

REVIEW ESSAY / NOTE CRITIQUE

Connecting Canadians and Others

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Andrew Clement, Michael Gurstein, Graham Longford, Marita Moll, and Leslie Regan Shade, eds., *Connecting Canadians: Investigations in Community Informatics* (Edmonton: Athabasca University Press, 2012)

Kirsten Kozolanka, Patricia Mazepa, and David Skinner, eds., *Alternative Media in Canada* (Vancouver: University of British Columbia Press, 2012)

Kieran O'Doherty and Edna Einsiedel, eds., *Public Engagement and Emerging Technologies* (Vancouver: University of British Columbia Press, 2013)

Manuel Castells, *Networks Of Outrage and Hope: Social Movements in the Internet Age* (Cambridge: Polity Press, 2012)

WHEN I FIRST RECEIVED THE CHALLENGE of reviewing the grand sum of four books, all based in the new world of cyber communities, I shuddered for a moment, imagining the size of the task that confronted me. I was not mistaken. What we have here is a determined effort by a colony of new media types in a new world to carve out a space in the current literature for some new and definitely fresh ideas. The concept of media community is hardly new, having flourished in the world of journalism scholarship since the mid-19th century. The concept is based in a very simple premise, that media, and in particular the media that deliver the daily news, play a critical role in the methods we use to define society. This, of course, can have both positive and negative consequences. On one side, you can have media institutions that act as the defenders of democracy and liberty. On the other, you can see the rise of tyrannies supported by governments that are just as willing to tear down societies. On a positive note, we can point to a range of actions, from the interventions of the cartoonist Thomas Nast who brought down a corrupt political leader and his gang to the truly brave to a determined broadcaster Edward R.

Murrow who stuck out his proverbial neck to draw a line between good and evil in mid-20th century United States.

Historical knowledge is a fine thing, but how does it relate to what we are about to examine in some detail? There are a number of cautions that one should be aware of when attempting to assess any given event in history, including recent ones. One of the great dangers that any reviewer or analyst will bring to the table focuses on what I will refer to as the “miracle cure syndrome.” You know, the naïve belief that a particular apparatus, such as a home computer, will create all kinds of miracles for you from shopping from your own home to creating access to more information than one could possibly need. This attitude in particular is prevalent in media circles. The highway to the digital world is littered with the bodies of now long forgotten technologies, most justifiably so.

Let me draw upon your patience for a moment as revolutions in communications practice and technology are critical for what we are about to explore here. Trust me, I will only work with the earth-shattering moments in the lives of observers and participants. The invention of lithography was one of those mind-bending experiences shared by people in the early 19th century that changed the way that people responded to each other for the simple fact that the use of illustrations in a magazine such as Britain's *Punch* precluded the need to wonder what someone or something looked like. Photography, of course, followed. Radio comedian Fred Allen was known to complain about the invention of television because no one in his field could now hide in a bad show. Real historical honours belong to the first electronic transmission system called the telegraph. The byword was often bigger and better, as shown in the creation of the virtually block-long Corliss Engine mounted for the American centennial celebrations in Philadelphia in 1876. These new media shattered boundaries and created communities where they never previously existed. Of course, it was only recently that the telegraph was superseded in the world of digital communications.

There is no particular order or ranking to the books I will be discussing. The books are examined in the order they arrived. As a result, I am going to start with my comments on the multi-authored *Connecting Canadians*, which brought together five well-known academics and a host of contributors mainly from a few graduate schools. Its central focus is the work that has been accomplished by investigators who have examined the creation and application of community informatics in various locations across the country. As noted in the acknowledgements, the material in the book was collected under the auspices of the Canadian Research Alliance for Community Innovation and Networking (CRACIN). One cannot help but focus on the attempts by various parties to create, through the use of digital technologies, a sense of community, bringing together previously unconnected persons who had strong needs to communicate with others who had similar needs and desires. Were they successful? That really depends on perspective.

