

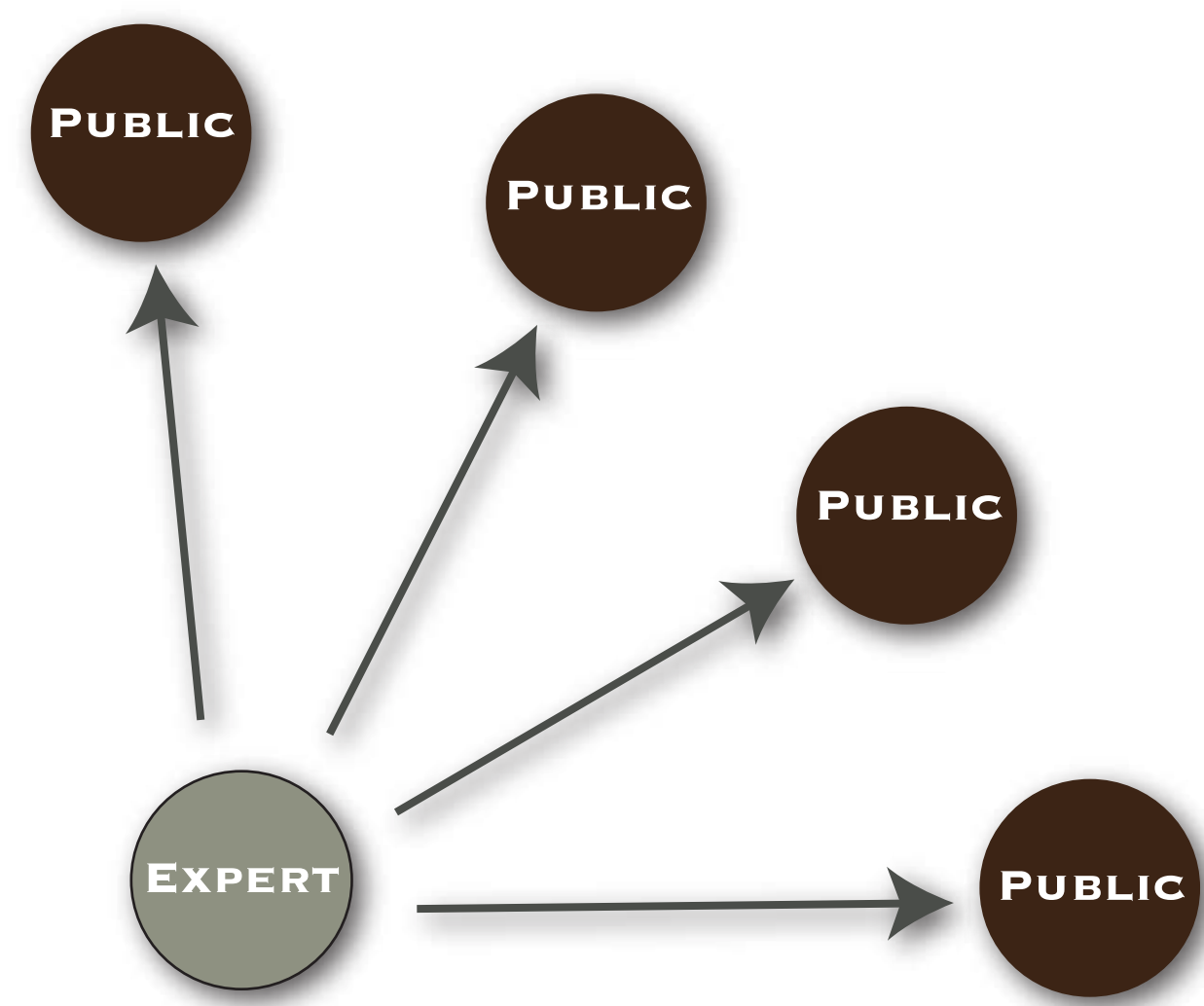
SCIENTIFIC COMMUNICATION AND NEW MEDIA

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Social media or “new media” is revolutionizing the way by which knowledge – both ‘scientific’ and ‘lay’ – is communicated. Indeed, social media represents a powerful set of constantly evolving tools for engaging society in scientific discourse. These tools have two (① , ②) main strengths that are relevant to scientific communication.

