Geothink



Geothink Canada Newsletter | Issue 13



Geothink continues to explore and articulate new open data research with wide audiences

In this issue, we celebrate the start of a new year by reflecting upon five successful Geothink&Learn webinars and highlighting exciting new Geothink research.

We catch up with Geothink Co-Applicant Teresa Scassa about her work on data deficits in the sharing economy; Geothink Collaborator Muki Haklay about his new open course on Citizen Science; former Geothink student Julia Conzon about her recent appointment at Employment and Social Development Canada; and other grant news.

We would like to thank all our partners, co-applicants and students for participating in and contributing to ongoing Geothink research.

[Cover image courtesy of: <u>forescout-wpengine.netdna-ssl.com</u>]

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Geothink&Learn webinars continue to bring together researchers and public audiences

We have enjoyed five successful Geothink&Learn webinars so far that brought together the grant's coapplicants, partners, collaborators, students and public to learn and share. The sessions have highlighted Geothink's unique interdisciplinary perspective and continue to cover a wide range of ideas from our faculty and students.

"A big part of the Geothink grant has been about engaging our partners and engaging a broader audience," Geothink Head Renee Sieber, associate professor in McGill University's <u>Department of Geography</u> and <u>School of Environment</u>, said. "That's why the Geothink&Learn webinars are so important.

"We try as much as possible to get rid of the jargon and to speak in a way that the public, our stakeholders and government officials can understand," she added. "We want to make this content useful to them, so they can take the theory and put it into practice".

We caught up with Geothink Project Manager Sonja Solomun and Postdoctoral Researcher Drew Bush to further discuss how the series has been received so far.

Geothink: We're now at the midway point in the Geothink&Learn webinar series. How has the reception been so far?

Drew: I think it's been strong and it's been building up. We've heard from the panelists who've taken part that they've been really excited about the format, about the audiences we've been having and how lively the question and answer sessions have been. Each session we've seen an increase in the number of attendees who are taking part as listeners. We went from starting out in the low twenties to having around 40 or 50 people on the calls, and now in our upcoming one we have over 100. So I think



Geothink's webinars have covered topics from the future of open data to governing artificial intelligence. [Image courtesy of www.digitaltrends.ca]

it's been well received so far.

Sonja: It's also been great to see the diversity of participants grow - we've had increasing participation from municipal staff and academic and non profit attendees from the United States and United Kingdom joining us. This has especially contributed to the lively question and answer sessions, which are always strengthened by different perspectives, but is also an indication of the international scope of our partnership.

Geothink: What sort of dynamic have you seen in each session?

Drew: There have been a set of really interesting issues so far, and I think what has been nice is the diversity of viewpoints that have been represented by the different panelists. So while they're all talking on a similar topic, there have been very different research perspectives represented and I think this is a hallmark of Geothink. It has made for really dynamic discussions that have brought in different ideas and different groups.

And for the people attending it has made it so that the question and answer sessions are quite lively. And I think that's a really nice attribute of this as well; that we really are bringing what Geothink researchers have been working on in the last few years to a broader audience. We're involving them in the discussion in some of the outcomes of the grant, as well as bringing in outside experts who work on these topics.

Sonja: The amazing thing about these events is that they have spurred insights and connections that continue beyond the hour long sessions—we've received many requests for emails of our panelists from participants who would like to reach out and connect further.

Geothink: How have different groups benefited from the series so far?

Drew: I think the point of these Geothink&Learns has been to bring what the grant has been working on for these five years to a broad audience, both in terms of the sessions themselves as well as the recordings we make to put

mation, research, and interesting work from the people that were involved. that's taking place in the partnership to this audience.

Sonja: It's also been especially exciting to have municipal, non-profit and public sector speakers inform our insights in academia. That's really what it's about: Using our platform to provide practical and actionable value.

Drew: And I think Geothink is really grounded in these practical applications, a lot of the work that the researchers do. So it's very relevant to the people who are listening and I think that's really important.

Geothink: We're there any unexpected challenges you faced along the way?

form can accommodate over 100 participants—I think our most recent session had just under 150 registrants.

Drew: I don't think there have been major challenges per se. Initially we did wonder how well the technology (the Zoom Video Conferencing) would work. And of course the first time we did our first session we had to feel our way through, to make sure it was going to go well. But even that first session I think ran

online. It's really bringing this infor- pretty smoothly and got a good reception

Geothink: What have we got to look forward to for the rest of the Geothink&Learn series?

Sonja: I can give you a few sneak peaks such as panelists from Australia and the United Kingdom. So we're definitely expanding the audience and reach of our webinars.

