*. This novel follows a boy named Ahmet who is ten and travels to the UK from Syria. Along the way he is separated from his parents and placed in foster care. He joins a new school and is immediately bullied for the way he dresses and the fact that he cannot speak English. A few kindhearted students then take it upon themselves to try to reunite Ahmet with his parents. The book tackles tough issues in a way that is accessible for students ages ten and up. It also looks to bust myths that surround the refugee crisis not only in the UK but around the world.

To augment this visit, I decided to run a series of digital literacy and legacy lessons that aimed at dispelling the myths about refugees. I asked the class to guess how many refugees are trying to flee wars. I also asked them how many environmental disasters or political persecutions they thought are currently in the world. Using information from the UN Refugee Agency, we were able to determine that over 70 million people are considered "forcibly displaced." I then asked the students, of that 70 million, what percentage do they think the UK takes in? There is a very specific reason for asking this question. In the UK we have political parties running on the platform that "Britain is full" and that we take in too many refugees. Many students guess 10 to 15 percent, and some go as high as 50 percent before I remind them that that number equals half the population of the UK itself. When students are informed of the real number, which is less than 1 percent, I ask them if that surprises anyone in the class. Without fail it does, and I ask them why. Two-thirds of the room have repeatedly said, "Because of what we hear on the news" or

"I thought it was more than that because of stuff I see online." This exercise has proven to be very eye-opening for me and hopefully for the students. It was a powerful way to prepare for Onjali's visit and inform the students on an important social issue while teaching them digital literacy skills.

In library lessons, I also use news stories to promote digital literacy. In one particular lesson, I show students the website How Stuff Works and its page entitled "10 Ways to Spot a Fake News Story" (McManus 2015). I enjoy this site as it fully explains why fake news is created and gives students ways to avoid it. It also points out sites that are generating fake news daily and the reason behind these stories, which is primarily ad revenue. This always generates a discussion with students about the nature of clickbait and why it's so important to avoid such stories. Every click adds money to the coffers of these sites and therefore keeps them in business.

I put students into groups of five or six. I provide each group with a different news story. I stress that each of these stories has been published and promoted as true. However, only one of them has been verified to be true. Their job is to read their news story and discuss with their group whether they think they have the real one or not. When they have had ten to fifteen minutes going over the story, I stop everyone and have each group read their headline, provide a synopsis of their news story, and explain to the rest of the class why they feel that theirs is the real or fake story. I get them to think back to the How Stuff Works article and provide as deep an analysis as possible on their decision.

When everyone has finished, I get the students (and teacher) to vote on which story they think is the real one. The results are often split, with 45 percent of classes getting it right. After the real story has been announced, I will ultimately get asked this question: "How do you even know *this* is the right story?" I love it when students ask this because it means they are thinking critically and questioning everything they come across, at least in this instance. I talk about how stories can be verified if they are from reliable sources or if they are carried by multiple news outlets (even though I stress that this sometimes still doesn't mean they're reliable). And if the story concerns an urban legend or a story that is based on historical accounts that have been repeated in one form or another, I talk to them about Snopes. I feel Snopes does a great job in debunking popular myths and even current news stories that have captured the imagination of young and old alike.

Snopes
https://www.snopes.com

To finish this lesson and to have some fun, I play a game that I call "Real or Fake." This is a game where I display images on the screen. Again, only one of the images has been verified as authentic. All the other fifteen images have been doctored or photoshopped in some way. I once again get students to vote, and they rarely vote for the right image. It always sparks a debate around specific images, particularly ones that students are dead certain are real. These mostly include images of dangerous animals enacting their rage on some poor swimmer or hiker.

To ensure that students are aware of the importance of a positive digital footprint and what their digital legacy entails, hands-on, practical exercises have proven to be effective. The library's role in this area is vital and will continue in future library lessons where students will discuss digital literacy and legacy with experts on the topic via Skype, engage in more research lessons around fake news, and write their own research papers. My ultimate goal is to ensure students are curious yet skeptical, engaged yet wary about what they are interacting with online.

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Digital Legacy   **Heather Moorefield-Lang, editor**

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The Good, the Bad, and the Ugly of Digital Legacies

Nicole Cooke*

We all have digital footprints and legacies, even if we aren't the ones actively curating our own trajectories. Virtually every move we make online is tracked in some way, and the digital crumbs, fingerprints, and dossiers we produce are used to market products, steal identities, and otherwise surveil us for a variety of reasons (NBC Nightly News Films 2019). Digital legacies are applicable to individuals and collective groups of people.

This can be particularly salient for people of color and other marginalized people who are created, demonized, or unduly hyped by the media. Remember how Pastor Jeremiah Wright was vilified in the name of accountability shortly before Senator Barack Obama became the forty-fourth president of the United States in 2008? Or when Congresswoman Alexandria Ocasio-Cortez's innocuous college dance video was unearthed and circulated in 2019 in an effort to discredit her and minimize her elected position? These are classic cases of distraction through discrimination and respectability politics.

Consider young Black adults Sandra Bland, Michael Brown, and Freddie Gray, who all died in encounters with police and were criticized for being at fault and not obeying the rules. All of them had negative images and stories circulated about them, while the involved White officers were said to be under duress, became the recipients of fundraisers, and were never convicted of any wrongdoing. At most, the officers were considered rogue and "bad apples"; this was the leading narrative instead of the emphasis of these stories being on the people who were so discriminated against that they ultimately lost their lives.

After Michael Brown's death in 2014, the hashtag #IfTheyGunnedMeDown appeared on Twitter to refute pictures of Brown peddled by the mainstream media showing him in a basketball jersey or staring "menacingly" at the camera, and unbelievably he was even shown lying dead in the street, suggesting that he deserved no compassion or humanity. The media controlling his narrative and trying to create his digital legacy chose not to show his high school graduation photo, which was taken just weeks before his death. With Brown, Bland, Gray, and so many others, the media paints people of color with disdain, writing grim, "urban" stories of incorrigible miscreants who somehow deserved their fates. And this same media, more often than not, describes and depicts White suspects in acceptable terms and respectable attire in an effort to paint them as "youth gone wrong" (Wing 2014). Suggesting that the media's actions are essentially character assassinations designed to perpetuate racism and Black stereotypes, Wing states,

> News reports often headline claims from police or other officials that appear unsympathetic or dismissive of black victims. Other times, the headlines seem to suggest that black victims are to blame for their own deaths, engaging in what critics sometimes allege is a form of character assassination. When contrasted with media portrayal of white suspects and accused murderers, the differences are more striking. News outlets often choose to run headlines that exhibit an air of disbelief at an alleged white killer's supposed actions. Sometimes, they appear to go out of their way to boost

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the suspect's character, carrying quotes from relatives or acquaintances that often paint even alleged murderers in a positive light. (2014, para. 4)

Even when subsequent community uprisings occurred in protest of these tragic deaths, Black and Brown community members were further castigated, maced, and arrested for defending the criminals and wrongdoers that were Bland, Brown, and Gray, and they were referred to as looters in mainstream media. Again, the underlying chain of events and the unwarranted deaths of minorities were ignored and twisted.

In these and many more examples, digital legacy becomes a form of accountability that is applied differently and unevenly depending on the persons or groups in question. Whiteness is amplified, and anything or anyone else becomes "othered," which results in Black, Brown, and other marginalized peoples becoming further excluded and stereotyped. Whiteness is presented as good or redeemable, and otherness is presented as bad and irredeemable. Digital legacies amplify both whiteness and otherness, but in opposite ways. The digital legacies of whiteness are created in sand or snow and can be manipulated, changed, or erased. The digital legacies of others are created in cement.