The book does contain a sense of belonging as well of one of righteousness of cause. This is not an uncommon ingredient in most social movements, but there are some important distinctions to be made here. At the risk of generalizing, the constituency attracted to community networks falls into two widely enveloping societies. Some are, by their very nature, small and difficult to service, such as Aboriginal reserves. In contrast, are the large urban communities that attract newly formed communities based on immigrant populations. The real story here though is the difference between American and Canadian practice. In Canada, there has been an effort to expand the non-profit sector while in the US the battles over broadband policy have been between large corporations and citizen groups.¹

Although I cannot possibly direct comments to all of the material in this nearly 500-page document, I can point you to the section entitled, "Community Innovation 1: Participation and Inclusion." There are only two essays in this section, and they will take the reader on a journey of contrasts by comparing systems at St. Christopher House in Toronto and Vancouver Community Networks. Both are based in large urban areas, but their experiences could not be more different. In general, the people at St. Christopher House had to be virtually dragged into working with the new technology, which created some strong suspicions about its role.² In contrast, the Vancouver network brought willing participants mainly among new immigrants who needed access to the outside world where their language was used and their customs respected.³

Overall in the book, there is a sense of innocence that often comes when unwilling participants become willing and workable ones. However, there is the noble project that just runs out of gas at a critical moment in its history. In spite of rocky moments, there is no sense that the whole networking concept might collapse and never be seen again. As I noted in my introduction, the highway to stability is littered with now-defunct technological dreams. Mind you, all previous attempts were in different kinds of media, although the concept of community creation and community involvement remain the same. And just what were these noble experiments?

Two models come to mind: one in television and one in academic publishing. When the cable television industry began to emerge in the 1960s, the broadcasting industry saw it basically as a technical saviour that could deal with the problems of increasing interference created by urban development.

1. Heather E. Hudson, "Canadian and US Broadband Policies: A Comparative Analysis," in Andrew Clement, et al., eds., *Connecting Canadians: Investigations in Community Informatics*, (Edmonton: Athabasca University Press, 2012), 90–101.

2. Susan MacDonald and Andrew Clement, "Systems Development in a Community-Based Organization: Lessons from the St. Christopher House Community Learning Network," in Clement, et al., eds., *Connecting Canadians*, 143–161.

3. Diane Dechief, "Vancouver Community Network as a Site of Digital and Social Inclusion," in Clement, et al., eds., *Connecting Canadians*, 162–180.

A broadcaster's worst fear was the erection of a high-rise in the middle of the signal path from source to receiver.

By 1968, the federal government took a much more interventionist course in dealing with the industry. While the industry remained devoted to improving the technical quality of its cable systems, the government was beginning to treat the cable industry as part of the active broadcasting structure. It began by restricting the importation of channels from the US. It redefined the basic structure of Channels 2 to 13 as the basis system and began to move American channels to spaces above Channel 14, which were not available to clients without conversion boxes. But the most stirring change was the compulsory allocation of one channel in the 2 to 13 spectrum for the so-called community channel.

The bureaucrats envisaged a society that would take the great medium of television into their hands and make it one of theirs. The regulator, the Canadian Radio and Television Commission (CRTC), wanted to see volunteers and other interested parties take up the cause, learn the hardware, and develop programming that was unavailable on the large commercial outlets. FM radio stations were also part of the scheme. All kinds of social activists and casual folks were attracted to the medium. However, in most cases, the quality of the work was questionable and eventually interest declined. So, out of the clouds stepped the commercial broadcasters. They convinced the CRTC to allow a limited amount of commercial activity, which it did. The grand experiment was at an end. Cable stations still provide one community channel in the 2 to 13 spectrum. Yes, the programming is largely local, but it is generated from the top down not from the bottom up. The biggest draw in most communities is local hockey broadcasts.

The situation in academic publishing is not as severe, but the principle that the big conglomerate will soon devour the creative small guy persists. Recently, there has been a trend wherein large publishers who have focused on academic publications for many years are now expanding into territories formerly occupied by non-profit journals. The result has been the reduction of the non-profit sector.

Is there any hope that advanced communications technologies can remain out of the clutches of a free enterprise, neoliberal agenda? As three of the editors of this book declare, it will be a challenge, as Canada has embarked on a policy initiative that focuses on the development of free markets in telecommunications policy.⁴ If this is the case, the chances of maintaining networks and creating communities are in jeopardy, a fact that the authors of this volume seem to recognize. However, the current behaviour of the federal government, which is aimed at blocking the expansion dreams of the Big Three (namely

4. Graham Longford, Marita Moll, and Leslie Regan Shade, "There and Back to the Future Again: Community Networks and Telecom Policy Reform in Canada, 1995–2010," in Andrew Clement, et al., eds., *Connecting Canadians*, 441.