INTRODUCTION

ONE TO MANY COMMUNICATION



1

ACCESSIBILITY | GROWING KNOWLEDGE NETWORKS

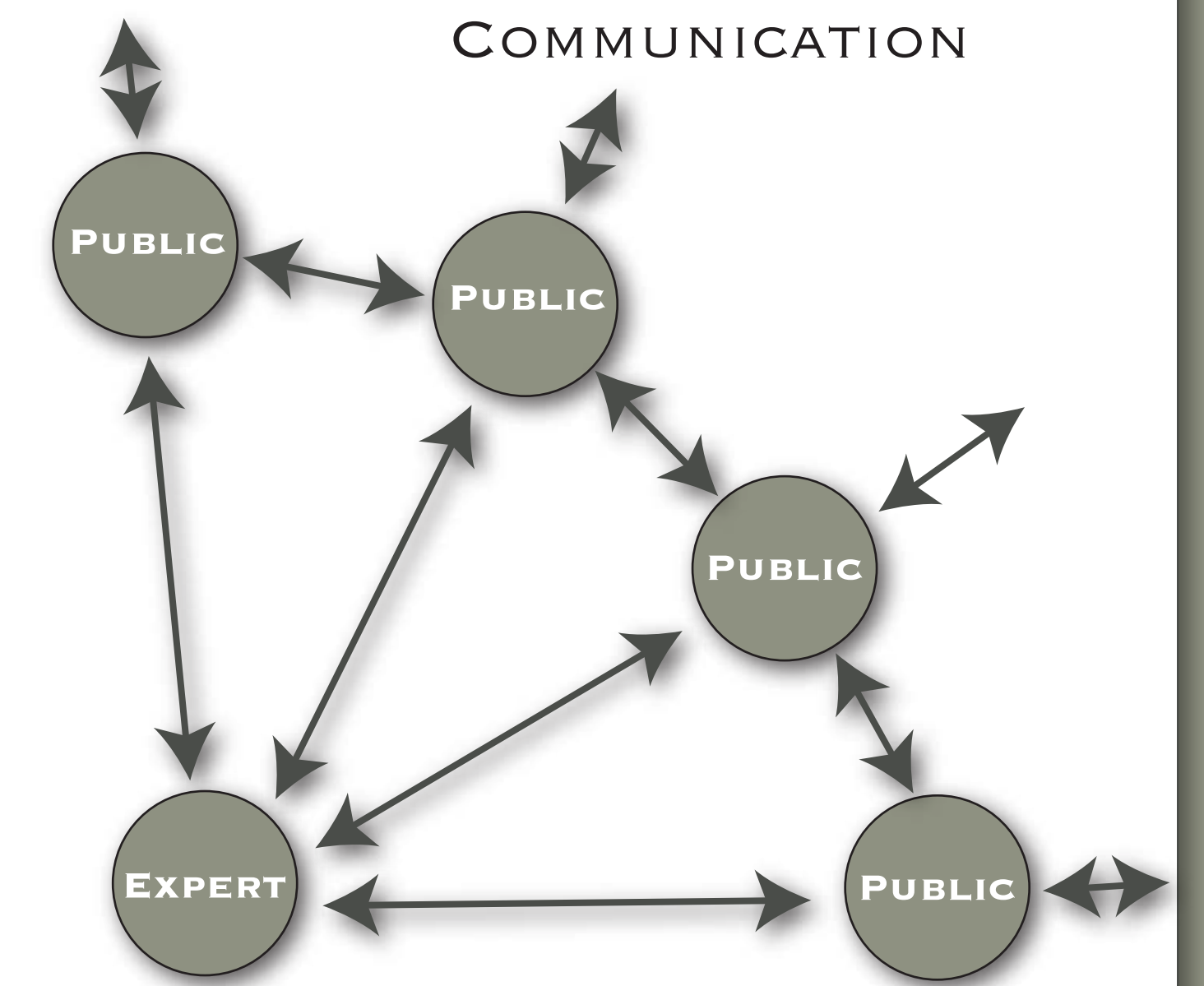
Social media is highly accessible to and intuitive for a wide diversity of audiences. Researchers can engage in ‘posting’, ‘tagging’, ‘linking’, ‘feeding’, ‘pinging’, ‘following’ and ‘tweeting’ to spawn new knowledge networks and consequently to amplify the reach and relevance of their research.