For example, in 2015 Brock Turner, a Stanford University student and athlete, was convicted of felony sexual assault for attacking an unconscious young woman in an alley. However, he was sentenced to only six months in jail because the judge in the case thought Turner had potential and shouldn't have his future ruined in prison. Men of color have to be subjected to "stop and frisk" initiatives and have served decades in prison for marijuana possession, arguably a much lesser crime than rape. Why haven't scores of minority men been given the same opportunity and benefit of the doubt that Turner was given? The media has largely forgotten Turner, but that did not stop the media from second-guessing and berating his victim, an Asian American woman named Chanel Jones, when she recounted her experiences in a 2019 memoir (Neary 2019). This biased accountability is rooted in stereotypes, prejudice, racism, whiteness, and heteronormativity and allows the status quo and the hierarchy to be maintained. Mainstream media, and now social media (e.g., Facebook trolls and Twitter mobs), exacerbates and perpetuates this phenomenon. The media can act as judge and jury and perpetuate false, stereotypical, and damaging misinformation, disinformation, and malinformation, and as a result, digital legacies are often at the media's mercy. People of color and other minorities are often villainized, and nonminorities are redeemed and glorified.

Existing at Our Own Expense

In a video decrying the apparent blackface appearance of Kim Kardashian and the perceived ongoing cultural appropriation by her entire family, Black actress and comedian Amanda Seales (2019) stated that Black people "exist at our own expense." The cultures of people of color are valued and mined, but the people themselves are not, and this is something people of color and others are faced with every day. In certain instances, they might be considered model minorities, but that won't ensure that they have positive experiences or digital legacies.

Among the reasons stereotypical digital legacies are so problematic and far-reaching is because minorities and others are not in control of their own narratives.

> Communities of color, low-income individuals, and those living in the margins have seldom been in control of telling their own stories. When white people and mainstream media control the overriding narrative, black people are disenfranchised. (Divided by Design 2019)

When narratives are controlled by the powerful, diverse information and perspectives are omitted, or even lost or not valued. For example, in 2019 it was been reported in non–United States news that the Uighur people, an ethnic minority group who are active practitioners of the Muslim faith in China's Xinjiang province, are being tortured by the Chinese government and sent to internment camps. Very little about this atrocity has been covered in the United States mainstream media (perhaps because of the stigma placed upon Muslims worldwide), and social media has actually sanctioned those who speak about the issue (Al Jazeera 2019).

Within the United States there are ongoing factions in the media, some catering to the right and others catering to the left, and yet others claiming to be in the middle or neutral. Unfortunately, all media has some kind of bias, and none of them are neutral, particularly when a small number of conglomerates own the majority of media outlets. Routinely referred to as propaganda for forty-fifth US president Donald Trump, Fox News has been called out for omitting and falsifying information and routinely presenting inflammatory and racist rhetoric. In December 2019, the political program *Meet the Press with Chuck Todd,* which airs on MSNBC and is considered to be more liberal than Fox News, was criticized on social media for polling affluent White voters in Iowa about the impending 2020 US presidential election, referring to these interviewees as a representation of US voters (NBC News 2019). Because of the current electoral college system, Iowa is a very important place for aspiring candidates

to win over, but Iowa by no means reflects the racial, ethnic, religious, socioeconomic, or class diversity in the United States, and it was misleading of *Meet the Press* to say otherwise. Misinformation and disinformation come from a variety of sources and in a variety of ways, and regrettably, a lot of it is not recognized, questioned, or challenged.

Just as harmful as omitting or deliberately falsifying, twisting, or cherry-picking information is using stereotypes and microaggressions in misinformation and disinformation. Stereotypes are used to control the narratives about groups that are different, marginalized, or "othered." They prevent minorities from being seen as individuals and facilitate the perception that minorities are comparable to animals or unflattering inanimate objects that are not worthy of the same humanity as members of the majority. Consider the fact that Black people, including children, have historically been depicted as apes and monkeys in literature and popular culture (Campbell 2019); K–12 textbooks omit or deny the details and context of slavery and genocide; the forty-fifth president of the United States called Mexicans rapists and mocked people with disabilities; Black academics are tokenized, fetishized, and called "rare creatures" (Starr 2019); Black actresses, and Black women in general, are discriminated against because their hair is "too Black" (McDaniels 2019); women of color are called angry and punished for showing emotion even when they are demeaned or discriminated against (Prasad 2018; Schmidt 2018).

Along with this lack of access to creating and controlling their own narratives and legacies, minorities face risk and rebuke when they do dare to attempt to control their own stories (Cooke 2018a). As mentioned in the previous paragraph, labels such as *angry, aggressive, hostile, sensitive, misinformed,* and so on are used to stifle and discourage narratives and experiences that deviate from the status quo and live outside of heteronormative checkboxes and racist tropes. Emotions also keep stereotypes from being debunked and dismissed; emotions such as fear, anger, hatred, and jealousy allow misinformation, disinformation, and malinformation to take root and make them very difficult to correct or dispel (Cooke 2017, 2018b).

The pros and cons of technology use, particularly as it pertains to perpetuating stereotypes and heteronormativity, has been a long-term discussion in the literature. Carey ([1989] 1992) wrote that technologies are representations of the culture in which they exist, and as such they cannot be viewed or accepted as neutral or free of biases. Nakamura (2006) concurred by suggesting this also applies to objects and messages on the internet—they are manifestations of the larger culture and need to be examined and critiqued in a critical and cultural way. Internet messages are part of a "contemporary constellation of racism, globalization, and technoculture" and should be viewed as such

(Nakamura 2006, 30). Brock (2009) continued this line of inquiry by stating that cultural images, online texts, and the electronic media that house them are products of the overall culture and society and should be viewed as potential vehicles of race, power, and discrimination.

A particular technology that has been widely discussed and criticized is YouTube, especially its problematic algorithms that recommend supposedly similar videos and content. Algorithmic bias is certainly not new or restricted to YouTube, but because of the proverbial rabbit holes that it can open up, it has warranted special attention. In the *New York Times*, various writers (Fisher and Taub 2018, 2019a, 2019b; Fisher and Bennhold 2018) wrote specifically about the radicalization that seems to be a result of YouTube's propensity for showing "related videos" that contain racist, sexist, anti-Semitic, and extremist content, conspiracy theories, and comments containing even more egregious jokes and language shared by users (Simon and Bowman 2019). While the recommendation system and autoplay feature on YouTube may seem innocuous, they are actually an insidious way to spread misinformation, disinformation, and malinformation.

> YouTube's recommendation system is engineered to maximize watchtime, among other factors, the company says, but not to favor any political ideology. The system suggests what to watch next, often playing the videos automatically, in a never-ending quest to keep us glued to our screens.
>
> But the emotions that draw people in—like fear, doubt, and anger—are often central features of conspiracy theories, and in particular, experts say, of right-wing extremism.
>
> As the system suggests more provocative videos to keep users watching, it can direct them toward extreme content they might otherwise never find. And it is designed to lead users to new topics to pique new interest. (Fisher and Taub 2019a, paras. 13–15)

Disrupting the Status Quo

While technology is certainly an issue, it's not going to heal itself. Information creators, consumers, and users must take responsibility for what they're doing online, and as much as possible need to take back the narratives that will ultimately result in their digital legacies. Users must make concerted, consistent, and informed efforts to cut through noisy digital information ecosystem to get to the truth (Terrill 2019). We have to be *in* the media and *understand* the media in

order to *disrupt* the media. When the media actually attempts some type of self-reflexivity, it recommends that people, especially children, reduce their screen time and vary their information consumption. That's an adequate start, but that will never be enough, not with the plethora of information people encounter in the course of a day. More people of color and minorities need to be in the media ecosystem creating, curating, and evaluating content; a critical mass of racially literate, compassionate, and empathetic information producers are needed to change the tide of racist, sexist, classist, ableist, and so on media coverage and digital legacy creation. Among the ways to move toward this goal is for educators and caregivers to be proactive in instilling media and information literacy skills and adept in having hard conversations and teaching hard histories. Cooke (2018b), De Abreu (2019), and Mackey and Jacobson (2014) are but a few of the practitioners and researchers who provide concrete strategies to implement information literacy, media literacy, and metaliteracy, which are the skills needed to become more adept at information evaluation and become savvier information producers and consumers. These are skills that have no age or expiration. Rather, they encourage readers to actively engage with information instead of just receiving and accepting information, good or bad, as a fait accompli.