Drew: We have three more Geothink&Learns coming before the grant wraps up. The next one is going to be on urban intelligence in February. We have a really interesting and international panel of speakers who are going to take part in the discussions.

Sonja: Possibly making sure the plat- You can catch up on Geothink's past webinars on Geothink's Youtube Channel and keep up to date on the future Geothink&Learn schedule on Geothink's website.

> We would like to thank the partners, coapplicants and students for their participation in the Geothink&Learn series.



The next Geothink&Learn will be held on Feb 7 at 12:00 (EST)

Join us on Thursday, February 7 at 12:00 (EST) as Geothink.ca will host its sixth monthly Geothink&Learn video conference session on the topic of Public Participation and Urban Intelligence. The panel brings together academic, non-profit and municipal experts in the fields of smart cities, open data, urban planning and geomatics

<u>Click to register</u>

[Image courtesy of forescout.com]

Geothink&Learn 5 Recap: The Data of Social Justice

On Friday, January 26, Geothink held its fifth Geothink&Learn video conference session on the topic of the data of social justice. The panelists discussed a range of issues on this topic and explored the opportunities, challenges, and implications of geospatially referenced big data, with a focus on its application in cities across the world.

Jon Corbett - Open data in social justice Increasingly open data are being used to support social justice, issues. However, for many communities the moments when the data is of tangible benefit rarely justify a continued impetus to mine, scrape and make sense of the changing dataset. Professor Corbett poses the question: is open data for social justice being design driven, or is it framed around specific needs?



"I think that there's a huge opportunity in the realm of Web 2.0 and new technologies to address social justice related issues, but I think we need to be a lot more purposeful about how we go about it."

Rob Feick - Citizens as (geo) data sources: implications for social justice Professor Feick explored the emerging role of the citizen as a data producer, and the implications for equity in community participation. In this context, he asked: How can we apply these new data-driven analysis methods to community decision making in Canada, while safeguarding equity, well-being and individuals' opportunities? "We learned a lot more about the challenges in our use of geospatial data—and use of geospatial technologies—to represent differences in society."



Victoria Fast - The data of social justice in Smart Cities

Drawing on research themes related to smart and socially just cities, spatial and open data infrastructure, and accessibility analytics, Fast discussed how smart spatial accessibility can enable more equitable access to digital mobility services. More broadly, she asked: How can emerging technologies be leveraged to benefit all Canadians, including Canadians living

Joanna Redden - Social justice implications of Datafication

Redden argued that as governments make more use of big data systems and artificial intelligence, there is need for greater transparency, accountability and means for citizen interventions. She drew upon two ongoing research projects; the first investigates the Government of Canada's uses of big data and the second is a transnational study of data harms.

Alessandra Renzi: - Pokémon GO and Three Kinds of Capture

Renzi discussed the results of a researchcreation project carried out in Jakarta, Indonesia with the Urban Poor Consortium. The collaboration involved the collection and visualization of data about flooding and evictions of informal settlements. Her case study shows how the urban poor are creatively engaging in data production and mobilization.



"We need more transparency that focuses not just on open data and making more data accessible, but more transparency in relation to practices and processes."

"The smart city promise rests on the idea that more and better information and communication technologies can make cities "smarter". However, many smart city technologies inequitably serve society, and notably underserve people with disabilities."





"The project points framing of data justice in a way that is transparent, horizontal and that really values the input of the people who are the subject of the data."

Research spotlight: Teresa Scassa explores data deficits in the sharing economy

Geothink Co-Applicant Teresa Scassa recently published her work on data deficits

Parts of this story were adapted from a post on Teresa Scassa's personal blog, which can be found <u>here</u>.

In her recently published paper titled 'Data deficits and the regulation of the sharing economy.' Geothink Co-Applicant Teresa Scassa, the Canada Research Chair in Information Law at the University of Ottawa, explores tensions over access to and use of Airbnb's housing data.

The sharing economy exemplified by Airbnb's platform is premised on the idea of matching seekers of temporary accommodation to those with excess space. In her recent work, Scassa examined some of the challenges to this characterisation and the problems it can pose for governments, civil society and researchers.

"My paper explores the impact of a company such as Airbnb on cities from the perspective of data," she writes on her online blog. "I argue that platformbased, short-term rental activities have a fundamental impact on what data are available to municipal governments who struggle to regulate in the public interest—as well as to civil society groups and researchers that attempt to understand urban housing issues."

Scassa's paper explores the impacts sites such as Airbnb have on more heavily regulated short-term accommodation providers and on local governments who are concerned with the availability and affordability of long-term housing.