2

INTERACTIVITY | OPENING SPACE FOR SCIENCE DIALOGUE

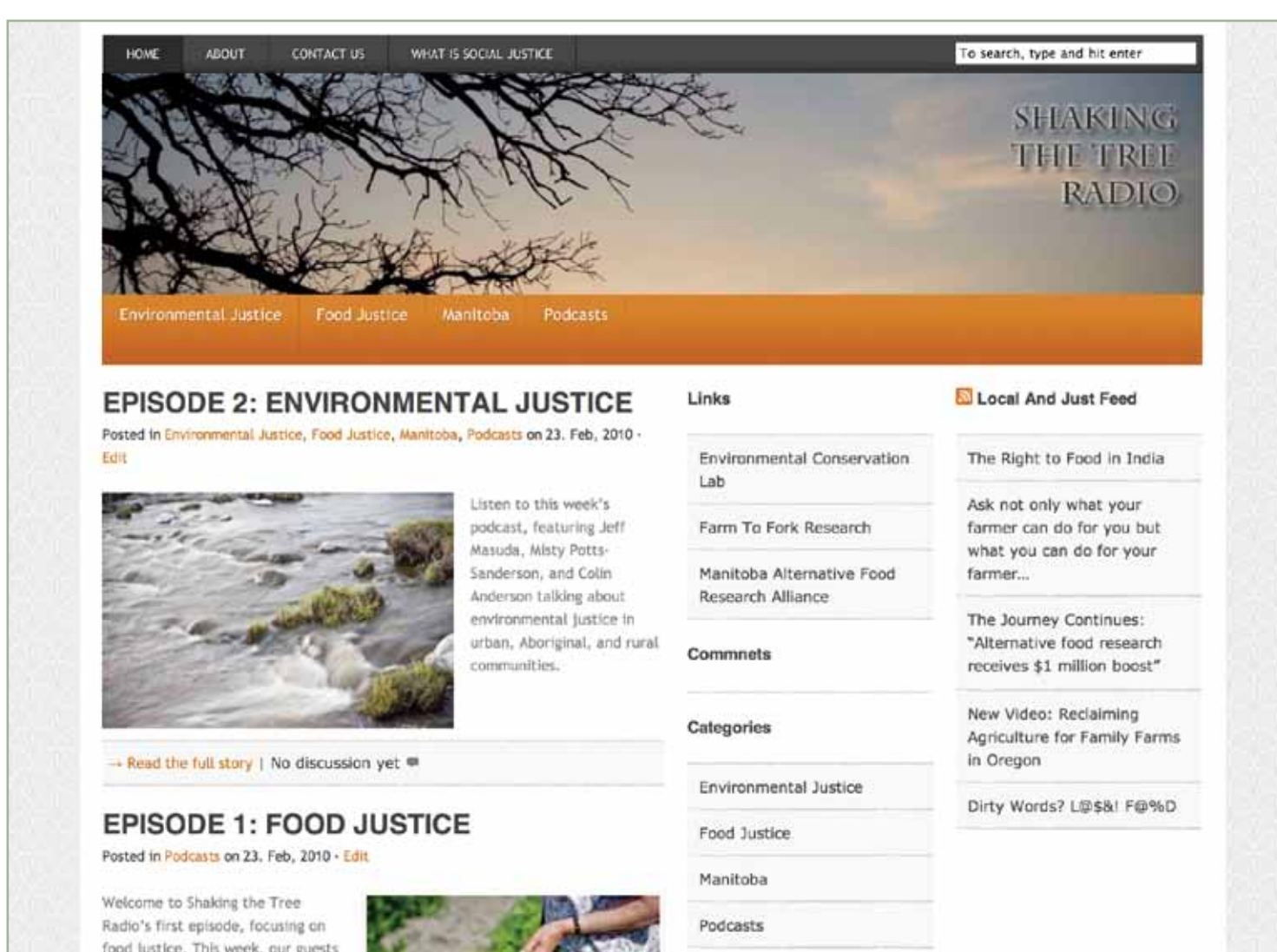
Social media tools are generally characterized by ‘interactivity’, allowing researchers to shift from the unidirectional “one to many” communication approach towards a “many to many” interactive approach. This dialogue can be facilitated through ‘commenting’, ‘forums’ and ‘linking’ to engender interactive and iterative communication that further shapes ideas/outcomes and empowers audiences.