Furthermore, Cooke (2018a) described the particularly acute need for people to be culturally competent and intellectually humble when creating and evaluating information. A culturally competent and racially literate writer, reporter, or producer would never have published pictures of Michael Brown lying dead in the street; they would have been cognizant of his humanity and aware of the damage the wrong pictures would do to his digital legacy. To this end, we all need to engage in counterstorytelling—storytelling that bucks the norm. This includes critiquing and trying to correct misinformation, disinformation, and malinformation, and it also includes telling personal stories. Pearson (2019) provided a salient example of this. Traveling to Nebraska to deliver a talk, this Muslim scholar became privy to a social media campaign disparaging her and her perceived intent to "brainwash" the white children at the school. Pearson recounted her fear and anxiety, but instead of letting this encounter cow her or let this negative digital legacy live on unchallenged, she wrote about the experience, refuted the racist and Islamophobic rhetoric, and reclaimed her narrative. Reclaiming narratives is not easy, but this is part of the hard work required by counterstorytelling. Cobran (2020), Kay (2018), and other educators are instructive on the art of having these hard conversations and telling courageous counterstories.

Perhaps our digital legacies should be left to the discretion of the individuals or groups in question, but that is not always the case, not in today's technological world. This means that people need to be more than just passive consumers. They need to be proactive creators of information and forethoughtful stewards of their own digital legacies and the legacies of others, especially those who are marginalized. It takes consistency, reflection, and effort, but the work invested will surely improve the legacies of all.

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Digital Citizenship, Digital Legacy, and School Librarians

April Dawkins*

School librarians have often been seen as obvious choices for educating children and teens about information literacy. Digital citizenship and digital literacy are one component of the larger topic of information literacy. Much of the literature about digital citizenship as a type of information literacy is highlighted in practitioner articles that emphasize inclusion of the topic as part of technology or media literacy curricula (Greenhow 2010; Hollandsworth, Donovan, and Welch 2017). As many school librarians are wearing the dual hats of school librarianship and technology facilitators in their schools, the decision that they will be teaching about digital citizenship is not unexpected.

As more attention is being paid to the issue of false and misleading information in social media and news reporting, the emphasis on information literacy, and specifically digital citizenship, has increased. In July 2019, Senator Amy Klobuchar (D-MN) introduced a Senate bill to address the issue: Digital Citizenship and Media Literacy Act (S. 2240, 116th Cong. (2019)). The companion bill was introduced by Representative Elissa Slotkin (D-MI) in the House in October 2019 (Digital Citizenship and Media Literacy Act, H.R. 4668, 116th Cong. (2019)). The two bills would provide grants totaling $20 million to help schools develop digital citizenship and media literacy curricula and education for grades K–12. In the press release about the bill, Senator Klobuchar's office emphasized, "This bill will help teachers across the United States develop curricula and pedagogical tools that will boost our population's digital literacy to a high level. We must become a digitally literate nation" (US Senator Amy Klobuchar 2019).

Digital legacy is an especially difficult topic to introduce to school-age children. Digital legacy is what a person leaves behind in the digital world after their death. Instead of discussing the very difficult topic of death with young children and teens, most digital citizenship and literacy curricula instead focus on digital footprints and the importance of understanding the permanence of sharing information in the online environment. This chapter examines the role of the school librarian in digital literacy and citizenship education as well as the content included in that curriculum. Additionally, the chapter provides ideas for appropriate inclusion of digital legacy topics for different ages.

Role of the School Librarian in Digital Literacy and Citizenship Education

The role of school librarians in digital literacy and citizenship education might seem obvious to school librarians; however, it isn't always obvious to legislators when legislation on digital citizenship education is proposed. In many states where legislation has been adopted, school librarians are left out of the conversation. Those laws mention the development of curriculum by districts and classroom instruction but fail to include school librarians who are literacy experts. One of the few exceptions to this is a law passed in the state of Washington in 2015, which specifically lists digital citizenship as one role of the school librarian (K–12 Education—Library Information and Technology Programs, Washington State Laws of 2015, ch. 27).

Confusion and uncertainty remain about the role and responsibilities of school librarians in teaching about digital citizenship. In a recent study published in *School Library Research*, Phillips and Lee (2019) examined perceptions that Utah school librarians

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had about their role. The study was conducted after the state of Utah passed legislation mandating that K–12 schools provide digital citizenship instruction. The responses showed that the responsibility for planning digital citizenship instruction was often held by school librarians, the school's technology specialist, or a combination of school librarians and teachers. The researchers indicated they were surprised that almost 13 percent of survey participants indicated that someone other than those professionals was responsible for planning the instruction and explained that the open-ended responses to that question indicated uncertainty: school librarians didn't know who provided the instruction, didn't know who had responsibility, or were even unaware of the state mandate for digital citizenship instruction. Another interesting finding from the survey was that school librarians believed that digital citizenship instruction should be collaboratively taught by school librarians and classroom teachers.

Many states are proposing legislation that requires digital citizenship or at the minimum media literacy instruction for K–12 students. Media Literacy Now, a national advocacy organization for media literacy education policy, advocates for and tracks media literacy and digital citizenship education policy initiatives at both the state and national levels. Its website provides detailed state-by-state information about proposed legislation that could impact curriculum and teaching initiatives. School librarians can use the site to track proposed bills in their own states and nationwide.

Media Literacy Now: Your State Legislation
https://medialiteracynow.org/your-state-legislation

Digital Citizenship Instruction Today—Standards

Digital citizenship and literacy are topics that are included in the most recent developments in student learning standards that are being used by school librarians for their instruction. The curriculum and standards that school librarians use are sometimes determined by what districts or states require. However, school librarians sometimes can make a personal decision about which curriculum and standards they wish to use. The American Association of School Librarians released its newest standards in 2018— *The National School Library Standards for Learners, School Librarians, and School Libraries* (AASL 2018). The competencies for learners and school librarians address digital citizenship and digital literacy within the Engage foundation. The emphasis in this set of standards is on engaging with sources and technology

in an ethical manner. In preparing school librarians for practice, Standard 3 of the new *School Librarian Preparation Standards* requires school librarians to be able to "foster the development of ethical digital citizens" (AASL 2019, 10).

Some school librarians opt to follow the Future Ready Librarian Framework. Digital citizenship is addressed specifically under the Personalized Professional Learning gear, which encourages the development of skills that "comprise success in a digital age" (Alliance for Excellent Education 2018). The gear goes on to mention digital citizenship as an example of one of the skills that is necessary for that success. The Data and Privacy gear addresses additional areas of digital literacy, including teaching and promoting student privacy.