Rogers, Telus, and Bell), remains puzzling. Only time will tell the outcome of this adventure.

It is hard to keep up with developments in the field, especially when digital technology is racing along the developmental highway with all the major players intact. That is why this volume has many serious but insightful moments that anyone who has a stake in this development, no matter how small, needs to pay attention. If there is an area that needs to be developed as a result of this book, it is a serious examination of the role of free enterprise broadcasters who are gradually getting into the digital field alongside the smaller players. As we have seen, there is a definite pattern unfolding here where the idealist, the hobbyist, and the social activist see their dreams and creations being slowly absorbed by the fellow with the bank account. This is not the first time this scenario has emerged as a difficulty. The very beginnings of radio started in the sheds and basements of the curious and creative but eventually surrendered to the affluent.

And now, onto our next encounter, a serious discussion on the role of *Alternate Media in Canada*. We begin with David Skinner's very perceptive look at the situation in this country, and, to put it mildly, confusion reigns in many a place.⁵

One of the essential difficulties is any attempt to define what is meant by alternate media is that further alternatives rapidly spawn. As Skinner points out, all media forms are constantly going through changes that alter the character and ability of those forms to respond quickly to media evolution. This is an obvious but useful reflection on the chaotic new media environment in which he deals with in the first chapter. His argument focuses on the impact of new technologies such as television in the late 1940s and 1950s and, in more recent times, the emergence of digital technologies such as the Internet. So, does he pass on any new and inspiring inventions that we all need? I do find it somewhat ironic that we created cable television to largely tackle the problem of signal degradation in urban areas, which, as I noted earlier, was a situation in the mid-1960s to 1970s and then, under pressure, turned it back as part of a new television landscape. That landscape succeeded in bringing television signals to places not intended to be on the roster. With the advance of cable, viewers in Charlottetown, Prince Edward Island, were now able to watch WIBV Channel 4 in Buffalo, New York. But of course, the Buffalo station was not the only interloper on the cable spectrum. As much as the Islanders loved the ability to watch distant stations that became available as cable grew, the local Maritime television stations were not as thrilled. The invasion of what became a form of alternate media led to a number of serious challenges, not the least of which was the impact of these stations that were not licensed in

5. David Skinner, "Sustaining Independent and Alternative Media," in Kirsten Kozolanka, Patricia Mazepa, and David Skinner, eds., *Alternative Media in Canada*, (Vancouver: University of British Columbia Press, 2012), 25–26.

PEI. As the audiences fragmented, full-time labour in many stations declined, and advertising dollars started to shrink. As a consequence, the broadcast regulator which, by this time had added telecommunications to its name, stepped in with a series of changes that truly placed the invaders at a disadvantage. Skinner's insight into this transition provides his readers with a slide rule to understanding that this was not just a shift of preference but one of a seismic character, which had influence at both the top and bottom of the media scale. In other words, these alternate media ended up providing the impetus to other form of alternate media, especially in the speciality world.

As Skinner and his colleagues note, we are now living in a very fluid environment where, quite literally, anyone can start up a television station and, finances notwithstanding, stay on the air indefinitely. But a word of caution. It cannot be seen as a purely responsive activity. The speciality spectrum is largely the creation of the broadcast regulator who allows the producers to charge per viewer a sum of money designed to create Canadian content and keep the broadcaster financially healthy. These particular regulations are designed primarily to finance the cable/satellite industry only. Commercial television is shunted to the sidelines much to its noisy regret. As much as the arrangement has helped operations such as TSN and Sportsnet, it took some time to win over the hearts of Canadian viewers. Back in the early 1980s, the specialty channels were exclusively pay television. Much has changed in the subsequent years.