"The impacts of platform companies are therefore not just disruptive of incumbent industries," Scassa said. "They disrupt planning and regulatory processes by masking activities and creating data deficits. My paper considers some of the currently available solutions to the data deficits, which range from self-help type resources such as data scraping to entering into data-sharing agreements with the platform companies. I argue that further action may be required by governments to ensure their data needs are adequately met".

The data deficit problem, Scassa writes, mirrors a larger shift represented by technologies such as Airbnb that transfer control over different types of data from public to private hands.

"Ensuring the ability of governments and civil society to collect, retain, and share data of a sufficient quality to both enable and to enhance governance, transparency, and accountability should be priorities for municipal governments," Sacasa said. "And it should also be supported by law and policy at provincial and federal levels."

Geothink spoke with Scassa to further explore the data deficit challenges facing cities. An edited transcript of this interview follows.

Geothink: Could you explain how the technology industry is disrupting regulatory systems by creating data deficits?

Scassa: There are a whole number of different ways in which people are concerned that these short-term rental platforms have an impact on issues that are important to cities and the people who



Teresa Scassa, Canada Research Chair in Information Law at the University of Ottawa .

live within them. But in order to make those arguments convincingly, there's a need for data. And it's actually quite difficult to get accurate or fully formed data from Airbnb about the nature and extent of the number and type of units that are available. That creates a data deficit because regulators don't really have those numbers at their fingertips.

Geothink: Are we relying on the companies themselves to make this data accessible?

Scassa: They can basically circumvent any city process so that data just isn't available except from the company. Some cities have started or tried to regulate, and part of what they've done is create licensing or registration requirements. And I think part of that is an attempt to gather data, so that they have some sense of who is renting what. So, to some extent, regulation in that context is a data gathering exercise.

Geothink: In what ways have governments have been tackling the data deficit problem?

Scassa: In some jurisdictions where they've introduced licensing and registration requirements, they have often been simply ignored. And so it's not really serving its data gathering function because people are not complying with it. Airbnb's approach to this sort of thing has been that cities should come up with light forms of regulation that don't impose an additional burden. In some cases—for example in San Francisco—after a lot of skirmishing between the company and government, the ultimate solution was arrived at that registration or licensing would happen through the Airbnb platform, and it would be a data exchange with the city through the platform. And maybe ultimately that's the most effective way to ensure that there is accurate data but it's an individually negotiated solution.

Geothink: What have been the impacts on local governments and citizens if this data isn't available?

Scassa: There are a lot of people

who've used Airbnb data to try and figure out what's happening, and to understand what's going on in communities. This is the way some of these data needs are being met, essentially through data scraping. So, it's less than ideal in the sense that there are all these potential methodological problems: Data that might not be available by scraping that would be useful to have. There may be errors that are introduced—so it's not a perfect solution but it is one of the solutions that's out there.

Geothink: Are there any issues faced by governments using data scraping to meet data needs?

Scassa: Usually governments are not scraping the data themselves, they're hiring consultants or using data that's been scraped by other people. So, in that sense, they're using third party data. And because it may have been scraped from the website explicitly contrary to the terms of use, there are legality aspects.

Geothink: Are data deficits a cross-industry issue?

Scassa: I think they are and in very complex ways because all of those operations are very data intensive. And those companies are put in a position where they can gather all kinds of data about their customers and their preferences

and activities and so on. So, there's a lot of data that's being collected by a lot of different private sector companies. Airbnb is a little bit different because they're a company that has to hang a lot of its data out in public space. There are some platforms that by their very nature have to make a lot of their data publically accessible in order to work. In either event, these companies are collecting a lot of information and that information has a real commercial value.

Geothink: What can we expect to see in the future?

Scassa: It's certainly interesting to see how this is shifting and shaping relationships. One of the things you see now is cities starting to buy some of that data from companies in order to do their own planning work. And to develop their own services. And so, in effect, customers are using these things. And then the data is being harvested and then being sold back to the governments of the cities they live in, using their own tax payers' dollars. So, there are certainly some interesting relationships there that are really worth exploring.