The standards that most explicitly address digital literacy and citizenship are from the International Society for Technology in Education (ISTE). Some school librarians are using the *ISTE Standards for Students* in developing their curriculum. Standard 2 is titled Digital Citizen and includes four subcomponents:

> 2—Digital Citizen—Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.
>
> 2a—Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.
>
> 2b—Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.
>
> 2c—Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.
>
> 2d—Students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online. (ISTE 2016)

Omission of Digital Legacy in Standards and Curriculum

Unfortunately, in most of these sets of standards, digital legacy is omitted. Only ISTE's standards obliquely refer to digital legacy in 2a, "permanence of their actions in

Digital Legacy   **Heather Moorefield-Lang, editor**

the digital world" (ISTE 2016). All of these standards address digital citizenship and include in their commentary discussion of ethics, media literacy, and safety. Some even go so far as to specifically mention a digital footprint or a student's online digital identity. However, the two are not the same. Digital legacy is more than just a digital footprint. A person's digital legacy is what a person leaves behind in the digital realm after their death. This is not something educators are comfortable in discussing with children of any age.

Digital legacy continues to be omitted in digital citizenship instruction and even in discussion of the elements of digital citizenship. Ribble's Nine Elements of Digital Citizenship were introduced in 2017 and adopted by many schools; however, the updated version released in 2019 continues to leave out digital legacy. The Nine Elements are as follows:

- **Digital Access:** The equitable distribution of technology and online resources.
- **Digital Commerce:** The electronic buying and selling of goods in the digital space.
- **Digital Communication and Collaboration:** The electronic exchange of information.
- **Digital Etiquette:** Electronic standards of conduct or procedures when using digital devices.
- **Digital Fluency:** Understanding technology and its use.
- **Digital Health and Welfare:** Physical and psychological well-being in a digital world.
- **Digital Law:** The electronic responsibility for actions and deeds in the online world.
- **Digital Rights and Responsibility:** Requirements and freedoms extended to everyone in a digital world.
- **Digital Security and Privacy:** Electronic precautions to guarantee safety. (Ribble and Park 2019)

Digital legacy continues to be ignored by the K–12 world. Three commonly used resources on digital citizenship are InCtrl, Common Sense Education, and Be Internet Awesome. Unfortunately, they omit digital legacy and address only a student's digital footprint and its impact on future success and admission to college.

1. *InCtrl:* Videos and lessons on digital citizenship for grades 4–8; aligned with AASL and English standards; addresses digital footprint and privacy but does NOT address digital legacy.
2. *Common Sense Education:* Videos and lessons on digital citizenship for grades K–12; digital footprint introduced in the third grade but does NOT address digital legacy. High school curriculum looks at the impact of student social media posts on college admissions and building a brand.

3. *Be Internet Awesome from Google:* Lessons and an interactive game designed for second through sixth grades; aligned with AASL and ISTE standards; includes digital footprint (or presence) in lessons on privacy but does NOT address digital legacy.

InCtrl
https://teachinctrl.org

Common Sense Education: Digital Citizenship Curriculum
https://www.commonsense.org/education/digital-citizenship/curriculum

Be Internet Awesome: Digital Safety Resources
https://beinternetawesome.withgoogle.com/en_us/educators

Introducing Digital Legacy to Children

How can school librarians and other educators introduce the topic of digital legacy to students? Often educators are hesitant to address the subject of death and grief with children, especially those who are in elementary school. Depending on the age of children, digital legacy can be introduced as a component of digital citizenship. School librarians should build upon the topics of digital footprints, online identity, and privacy to discuss the permanence of information in the online world.

In elementary grades, children should be introduced to the ideas of protecting their privacy online and the permanence (or persistence) of what they share. While it might be distressing for young children to learn much about death, they do experience it in a variety of ways: the loss of a pet, a grandparent, a teacher, a friend, or even a parent. When these occasions occur, school librarians are often asked to find books and activities to help young children process their grief and understand death. This is the appropriate moment to talk with them about what happens online when someone passes away. Older elementary students (fourth to fifth grade) can be asked about obituaries and online memorial pages that are often created by funeral homes where people can post memories and condolences. This discussion could then be expanded into a talk about what happens to deceased loved ones' social media pages.

As they enter middle school, tweens and early teens are exploring their personal identity, often in

an online environment. Continued discussion of the impact of what they are sharing, the impact it has on their privacy and safety, and the potential for information they post to be accessed for the foreseeable future is extremely important. At this age, many children are creating their own social media accounts. School librarians should take this opportunity to talk about the terms of service and what they mean. Too often students (and really everyone of all ages) just TL;DR (too long; didn't read) and click to accept. A great activity to do with students is a comparison of the terms of service for multiple social media sites. Here is the chance to include digital legacy: What do the terms of service say about how accounts can be closed and what happens to data when an account holder dies? How easy is it to find this information?

Beginning in middle school, school librarians should take advantage of collaborations with guidance counselors and athletic coaches to further discuss how students' digital lives are used by admissions counselors and university level coaches in choosing which students are admitted to college or receive athletic scholarships. This will continue to build on earlier lessons on the digital footprint, privacy, and safety.

As students move into high school, school librarians can help them become better managers of their online presence and digital life. One great activity is to help students create a record of all of their online accounts and digital assets—social media, banking, digital tools, photo storage, streaming services, and so on. School librarians can provide students with a spreadsheet template to gather all of their online account information and lists of digital assets (cloud-stored media) in one location. Students should be encouraged to NOT keep this digital record in an online or cloud location. This digital record should include the digital account, username, password, what type of service this account provides, if it is fee-based or free, and a link to the sign-in page. Once students have brainstormed all of their online accounts, school librarians should take the opportunity to talk about closing (and possibly deleting) unused or outdated accounts. This is a perfect time to examine account policies about closing and deleting accounts when a person is deceased. They will find that many sites have little or no guidance about the process involved. Some of the big social media sites (Facebook, for example) now have guidelines about this process, but they often require a family member to request an account be closed and present a death certificate. An alternative to presenting a death certificate is to make sure that family members have access to all of our accounts. For teenagers, this may be a lot to ask. They wish to guard their privacy. However, school librarians can encourage them to look at a password management system that provides emergency access to designated individuals. Keeper Password Manager is one system that allows for emergency access (Keeper 2017). Keeper isn't free, but students can get a 50 percent discount on the annual fee, which currently runs $29.99.

Conclusion

The absence of digital legacy as part of the digital citizenship instruction in K–12 education is troubling. Understandably, educators are hesitant to discuss death and dying with children. However, it is vitally important that we expand on the topic of the digital footprint, privacy, and the enduring presence of our social media lives to include what happens to our digital life after we have died. The currently available standards and curricula need to be expanded to include this important aspect of digital literacy.

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Digitization and Personal Digital Archiving

Katlin Seagraves[*]

My approach to digital archiving and digitization was born more organically than the ways described in most writing I have seen on the topic. The steps outlined in this chapter were developed through trial and error after years of seeking out answers to patron questions. The public library I work for offers our patrons access to digitization equipment, and my job, in large part, has been figuring out how to guide our patrons through the processes that come with using it. After mastering the ins and outs of the equipment, the next questions asked by patrons are often, "How do I organize my photos? How do I back up everything? Where do I even start?"

Inspired by a 2017 *Computers in Libraries* article by staff at the Athens-Clarke County Library's Digital Media Center (Stanley and Wright 2017), I developed a series of classes that are taught in the following order:

- DIY Digitization
- DIY Digital Archives
- DIY Oral Histories
- Repairing Photos with Photoshop
- Digital Estate Planning

While we don't have enough room in this chapter to dive into all of this content, at the end I have included some resources that were helpful when developing these programs. In this chapter, I explore the following topics:

- personal digital archiving
- digitization at the library

Personal Digital Archiving

When talking about digital archiving, I like to answer the questions Why, What, Where, and How.

Why

Why are we talking about digital archiving? Everyone has different motivations for organizing their digital files. Most of my library patrons want to preserve their family and personal history. They want to ensure their family photos, home videos, and genealogy documents are shared with loved ones and available to future generations.