What has sprung out of these early attempts is a virtual smorgasbord of operations with different approaches to what constitutes television. Canadian viewers can receive television signals from remote places (at least to them) such as China, India, Pakistan, and any number of places in continental Europe. The Doha-based non-commercial Al Jazeera can be accessed virtually anywhere in the world either by cable, satellite, or computer. All one has to do is lay out a monthly fee and the station is yours until you decide you no longer want it. However, ethnic media, as seen through the eyes of Karim Karim, has a less glorious past.⁶ Prior to the Canadian attachment to multiculturalism, ethnic media existed in a virtual back corner of the broadcasting spectrum. In an adverse way, the need for third-language (neither anglophone nor francophone) Canadians to have connections back home was not a desirable commodity. Third-language radio stations such as Toronto's CHIN AM-FM were forced to carry English translations in selected areas of the day when Italian language broadcasting was being aired. These regulations were the very heart and soul of federal policies of the period that encouraged integration into the new environment, and broadcasting played a major role in that game.

As most ethnic media entrepreneurs quickly discovered, it was far easier publishing a daily newspaper than attempting to deal with the broadcast

6. Karim H. Karim, "Are Ethnic Media Alternative?" in Kozolanka, Mazepa, and Skinner, eds., *Alternative Media in Canada*, 167.

authorities in Ottawa. This did not stop the founding of third-language media such as Toronto television station CFMT, which is now owned by Rogers Communications who have kept the character of the station alive and productive. But as Karim points out, the ethnic media play a role in slowing down the integration of newcomers into the mainstream of society. While this can certainly provide a blanket of security, as he discusses, it can lead to societies that are fragmented. Yet, as we celebrate the coverage of NHL hockey by a group of Punjabi announcers, we can only conclude that this media form still has a strong role to play in Canadian society.

Getting a handle on the definition of alternate media takes us on a journey that strongly suggests that there is no one dimension to the campaign. Even Karim has surrendered on this account. So let us take a look at another forum that goes under the microscope in this volume of essays, Paul Jay's Real News Network. In many ways, this project is an alternative to the commercial news broadcasts that Sonja Macdonald notes has slipped into a form of safety in reporting that heavily relies on celebrity gossip and light "news" items such as "man bites dog after dog bites man." The creation of the Real News Network was made possible because the technology was available to set up an Internet connection that was available around the world. It led to a broadcasting system that involved the swapping of video feeds from sources traditionally not covered to any great extent. As Macdonald notes, "Jay's vision is to provide fact based professional video news stories about world events with ordinary peoples' interest in mind."⁷

There is also something else that Jay would like to create: a social order that leans heavily to the left. So, when that ideological perspective exists in the reporting of the news, no one can claim the mantle of impartiality (if indeed such a thing exists). Where Jay presents a strong case for alternate media, he steps aside to some degree when he adopts some of the values of traditional media. Of course, this means that communication with any potential audience can be based on media forms that are simple, to the point, and presumably untainted. Where Jay comes clean, so to speak, is with his reporting colleagues who are commissioned to scout the world and tell the tales that are not being told. Here Macdonald's analysis is right on the mark.

Today, we are seeing a much stronger presence of Aboriginal Canadians in the media, both as subjects for reporting and as owners and managers of various media such as the Aboriginal People's Television Network. In terms of media development in First Nations communities, this is just the tip of a very deep iceberg. As Marian Bredin notes, from a very modest beginning, we are seeing a growth cycle in the types of media now available.⁸ At the time of this

7. Sonja Macdonald, "The Real News Network as Hybrid Media: The Future of the International Video News?" in Kozolanka, Mazepa, and Skinner, eds., *Alternative Media in Canada*, 106.

8. Marian Bredin, "Indigenous Media as Alternative Media: Participation and Cultural Production," in Kozolanka, Mezepa, and Skinner, eds., *Alternative Media in Canada*, 185–186, 188.

publication, there were thirteen Northern Native Broadcast Access Program (NNABP) funded broadcasters who produce radio and television programming in no fewer than twenty Aboriginal languages. And as any student of cultural development of this kind knows, spiritual attachment is critical to preserving what could be a dwindling community of practitioners. To connect to the larger Canadian world, some programs are also developed in both French and English languages in the Native broadcast community.