MANY TO MANY COMMUNICATION



CASE A

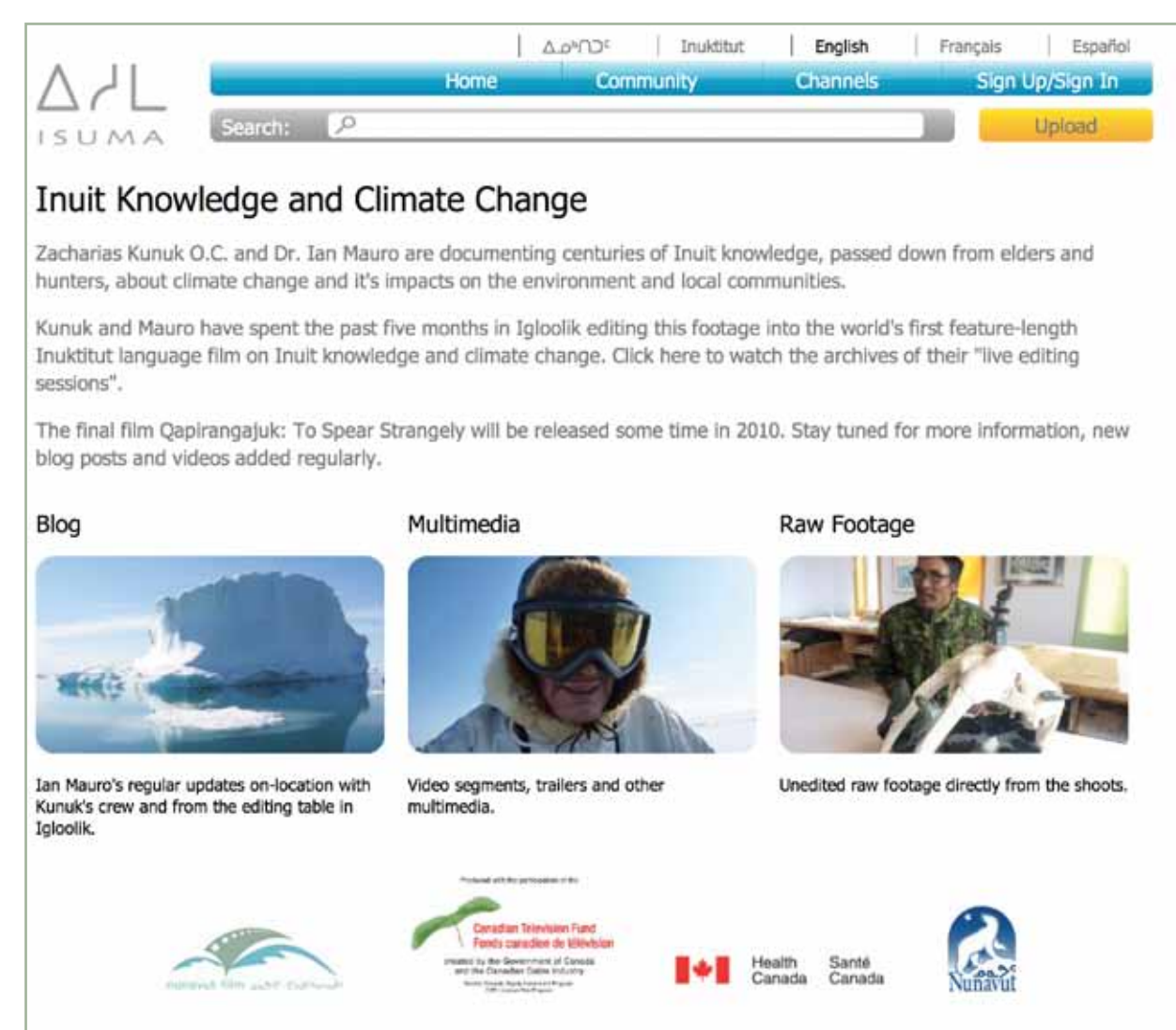
SHAKING THE TREE RADIO



Coordinated by Stephane McLachlan & Troy Stozek (UofManitoba) • Weekly radio broadcast and podcast featuring research and activism pertaining to environmental, social, and food justice issues • Improves accessibility of social science • Provides opportunities for interactivity both in comments sections of the web site and during the show itself (call-ins) • Radio increases access to populations with limited internet