Technology has changed the way in which we store information. Most people no longer print out photos, cut them up, and paste them into scrapbooks (thank goodness). With new technologies introduced into the mix, people have to adapt how they store and share information.

Unlike physical files of photos that can be pulled out of boxes and put back in, digital files can be much more difficult to sort without good archiving practices. No one wants to lose their files. If you can't find a file, it functionally does not exist. When talking about digital archiving practices, there are two main ways you can ensure long-term access to your digital files:

- Back up your files.
- Name and organize your files.

What

What are we saving? When I refer to digital files, I generally mean the following types of documents:

- photo (.jpg, .png, .tiff)
- audio (.wav, .mp3)

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- video (.mp4, .mov)
- documents (.pdf, .tiff)

When talking to library patrons, I make sure to discuss file extensions. File extensions are an important part of file naming. It is good practice when working with patrons to never assume the base level of knowledge regarding file types. I have found that walking through the file types before diving into naming schemas can help patrons feel more comfortable looking at file names.

Where

Where are we saving our files? Storage locations can be broken down into three major types:

1. *Local storage:* phone, desktop computer, tablet, laptop.
2. *External storage:* memory card, flash drive, external hard drive, portable flash drive.
3. *Online cloud storage:* iCloud, Google Drive, One-Drive, Dropbox, Amazon Drive, and so on.

Most users employ a combination of two of these, if not all three. One thing all these storage locations have in common is that they all have an expiration date, functionally speaking.

In general, the life of storage media is cut short by at least three factors: (1) use and handling, (2) lack of durability, and (3) obsolescence. Obsolescence is the most frustrating of the factors to work with in a digitization lab. When suggesting storage locations, I always lead customers away from storing files on DVDs, CDs, and floppy disks (yes, someone tried it last year).

Lest you think all problems are solved by cloud storage, there are a few things to keep in mind with cloud storage services:

- Cloud storage services require a continued financial investment. Even the cheapest cloud services can cost $0.99 monthly. While an $11.88 annual investment is not much, it can add up quickly once you store more information or if the price increases to accommodate your increasing storage needs.
- Cloud storage services are not forever. While it seems like Google, Amazon, and Apple may be around until the end of the internet, the services they provide may not be. (Looking at you, Google Inbox.)
- And finally, cloud storage services are not always the safest way to store your information. Data breaches and targeted account hacking make the information you store online vulnerable.

So where do you store your digital files? I always

recommend the 3-2-1 Method. The 3-2-1 Method calls for you to save three copies of your digital files with two of your copies stored locally (on different devices) and one copy stored off-site (on an online cloud service).

The best example I saw of this method in action was a library patron who frequents my lab. She and her husband back up their files to two external hard drives. One hard drive is hooked up to her computer, where it is updated daily. The other hard drive is stored in a fireproof safe and is switched out with the first hard drive monthly. She also uses a backup service on her computer that backs up files and information automatically with a third-party company.

While not everyone has the means or the discipline to follow such a strict regimen, even backing up one copy of your files will ensure they are available in the event something happens to your laptop or computer. Do your future self a favor and back up your files before disaster strikes.

However you decide to do it, make sure you back up your files regularly. For some people, this is done by setting up a monthly reminder. I tend to back up files after finishing a large sprint of work.

How

How do we name files? How do we store information about files? How do we find the files we need? How do we organize files? The How questions are some of my favorite to talk about with library patrons. Some questions are straightforward. Some are harder to answer.

HOW DO WE NAME FILES?

Unfortunately, there is no easy answer when it comes to naming files. File naming is as personal as the files we store. There are experts who work to answer this question for institutions with large collections. For the most part, public library users are working on personal collections. For them I offer a few tips and a few examples of naming schemas I like.

- *Be descriptive.* Melody Condron, in her book *Managing the Digital You*, asks the question, "If I see this file name in 10 years, will I know what it is about without opening it?" (Condron 2017, 22).
- *Don't use acronyms.* This is especially important for personal collections. It may make sense to you, but your family or digital executor may not be working with the same set of information.
- *Avoid special characters.* These mean something to a computer, so avoid characters like "/", "\", and "?".
- *Use underscores, not spaces.* Some software does not recognize spaces, and many machines will automatically add "%" instead of a space. Save

yourself some grief later and use underscores between distinct parts of a file name.

- *Avoid long file names.* Machines can handle only so many characters in a file path. As a rule, try to avoid file names longer than thirty-two characters.
- *Whatever you do, be consistent.* Once you settle on a naming schema to use for your project, stick to it. I recommend keeping your file naming schema on a digital or physical sticky note in your space. When you're naming something new, do a quick check to make sure it follows the pattern you have set up for yourself.

A few naming schema examples are as follows:

yyyymmdd_location_subject_uniquenumbers.ext

surname-firstname_yyyymmdd_state-place_item .ext

name_date_place_item.ext

yyyy = year, mm = month, dd = date with 0 in front of single digit dates

Organizing your dates this way makes your pictures easier to sort by date.

For example, some friends and I took a trip together to New England. We started our journey in Boston. The first image I have is of Great Bay, and it was taken on November 22, 2016.

Using the yyyymmdd_location_subject_unique-numbers.ext schema, I get the following file name:

Date: 20161122

Add: location—Boston

Add: subject of image (abbreviate)—grtbay (Great Bay)

Add: unique numbers (3 digits is enough for this particular trip)—001, 002, etc.

Add: filetype extension—.jpg, .tiff, etc.

Ex: 20161122_boston_grtbay_001.jpg

On a Mac, you can rename files in batch quickly (see figure 5.1). Select the images you want to rename, right-click, and select Rename # items. At the next step, you can choose to customize your file name and select where you want the numbering to begin.

On a Windows computer, you can select the items you want to rename, right-click, and simply type in the text you want to start with (see figure 5.2, p. 26).

Windows does not allow for much customization in numbering with its batch renaming feature.

If you want more customization of your files when renaming in batch, consider using a file renamer. I usually recommend Advanced Renamer. It is open source and allows you to make your batch renaming as granular as you want.

Advanced Renamer
https://www.advancedrenamer.com

HOW DO WE STORE INFORMATION ABOUT FILES?

The short answer to how we store information about files is metadata! Introducing library patrons to metadata is a little bit like showing a peek behind the curtain of a good magic trick. Because we can't add every single piece of information to a file name, we have to look to other ways of storing data about our digital files.

Metadata is a set of data that describes and gives information about other data. One good way to illustrate how metadata works is to talk about your library collection's catalog. Every item at the library has (hopefully) a digital catalog entry. In this entry, information is stored about the author, publisher, and publication date. We also generally tag catalog entries with things like subject headings and a description. Digital files also have cards of information attached to them. The trick is knowing where to look and how to add information.

To see what information is attached to your digital file, right-click on the image you want to look into. On a Windows computer, you will see Properties (see figure 5.3, p. 26). On a Mac computer, you will see Get Info (see figure 5.4, p. 27).