To provide you with concrete figures, we have to go back to 2003 when these eleven various groups combined produced no less than 1,146 hours according to Bredin. Another exclusive television group of nine added a further 27 hours of television.⁹ So who watches and listens to this programming? As Bredin notes, one of the success stories lies in the fact that non-native broadcasters are starting to realize the value of creating radio and television programming that actually crosses language barriers. As Bredin also points out, that has taken place in the quarter century since the NNABP structure was created. When one reflects on this kind of development, it is regrettable that the Program in Journalism for Native Peoples, which was located at the University of Western Ontario, in London, Ontario, did not live to see the full potential of these developments. In many ways, the creation and funding of this program was an early step in what would become a desirable practice not long afterward.

But all was not rosy in those early years. Many young Aboriginals chose to live away from the reserve in order to seek meaningful employment, social services, and similar benefits. This presented a serious challenge to Aboriginal broadcasters whose potential audiences were difficult to identify in large urban environments. The result, according to Bredin, was the establishment of a radio broadcasting system with outlets in Vancouver, Calgary, Edmonton, Toronto, and Ottawa. Because the broadcasts were delivered by transmitter over the open air, they were also available to non-Aboriginal clientele as well. And as Bredin points out, programming is only one aspect of the challenges surrounding Native broadcasting, as well, of course, as print media.

Bredin brings to life a number of excellent examples of how Indigenous communities are dealing with the invasion of media into their daily lives. Her example of the Wawatay Radio Network (WRN) covers many aspects of what has been done and what should be done to keep this thriving community alive. WRN was licensed and created in 1974 with a mandate to build infrastructures and content for newly established stations across the North from offices and studios located in Sioux Lookout and Moose Factory. The only real regret I have about this chapter is the question of longevity. Unfortunately, the printed word is going to have a struggle matching the instantaneous responses available in the various forms of electronic media. That very situation, of course, could negatively impact the print community as well.

9. Bredin, "Indigenous Media as Alternative Media," 192.

The other member of the emerging media club is the Aboriginal Peoples Television Network. In her description of events that led up to the creation of this network, Bredin is far from objective. However, I have no problem with that. I have always been guided by the principle, "if it is good, please say so." In this case, the network is in its second license term of seven years. Bredin points out that the network is not like many of the other so-called speciality channels that now appear with great frequency on the spectrum. And that is only a good thing. One of the more significant developments was the creation and management of a news gathering operation based in Winnipeg. The idea of delivering news through the network of course is not original, but in this case the mandate to collect and report news that is national in perspective while bringing the culture of Aboriginal communities to an ocean-to-ocean audience is new.

In her final statement in her chapter that is loaded with critical and important information, Bredin argues that the creation and health of Indigenous media is a blessing we should not overlook. Very carefully, she looks at the question of language and how it is integrated into the national culture of both English and French and more recently multiculturalism. Bredin is certainly conscious of the fact that the media landscape is not likely to produce any form of stability and perhaps that is not a bad thing. Indigenous communities need to be aware of the fact that they are now part of a global media concentration that we see in use every day of our lives. It is no accident that one of the cheaper forms of human activity can be derived from the new digital world we live in. Not only is this a challenge for Indigenous broadcasters, but non-Indigenous people face the same kind of challenge.

We are going to take a turn now to look at a very different way that Canadians connect with each other. I would risk stating that very few people beyond the world of biotechnology really understand what is happening. Kieran O'Doherty, Edna Einsiedel, and the contributors to *Public Engagement and Emerging Technologies* are going to try to explain it. I must admit, I felt somewhat tense when I began to read this work. I felt that these were subject matters beyond my scope in terms of understanding. But the clarity of the writing and the organization of the material into theme-driven chapters did a lot to help this neophyte to join this world, no matter how briefly.

Like the two previous books that have been reviewed in this essay, this is also a collection of essays. And like the previous entries, there is a great deal of information jammed into the confines of eighteen related chapters. What makes this work somewhat different to the other two is an intensive examination of the role new technologies play in the democratic process. And here, the going gets murky at times. The editors have divided the collection into definable areas. For example, Part One of the book deals extensively on the issues involving the relationship of technology and emerging publics, which of course are critical to the evolution of democratic participation and as a

consequence democratic creation. So, should this view remained unchallenged? I would hope not.