CASE B

WWW.ISUMA.TV



Coordinated by Zacharias Kunuk (Igloodik Isuma Productions) & Ian Mauro (UofVictoria) • Research project exploring the implications of climate change for Inuit • Companion documentary film is partially edited online where anyone can give feedback and interact with the research-analysis process • Video making process and comments sections of web site offer highly interactive space • Also uses blogging, Facebook and You Tube

CASE C

GENOMICS ON FACEBOOK



Coordinated by Mike Spear (Genomics Alberta) • Uses ‘NewsCloud’ social media toolkit to enhance Facebook • Ideas and answers section provide highly interactive space • Points system (competition) encourages commenting and voting • Contest/prizes to prompt video submissions • ‘Send a gene’ application is a unique social networking tool to draw in new participants • Also uses blogging, You Tube and Twitter

CASE STUDIES

CASE D

WWW.FARMTOFORKRESEARCH.COM

Coordinated by Colin Anderson (UofManitoba) • Research results, commentaries and videos are regularly posted as blogs and video blogs • Integration of Twitter and linking from other web sites help grow knowledge networks-communities • Comments section provides possibility for interactivity but still an unrealized opportunity

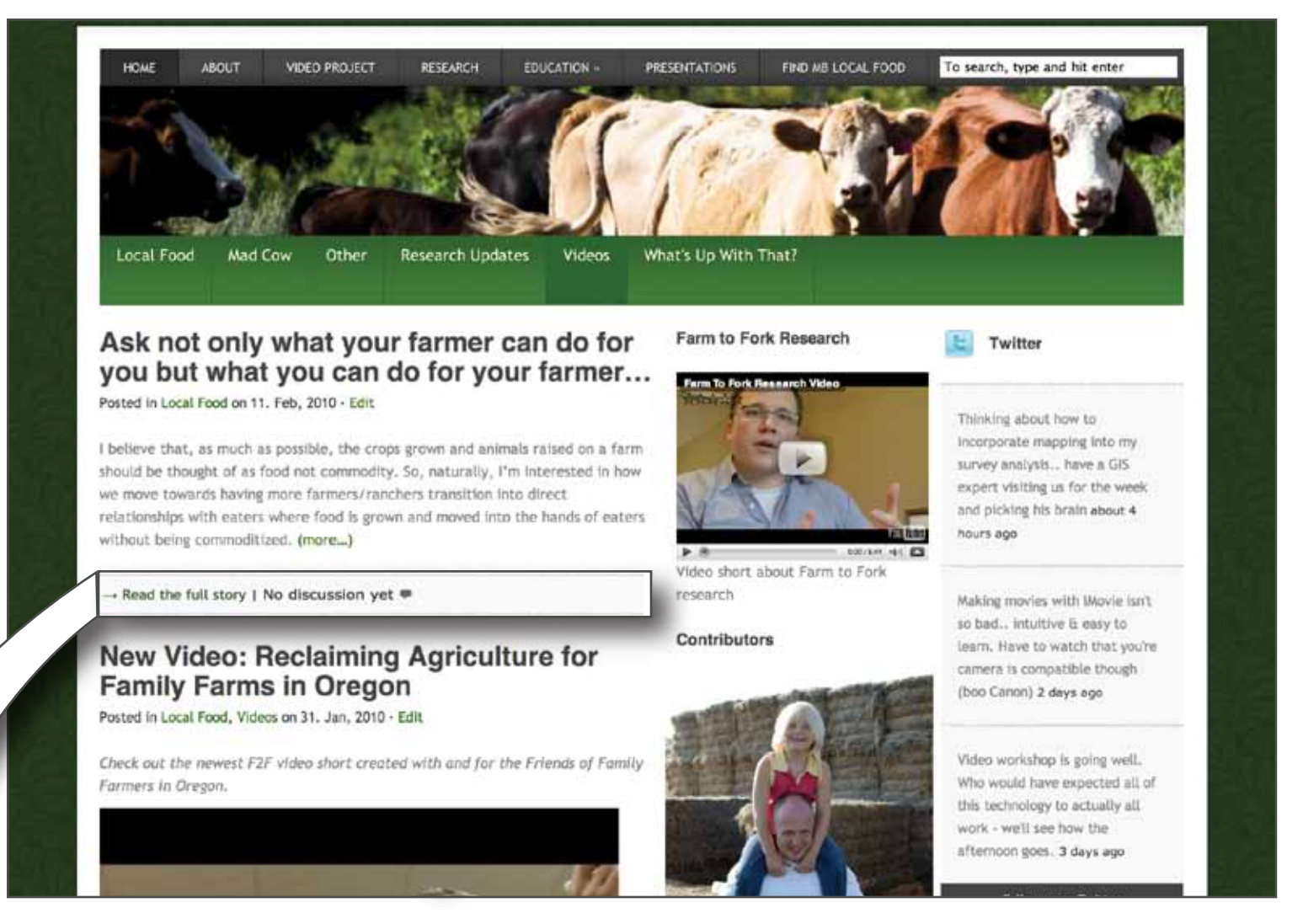


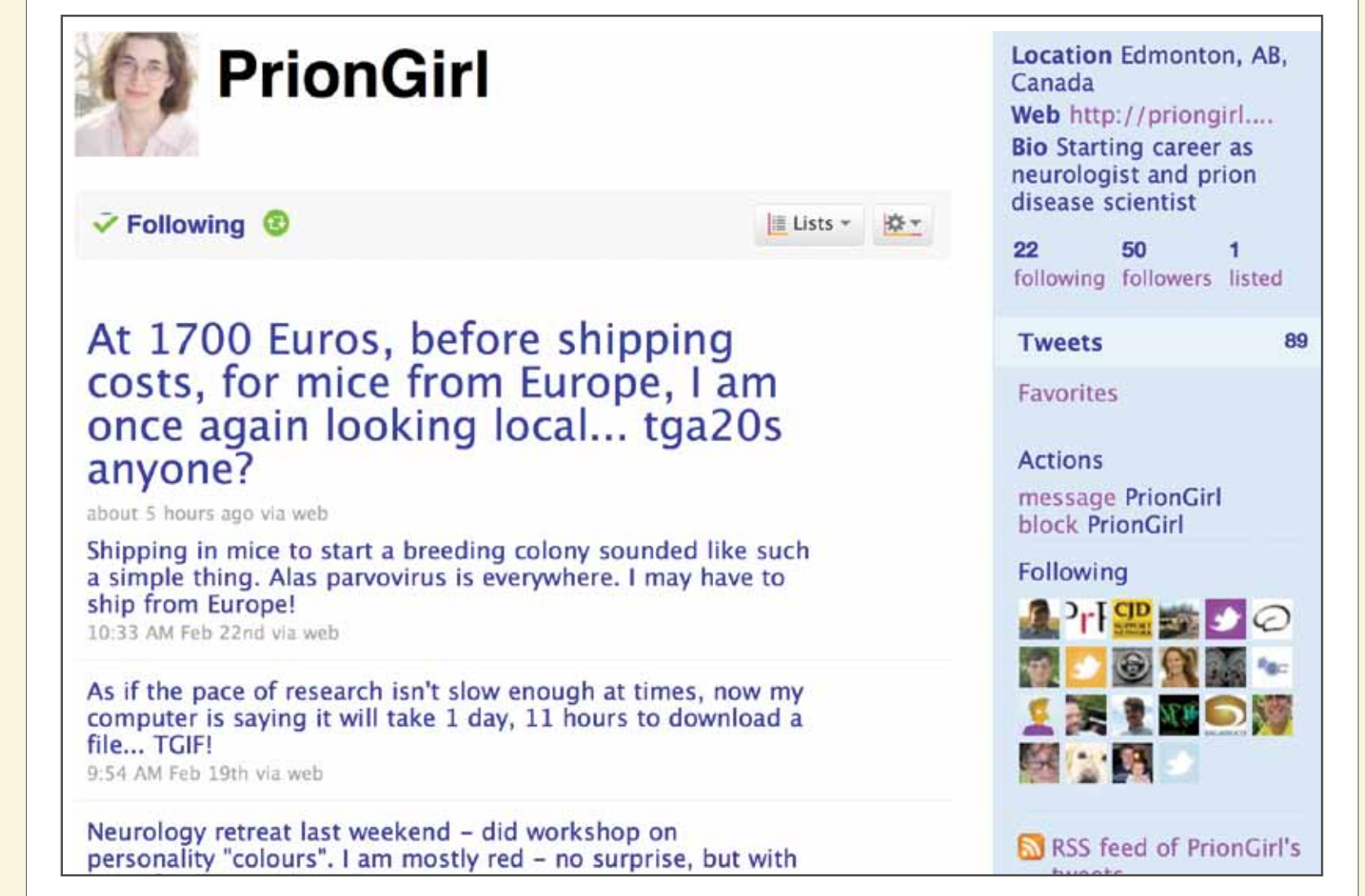
TABLE 1 - SUMMARY OF NEW MEDIA TOOLS USED IN CASE STUDIES