When you get into the properties (see figures 5.5 and 5.6, p. 28), you can see some information about your digital file. On a photo you can see the following information:

- date of creation
- device information—camera model, scanner model, and so on
- location—usually stored as GPS coordinates
- dimensions
- authors

Once you are in the Properties (Windows) or Info (Mac), you can add tags and comments to your file. If you are dealing with family photographs, you can add a tag for each person in the photograph. You can tag keywords like *funeral*, *reunion*, or *lake house*.
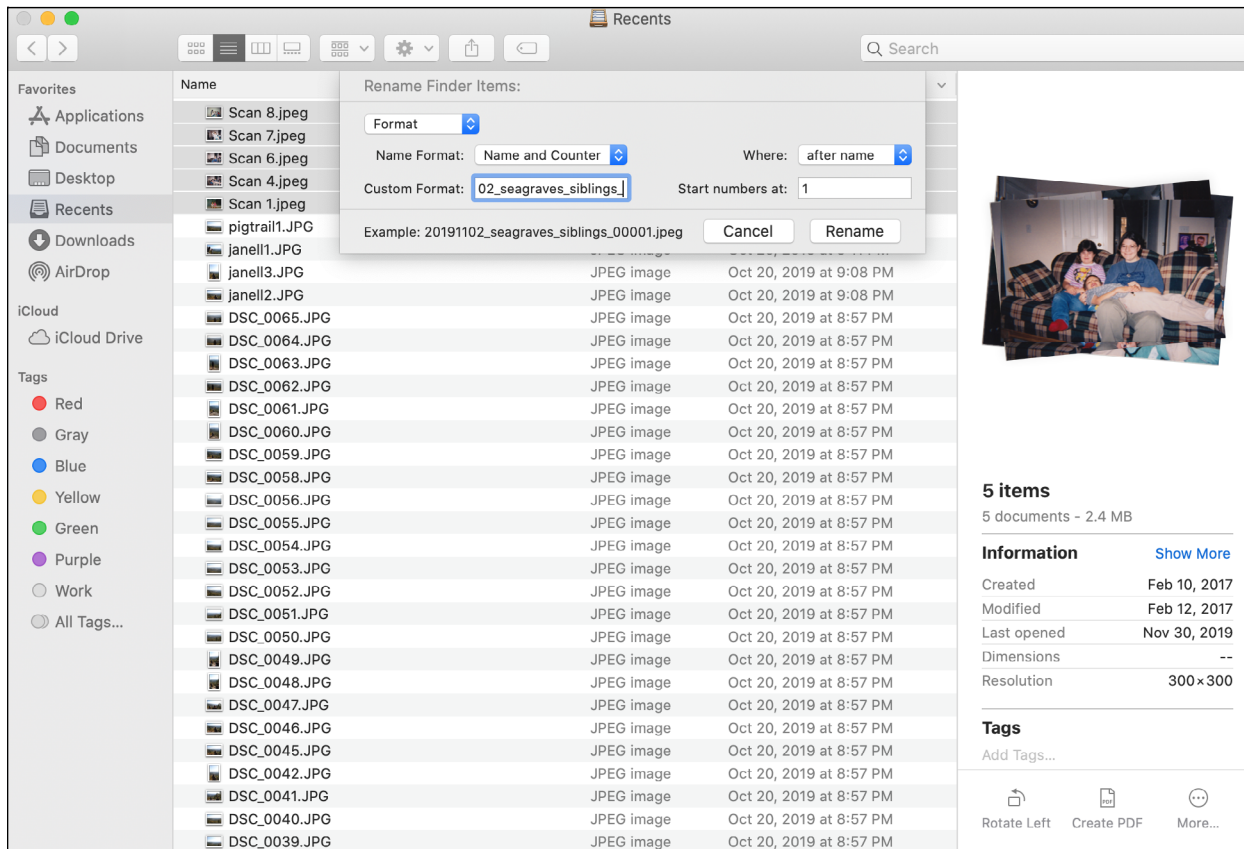
Once that information is saved in the files, you can

Figure 5.1
A screenshot of the options you get in renaming Finder items on a Mac computer

search your computer by the tags you create. This process may seem like a lot of work to library patrons. But if they take this very important step with their digital files, they can save themselves a lot of work in the future. This is also a good way to share information with future family archivists. It's a bit different from the old style of adding a caption to the back of the photograph and much more effective in the long run.

HOW DO WE ORGANIZE FILES?

There is no perfect answer to how we organize files, and most people have elaborate file organization that makes sense only to them. But I have found that if you tag and name your files properly, you don't need to organize them! The search function will get you all the places you want to go.

Digitization at the Library

Earlier I stated that obsolescence is the most frustrating

factor in potential loss of your files. Digitization can be a frustrating and time-consuming project for many library users (and staff).

There is a growing movement to "bring preservation to the people" (Memory Lab Network 2019). Public libraries are at the forefront of that movement. A public library is a democratic space that provides vital resources for its patrons. It is the great equalizer in a community.

Digitization Equipment

At my library, we have a digitization lab where users can come use our equipment to digitize their analog memories. We have three scanners (capable of also scanning negatives and slides), a large-format scanner, a VHS converter, cassette converter, 8 mm and Super8 reel converter, LP converter, floppy disk drive, and a VHS-C adapter. This equipment was not cheap. However, providing it at the library and making it a shared resource for my county's residents makes it accessible for anyone who wants to use it.
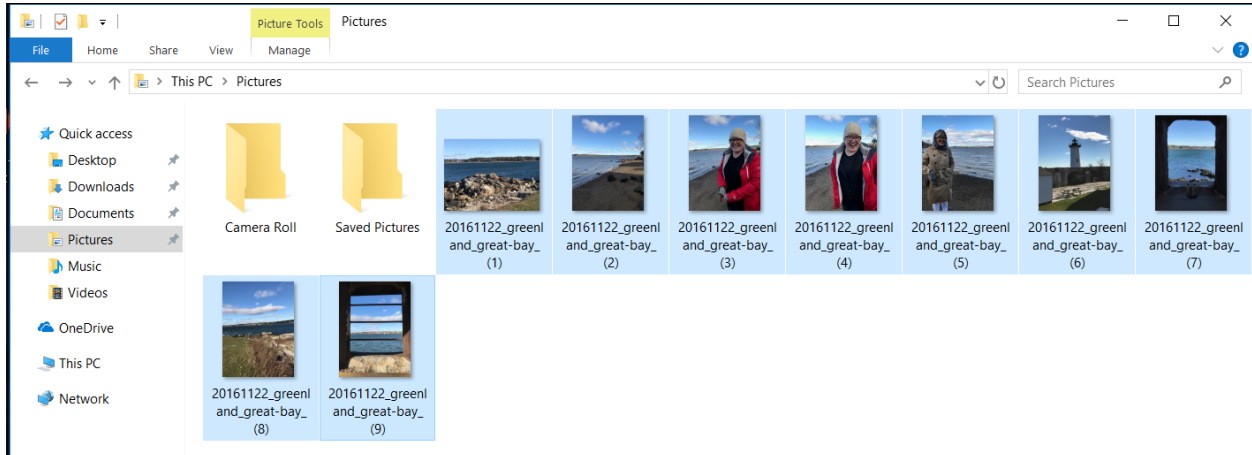
Figure 5.2
A screenshot of items selected and renamed on a Windows computer

If you are interested in providing publicly accessible digitization equipment at your library, check out some spaces that already have a setup:

- Memory Lab at DC Public Library
- Digital Literacy Lab at Tulsa City-County Library
- San José Public Library

Memory Lab, DC Public Library
https://www.dclibrary.org/labs/memorylab

Digital Literacy Lab, Tulsa City-County Library
https://www.tulsalibrary.org/programs-and-services
/aep-foundation-digital-literacy-lab

San José Public Library
https://www.sjpl.org/blog/retro-tech-analog-past
-digital-future