First and foremost, as we have seen in other contributions in the other books, ready access to various forms of media has brought about a revolution in the participatory process and has thus strongly influenced the democratic process. The editors are on top of this one. The Smartphone, the Twitter generation, and the portable tablet have redefined our lives as solitary, lonely participants whose existence is monitored through the use of new digital technologies. Anyone who desires to can get on the band wagon and state their cause to a global audience. That is one variation, and we find it constantly in the pages of the daily press, voices on the radio, and of course images on television. But in some respects, these are only extension of what we have already known for quite some time.

Where the debate becomes more strained, as the editors point out, is on the question of participation. This may seem extreme, but one could potentially live an entire lifetime by using only digital technologies to speak to the outside world. This dependability on technology could create the opposite affect where one-to-one communications blunts and diminishes any sense of collective participation. The suggestion that appears throughout this work certainly recognizes that new technologies can, at one time, bring the shy participant into the world of tomorrow, but it can also do exactly the opposite by shoving the participant into a further and more concrete isolation.

To repeat an earlier observation, the historical landscape is littered with tales of the impact of new technologies and how they have fitted into society. One prime example is the birth of the first electric communications, the telegraph. It grew from its origins in the Polk presidential campaign to its role in bringing information from the Atlantic to the Pacific. Without the telegraph, we would not have given birth to national stock exchanges, which emerged when connected to each other. A more familiar impact would be the sinking of the Titanic. Although radio communication was available from the stricken ship, it was not until after the tragedy unfolded that American ports required radio and its use 24 hours a day on any ship entering American waters. Enough said on that tale.

I have often wondered about the mystique given to science (in many cases) at the expense of other participants in the building of societies. Yes, let us be honest. Most scientific communication depends on creating an atmosphere where some sense of the information passed along leaves a dark hole. It follows that this kind of result is parallel to television's medical miracle types who live in a zone of creativity that also leaves a lot of questions either entirely or partly unanswered. Indirectly, Susan Dodds' chapter points to this very fact.¹⁰ Can

10. Susan Dodds, "Trust, Accountability, and Participation: Conditions for and Constraints on 'New' Democratic Models," in Kieran O'Doherty and Edna Einsiedel, *Public Engagement and Emerging Technologies*, (Vancouver: University of British Columbia Press, 2012), 69–79.

we have an increasingly scientific society without an extensive and effective democratic process? It would appear that both are necessary if only to recognize the need to defend either position.

The key part of the debate in Parts Two (“External Conditions for Legitimate Public Engagement: Ethics, Society, and Democracy”) and Three of the book (“Internal Conditions for Legitimate Public Engagement: Lessons for the Practitioner”), explore the role of democracy in making scientific claims legitimate and acceptable to the public. Dodds’ chapter focuses on the concept that science must, in effect, marry itself to the democratic ideals that exist in both the lay community and the scientific community. It is a position that needs debate. A number of years ago, a group of colleagues, including me, defined a media program for medical professionals. We observed that in any number of cases, the public was being fed information that was technically accurate but also very limited in scope. The problem of legitimacy highlighted the potentially destructive risks to both the creator and the participant.

The use of public participation is not an exclusive entity in this day and age. Pseudo participation can be found in the creation and use of focus groups. Let no one be fooled. I could not make a case, and I am sure that Dodds could not either, about the validity of these groups. First of all, as much as one sees these as participants in social creation, they are more about marketing a specific product or service. They have little to do with participation factors that are not rigidly controlled. Mass polling can suffer from the same kind of restrictions. And let us not forget the always available radio talk shows, which probably do more than any other force or phenomenon to bring people to the table for a chat, sometimes a very noisy one.

In Part Five, “Modes of and Experiments in Participation,” one can find a solid and worthy campaign to promote deliberation in the political sphere. The contributors to this section go beyond the norm used for political participation. In one case, David Secko recommends journalism as a possible way to involve people in more extensive deliberation over democratic principles.¹¹ As a former journalist, I found this suggestion oddly intriguing. Journalists are very much creatures of control: wanting at all times to control the agenda in any set of events in which they may find themselves. As a result of this suggestion, Grace Reid raised the possibility of exploring the use of docudrama.¹² Not all docudrama producers are going to accept input from the folks on the sidelines. Yet, the idea points to the fact that someone out there is at least thinking of non-traditional models. One of those models includes

11. David M. Secko, “Swimming with Salmon: The Use of Journalism to Public Engagement Initiatives on Emerging Biotechnologies,” in O’Doherty and Einsiedel, eds., *Public Engagement and Emerging Technologies*, 211–228.