You can read the original blog post on Prof Scassa's personal website at <u>www.teresascassa.ca/</u>. You can follow her work on law, privacy and open data on Twitter <u>@TeresaScassa</u>



Platform-based, short-term rental activities have a fundamental impact on what data are available to municipal governments who struggle to regulate in the public interest. [Image courtesy of www.publicaffairsnews.com]

Current Projects: Muki Haklay and UCL ExCiteS launch Citizen Science open course

The course introduces students to the theory and practice of citizen science and scientific crowdsourcing

Citizen science is a hot topic these days—particular when it makes use of crowdsourcing efforts to aid scientists, researchers and governments. Such crowdsourced projects emphasize public involvement in the discovery of new knowledge, and can involve one person or millions in collaborating towards a common goal. Yet the theory and practice of citizen science projects that utilize crowdsourcing may not always be apparent to those taking part.

Now there's a place to get answers on citizen science and crowdsourcing thanks to <u>Geothink Collaborator Muki</u>



Muki Haklay, professor of Geographic Information Science in the Department of Civil, Environmental and Geomatic Engineering, University College London.



The course introduces its students to the theory and practice of citizen science and scientific crowdsourcing.

Haklay, a professor of Geographic Information Science in the Department of Geography at University College London, and the Extreme Citizen Science group (ExCiteS) he leads. This past January 11, Haklay and the ExCiteS research team launched an 11 week online and face-toface course titled "Introduction to Citizen Science and Scientific Crowdsourcing."

<u>The course</u> introduces students to the theory and practice of citizen science and scientific crowdsourcing. It also explores the history, theoretical foundations, and practical aspects of designing and running citizen science projects.

"The long term thinking is that as this area becomes more professionalised and there is more knowledge in the area, both practitioners and students need to learn about it," Haklay said. "This area is growing. And we can now spread the knowledge we have—after 10 years of people writing about these topics—and have enough knowledge to share."

"The other fascinating thing about citi-

zen science and scientific crowdsourcing is that although it has a lot of geography and GIS, it's not just for GIS people." Haklay added. "You have people from astrophysics, to conservation, to chemistry, and anything in between. We even have contacts from the United Kingdom Cat Conservation Trust. So you want something that's wide and inviting to people but that doesn't assume any prior knowledge."

So far, the course has attracted a large number of participants and received positive feedback.

"We have comments from around 380 people from all over the world," Haklay said. "Many of them practitioners, some of them students, some of them at different levels, and they're all showing interest. The great thing about citizen science is that a lot of material is free, so it just perfectly fitted for it to be an open course."

By taking account of a wide range of perspectives, the course also serves practitioners hoping to use crowdsourcing principles in organisation and governmental settings.

"From the research that Geothink has done it's clear that at the organisational end point there are perceptual barriers to accepting materials and methods within government," he added. "And it makes sense because organisations that are used to top-down are really not always used to bottom-up or to crowdsourcing."

Haklay's new course supplies a strong, actionable foundation to support scientific crowdsourcing in a range of fields.

"By providing the material, giving it le-

gitimacy and sharing the knowledge that exists in the field about the characteristics, it makes it possible for people to actually use it," Haklay said.

More information about the course can be found on the <u>UCL course page</u>. More on Muki Haklay's citizen science work can be found on Twitter <u>@mhaklay</u>.

What is Citizen Science?

"Citizen science is the participation of members of the public in scientific projects, including the engagement of a large group of people in the creation of new scientific knowledge (crowdsourcing).

"The module explores the history, theoretical foundations, and practical aspects of designing and running citizen science projects. By the end of the course, you will experience citizen science and be familiar with the academic literature in this area."

— Taken from the course description of UCL's 'Introduction to Citizen Science & Scientific Crowdsourcing'.

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Geothink Canada on YouTube

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Student Spotlight: A catch up with former Geothink student Julia Conzon

Former Geothink student Julia Conzon tells us about her exciting career trajectory since graduating from McGill University

By Julia Conzon

My career path that led me to my current job has been informed by several seminal academic, professional, and personal experiences since graduation from McGill University in May 2016. McGill University Associate Professor Renee Sieber's courses expanded my understanding of how humans, space, and technology interact. It also inspired me to pursue a career that could combine my background in Geography, Geographic Information Systems (GIS) and Anthropology.

After I graduated, I worked with Geothink and Johns Hopkins University's Center for Government Excellence (GovEx) as an assistant researcher and web developer on the <u>Open Data Standards Directory</u>. I also worked on a shortterm contract job with Open North and Publish What You Pay Canada. Without a background in software engineering or computer science, I had to learn a lot on my own. But the continuous support from my employers, clients and mentors allowed me to remain focused and motivated.

After networking at conferences, holding open mapping workshops, and coding daily, I eventually took on two additional opportunities during 2017: One in Ottawa with Statistics Canada and the other in Ayacucho, Peru, with <u>Mapbox</u>. At Statistics Canada, I worked on a project that assessed whether crowdsourcing could be used as an official data collection method for the national statistical agency. The project aimed to collect one open database of all building footprints (and attributes) in Ottawa and Gatineau by engaging with citizens to map on OpenStreetMap (OSM).