For an extensive list of digitization labs in North America, check out the Memory Lab Network. The Memory Lab Network site has great resources for learning more about setting up a digitization lab. Some libraries offer more mobile digitization options on carts or even just add equipment to existing computers. A separate space is not necessary to start providing access to digitization equipment.
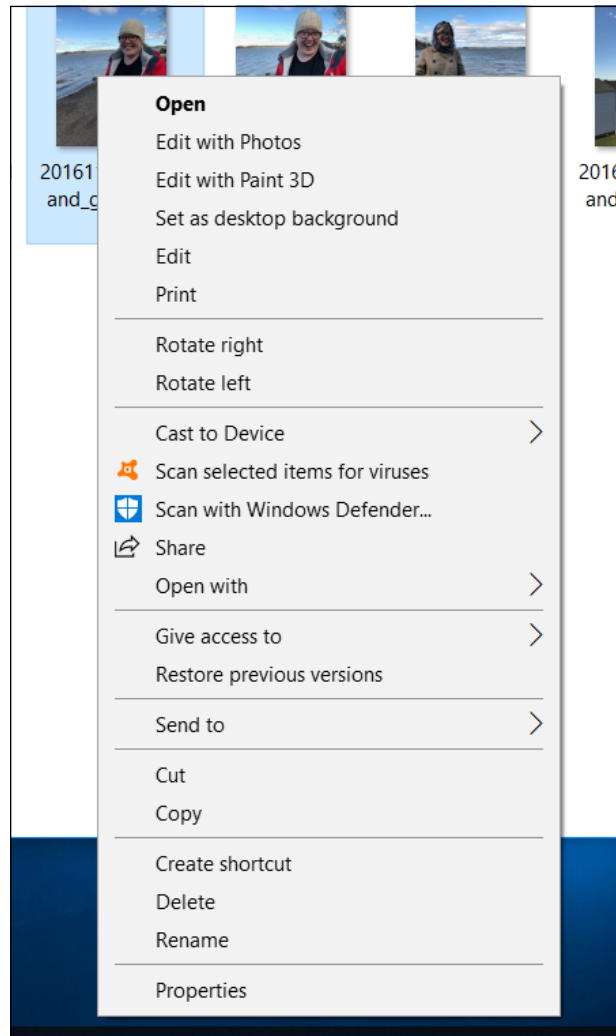
Memory Lab Network
http://libguides.dclibrary.org/memorylab/resources
/digi-stations

Figure 5.3
A screenshot of file options on a Windows computer

Digitization Standards

When talking about best practices in digitization with library users, it is important to understand your patrons' motivations and available resources. They often do not have the time, patience, and available storage space to adhere to professional digitization standards.

If you are looking for information on resolution and digitization standards, check out the "Guidelines for Electronic Preservation of Visual Materials" by the Library of Congress.

Guidelines for Electronic Preservation of Visual Materials
https://www.loc.gov/preservation/resources/rt/guide/index.html

Tips for Getting Started

The hardest part of any digitization project is getting started. Here are a few steps your library patrons can take that will set them up for success.

- *Evaluate.* You don't need to keep everything. Sift through your items and figure out what is worth keeping.
- *Break it down.* Starting a large-scale personal project can be very daunting. Breaking up a digitization project into smaller pieces can make it much less intimidating.
- *Test it out.* Test out your equipment and get familiar with the settings before you work on a big stack of photos or long video. No one likes figuring out a great trick two hours into a project.
- *Create a workflow.* Everyone has different methods for working on personal digitization projects. The one that works best for me is to digitize a stack of items, transfer the files to my own computer, rename the files, and then start adding metadata to one item at a time. I usually digitize about fifty to one hundred photos at a time.
- *Don't get frustrated!* Even though there are entire degree programs, journals, and textbooks devoted to digital archiving, you don't have to be an expert to do it. Just figure out what works best for you.

Further Learning Resources

There are two books that have been valuable resources for me when developing best practices and instruction:
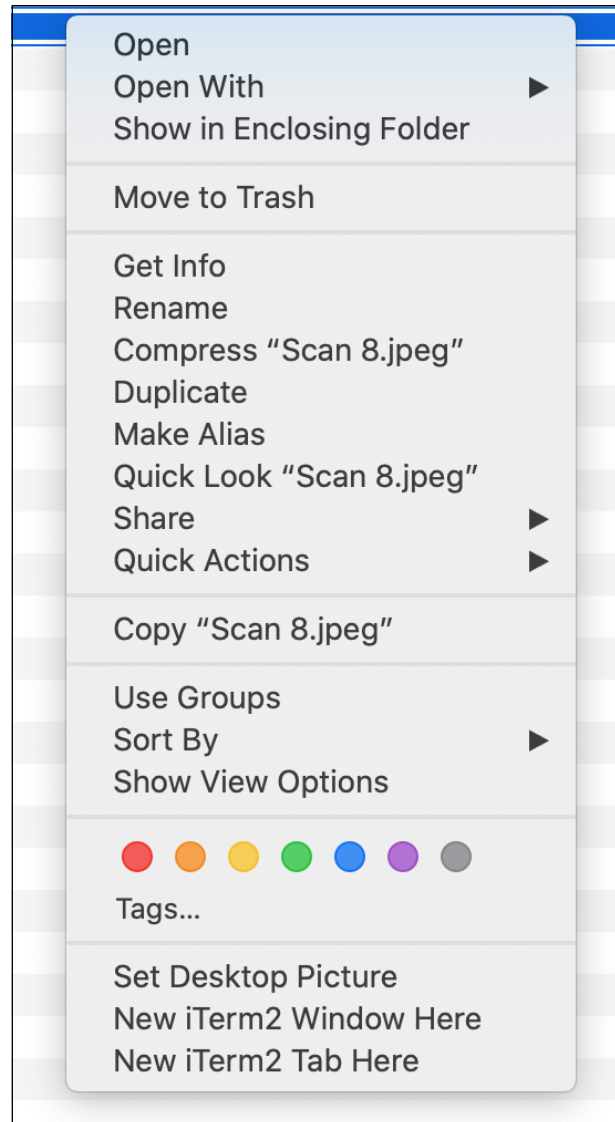

Figure 5.4
A screenshot of file options on a Mac computer

- *Managing the Digital You: Where and How You Keep and Organize Your Digital Life*, by Melody Condron (Lanham, MD: Rowman and Littlefield, 2017), is a book we keep on hand at the library. The writing is accessible and good for library users who are new to personal digital archiving.
- *The Complete Guide to Personal Digital Archiving*, edited by Brianna H. Marshall (Chicago: ALA Editions, 2018), is a thorough look into digital preservation and archiving. It has been a good tool for me in developing further instruction for library patrons.
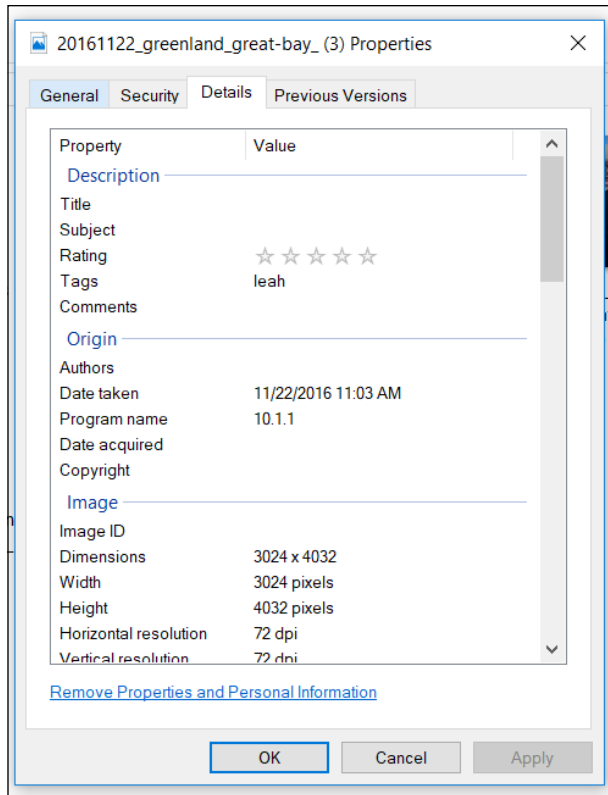
Figure 5.5
A screenshot of the Properties on a Windows computer

References

Condron, Melody. 2017. *Managing the Digital You: Where and How to Keep and Organize Your Digital Life*. Lanham, MD: Rowman and Littlefield.