	Blogs	Facebook	Podcasting	Web Video	Twitter
Accessibility	Highly accessible to all audiences who have access to internet	The Facebook network provides linkages to new and sometimes unexpected audiences	Audio and Video provide an alternative to the written forms and provide expanding opportunities to communicate science. You-tube, iTunes and other video-audio sharing forums are becoming increasingly popular and can provide a link to new audiences		Followers have access to daily or even hourly ‘science updates’. Succinct tweets can lead followers to more in-depth links/stories/science
Interactivity	Comments and video comments provide opportunity for discussion	“Wall” section provides space for discussion. Plug-ins exist to expand Facebook’s interactivity	Podcast programs can be open for ‘call-ins’, comments and blogs	Participatory editing can be highly interactive. Comments and video comments	Re-tweeting and replying offer limited opportunity for interactivity
Cases Using Tool	B, C, D, E	B, C	A	B, C, D	C, D, E
Science Social Media Guidelines	<ul style="list-style-type: none"> • Use language and provide content that is relevant to social media users • Consistently produce new content in accord with social media norms and expectations of potential users (e.g. 1 tweet a day, 1 blog post a week/month) • Commit time to prompt and contribute to discussions in your own medium and in discussions forums on related social media forums • Create synergies by using multiple social media tools (e.g. use twitter to pull viewers to blog) • Experiment with new and emerging social mediums to find the combination of tools that works best for you 				

CASE E

PRIONGIRL ON TWITTER

Neurologist & Prion disease scientist Dr. Val Simms (UofAlberta) provides regular updates about the process of being a scientist • Increases accessibility to the process of science • Twitter is succinct and frequent by nature & provides opportunity for followers to stay tuned without being overwhelmed • Re-tweeting and replying functions in Twitter offer opportunities for interactivity



DISCUSSION

→ Read the full story | No discussion yet

Creating a space that allows for interactivity is insufficient to actually engender interaction. This screenshot from our blog farmtoforkresearch.com is illustrative. Despite the ability to leave comments, it is rare for academic social media forums to actually stimulate a truly interactive exchange - ironically, there is little or no discussion - yet. We suggest that academics move beyond the passive creation of interactive space towards actively participating in interactive knowledge communities (see Table 1 for suggestions). Moreover, the potential of new media is largely limited to those whom have high-speed internet access. Marginalized populations (the poor, elderly, remote, etc.) are thus largely excluded from new media forums, although they are often more vulnerable to the risks associated with scientific ‘progress’ than the privileged populations who have high levels of access to new communications technologies.

Rather than viewing readers as passive knowledge receptors, readers are engaged as active participants in shaping knowledge. Scientific communication is thus viewed as a multi-way co-construction of knowledge. Recipients of knowledge are not merely vessels to be filled with scientific data but rather receive, interpret, critically evaluate, and re-communicate information to inform scientific discourse and practice. The dialogic interface provided by the evolving slate of social media tools may open up new possibilities for the democratization of (often opaque) social and natural science discourse. Despite this democratic potential, the use of this media tools is still rare in academia where communication remains dominated by traditional media such as monographs, theses and peer-reviewed journals. Social media will not replace traditional media anytime soon but offers new opportunities to build on and improve scientific communication.

POSSIBILITIES FOR DEMOCRATIZING SCIENCE THROUGH ‘NEW MEDIA’

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