12. Grace Reid, “Science Media and Public Participation: The Potential of Drama-Documentaries,” in O’Doherty and Einsiedel, eds., *Public Engagement and Emerging Technologies*, 229–247.

digital transfer. The computer can be a participant's best friend or worst nightmare. But one only needs to look to YouTube to realize the potential for creating democratic structures by normal media forms and new technology. As we well know from the first chapter, biotechnology presents its own set of chances as the book indicates. You are either on the fight against "Frankenfoods" or in the mix when it comes to celebrating new ways to extend life.

Perhaps it is fitting to conclude this work by reviewing another concept of democracy than the ones we have been studying at this point. I will turn to the only single authored volume under examination here, Manuel Castells' *Networks of Outrage and Hope: Social Movements in the Internet Age*. Castells focuses his attention on the outcome promoted by various networks in attempts to achieve democracy in whatever form that might take. Whatever the solution, Castells recognizes that, within social movements campaigning for a common cause, there are many assemblies, many directions, and many characters to whom attention must be paid.

As Castells points out, we live in increasingly difficult times. Seemingly diverse societies come together when one least expects. He begins by asking his readers what recent events Tunisia and Iceland had in common. Not much, by his own admission, but a "not much" that needs challenge. Rightfully, he begins with the collapse of the Tunisian regime, which was followed by the Civil War in Libya, yes, it was a civil war. What took place in both Tunisia and Iceland was a fundamental change in the structure in their respective societies, and that is what Tunisia and Iceland had in common. Not only that but, as he points out, Egyptians gathered in Cairo's Tahrir Square, many of whom were campaigning for an Islamic state in that country.

As he points out in his chapter called "Opening," the crisis of 2008 was a fundamental changing point for many societies. As he notes, the lofty place held by financiers and bankers in contemporary society started suffering attacks from all sides. There were accusations of corruption, deceptions, and outright lying. Media was no better. In many one-party states, media were regarded as the mouth piece of the regime, not the voice of the rebel. The key element that drives all societies, trust, or lack thereof, was missing in the first decade of the 21st century.

Castells makes the argument that the revolutions that came to grip the nations of the Middle East originated in what he called the free space offered by the Internet. Here, rebelliously minded individuals could communicate with souls who shared their beliefs. Although not impossible to quell, blocking Internet sites proved to be most difficult. To use his own example, fear of the repressive capabilities of an authoritarian regime gave way to anger and eventually action. Such a set of activities could only be possible by a form of communications that could reach nearly everyone. The Internet provided that, first in southern Tunisia and eventually around the world itself.

Iceland would be the breaking point for the previously stable regimes in the Euro Zone. Although not as extensive or effective like the Middle East regimes, one by one the cracks in the cycle of greed and corruption began to appear. Before 2008, banks in Iceland were seen as the model by which poorer nations could escape the cycle of poverty. When it went downhill, it did so dramatically. The global turmoil in the global economy linked the fates of Greece, Iceland, Spain, the Middle East, and the count goes on.

The Occupy movement needs a moment of exclusive attention before going on. Created in large part by the Internet, the Occupy movement began in Vancouver, British Columbia, in a magazine called *Ad Busters*. The magazine had been around for quite some time espousing social justice causes that others had ignored. To the surprise of many, parks and public sites became home to many protestors. The movement attracted the poor, the rich, the educated, workers, and more. Castells is very good at documenting the important movements around the world and explaining the impact of each.

There are many ways that one can measure the impact of new media with its new uses. Castells points out those factors very clearly, interpreting their broader meaning. Revolutions usually begin from the bottom, but not always. And as any diehard revolutionary will tell you, at the core of these various uprisings is a desire to be free and live in a democratic society. This is not the first time in our history that we have witnessed the overthrow of a totalitarian regime through media. Even corrupt businesses, like the old meat-packing operations in Chicago a century ago, can find themselves on the receiving end of some very nasty scrutiny. It is no coincidence that one of the first things a rebel band does in battle is head to the government television station. The only difference now is the fact that they can carry the media in your pocket.