Memory Lab Network. 2019. Homepage. Accessed January 9, 2020. https://memorylabnetwork.github.io /index.html.

Stanley, Angela, and Natalie Wright. 2017. "Saving Stuff: Digital Preservation for Family Historians." *Computers in Libraries* 37, no. 3 (April): 19–22.
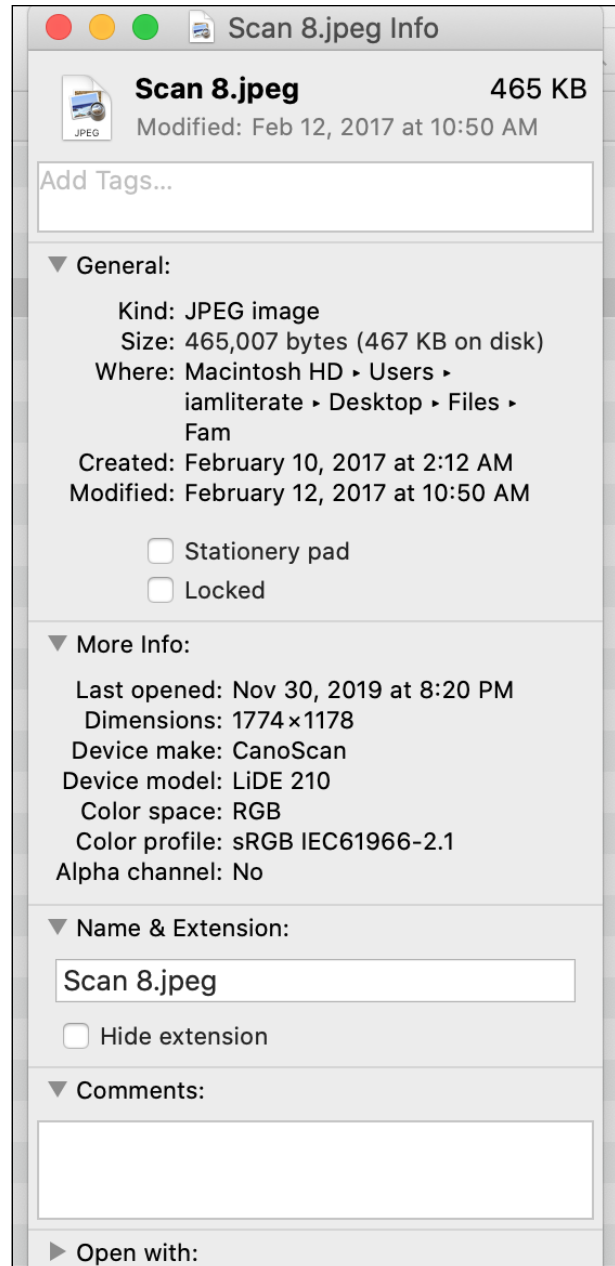
Figure 5.6
A screenshot of Info on a Mac computer

Digital Legacy   **Heather Moorefield-Lang, editor**

Keeping Your Digital Legacy Safe

Heather Moorefield-Lang and Jeffry Lang*

When working with technology, it is important to be safe and secure online, but what happens to your digital legacy when you are no longer here? In other words, does the internet know you're dead? How can your family, friends, or loved ones gain access to your digital files, social media, and other portions of your online life? Inheritance laws have dealt only with physical property until the last few years. There is little regulation in place for online items (Zastrow 2017). We have built so much of our life online. We must think of that digital life we leave behind. Do your heirs know how to access your cloud-based files? Can your social media sites be shut down? What do you own online versus what access rights do you have to view, listen, and read online? At the simplest level, can your family access your laptop, computer, tablet, or phone? We work so hard to be safe digital citizens online that we forget to think about a time when we are citizens no more.

Useful Terms

The following items can be incredibly useful for family, friends, and loved ones needing to access your digital belongings:

- *Death certificates.* A death certificate is an official document, signed by a physician, that provides the cause, date, and place of the person's death. When a loved one dies, death certificates are needed for a variety of things, everything from insurance to banking. Death certificates are often needed for social media and cloud accounts.

Facebook, Twitter, Pinterest, and others request a death certificate to close an account (Lexikin 2019).
- *2FA.* Two-factor authentication (2FA) is considered an extra layer of security for account access. Typically, e-mail will have a username and password. Using 2FA means another piece of information is needed for access. This extra piece of information might be a secret question, a PIN, or a code sent to your phone or device, or it can be biometric such as fingerprint, iris, or voice (Authy 2020). Two-factor authentication is useful for digital security but can be bad when someone passes away, especially biometric 2FA. This is another reason why communication is important among family members and having a family password manager is useful. Read about password managers in the next paragraph.
- *Family password manager.* Think of a password manager as an online version of a notebook. This is a place to store all account log-ins and keep notes for your heirs (Pinola 2019). These online storehouses let users store passwords and log-in information while also keeping this data secure and private.
- *E-mail accounts.* Many online accounts are tied to e-mail addresses and can often be used to unlock or recover other accounts. It is important to maintain access to these e-mail accounts as many are purged after a certain amount of inactivity.
- *Licensed software, photo, music, and data repositories.* Many of these are subscription-based services that are autobilled to credit cards, and their data retention policies vary. Often, accounts are

purged after a certain amount of inactivity.
- *Monetized social media, digital pay apps, virtual goods, and cryptocurrency.* Online activity can often lead to real monetary assets or even virtual assets. The IRS recently updated a policy that determines which digital assets are taxable and excluded in-game currency in reporting responsibilities (Phillips Erb 2020).
- *Cryptocurrency.* According to research by the *Financial Times*, between 2.3 million and 3.7 million Bitcoins have been lost for a variety of reasons, including the death of the asset holder, which accounts for roughly 30 percent of the Bitcoin market (Goldring and Jacobs 2019). Cryptocurrency is also a taxable item according to the IRS and subject to inheritance taxes, even if the currency is inaccessible (IRS 2020).

Online Tools You Can Use

- *1Password.* 1Password is a site for your family and you to store and share passwords, software licenses, notes, and other items that might be sensitive.
- *LastPass.* LastPass is all about making your online life easy. This is a spot to share and remember all your passwords across devices. The site works very similarly to 1Password in that you can set up accounts for your family to share passwords, notes, and other sensitive information.
- *Gmail.* Inactive Account Manager from Gmail allows you to plan for what happens when you pass away or when you stop using an account.

1Password
https://1password.com

LastPass
https://www.lastpass.com

Gmail Inactive Account Manager
https://myaccount.google.com/inactive

Final Tips and Considerations

- If you have not already done so, speak with an estate attorney about your physical and digital property. If you don't want to involve a lawyer,

research writing a will online. It is an easy document to fill out, and you need only a notary stamp to make it official.
- Talk with your family, friends, loved ones, and heirs. Death is not the most exciting or welcome of topics, but it happens to 100 percent of us. Not discussing it is leaving your heirs in the lurch.
- Appoint a digital executor. This can be the executor of your will, or it can be a designated web service (Zastrow 2017).
- Be realistic about your digital assets and belongings. What do you have? Make an inventory for those who will inherit. Update this list and revisit regularly (Zastrow 2017).
- If this topic is of interest to you, see our list For Further Reading below for more information.

For Further Reading

Carroll, Evan. 2017. *10 Simple Steps to Get Your Digital Life in Order: A Guidebook to Help You during This Difficult Time*. Raleigh, NC: Digital Beyond.

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