The project has now expanded into the Building Canada 2020 (BC2020) community-led initiative. BC2020 aims to map all building footprints in Canada on OSM by 2020. To get the ball rolling, I connected with Canadian academics, including some Geothink professors and students, to host mapping events (AKA mapathons) during OSMGeoWeek (November 12-18 2017). Students were educated about OSM and participated in armchair mapping rural regions across Canada. You can see the results from the mapathons here!

After working with the government, I had the exciting opportunity to spend 5 months working with Mapbox's Data Team in Ayacucho, a small town in the middle of Peru. Here I learned how to armchair map buildings and roads across Canada and the United States. I also developed validators for quality assurance and I visualized data as interactive maps (check out my <u>GitHub</u>).

What's up for 2018? Well, most of my work thus far developed my skills in collecting, managing and visualizing (mostly spatial) data. So my next route is data-driven decision-making within the Government of Canada. I have just started a full-time position as a Data Scientist at Employment and Social Development Canada. Here I will be working with mathematicians, linguists, stat-



Julia Conzon is a former Geothink student and a graduate of McGill University

isticians, software engineers, computer scientists and sociologists who use data analytics to help streamline government processes.

We develop models that can improve the efficiency of a given issue within the government to provide better services to more Canadians. However, my extensive reading has led me to be very wary of "weapons of math destruction" in algorithms, so I am taking a very cautious and critical approach to what I am learning and how I am applying the knowledge. Feel free to check out my progress through following me on <u>Twitter</u> or my <u>website</u>!

My motivation and hard work have certainly led me to where I am today, but I am also very thankful for the support I received along the way from Geothink and the open data community. Without the support, I surely wouldn't be where I am today.

Publications and Announcements

To increase awareness of the work happening at Geothink, we are reproducing calls for papers as well as announcements of new knowledge mobilization projects such as books and journal special issues. This lets everyone know when work on a planned book or paper is started. Partners are also invited to collaborate in writing. Not only are we including calls for papers or chapters for Geothink-specific output, we are also including related calls for papers from Geothink researchers.

Daniel J. Paré, "Independent Reporting Mechanism (IRM) Preliminary Review 2017: Ontario "

The Independent Reporting Mechanism (IRM) carries out an annual review of the activities of each government that participates in OGP. As part of the pilot status of the reports, the IRM is releasing this early version of the review of process and commitment form (Specificity, Relevance, and Potential Impact)...

https://www.opengovpartnership.org/ sites/default/files/Ontario IRMpreliminary-review 2017 for-publiccomment.pdf

Roche, 2017. Geographic Information Science III: Spatial Thinking, Interfaces and Algorithmic Urban Places -Toward Smart Cities. Progress in Human Geography, 41(5): 657-666, online first July 9th 2016, DOI: 10.1177/0309132516650352.

This third report examines interfaces as a key element enabling spatial skills, and development of new forms of digital spatialities for smart cities...

http://journals.sagepub.com/doi/ abs/10.1177/0309132516650352 Bégin D., R. Devillers and S. Roche, 2017. Contributors' Withdrawal from Online Collaborative Communities, the Case of OpenStreetMap, *ISPRS International Journal of Geo-Information.*,340; DOI :10.3330/ijgi6110340.

This paper not only illustrates a formal approach to assess withdrawals from online communities, but also sheds new light on contributors' behavior, their life cycle, and events that may affect the length of their participation in such project...

http://www.mdpi.com/2220-9964/6/11/340

Scassa, T. (2017). Law Enforcement in the Age of Big Data and Surveillance Intermediaries: Transparency Challenges. *SCRIPT-ed*, 58(6), pp.67-284.

This paper examines how the public sector reliance on purchased georeferenced data and analytics changes the dynamics of transparency of government action and calls for new measures and approaches...

Read Professor Scassa's blog article on her personal website <u>here</u>.

https://script-ed.org/wp-content/ uploads/2017/12/scassa.pdf Bégin D., R. Devillers and S. Roche, 2017. Contributors' enrollment in collaborative online communities: the case of OpenStreetMap, *Geospatial Information Science*, DOI: 10.1080/10095020.2017.1370177

In order to identify the nature of events that might have facilitated or hindered enrollments in the OpenStreetMap (OSM) project over time, we analyzed the correlations between the number of new participants and the events that dotted its history...

http://www.tandfonline.com/doi/ abs/10.1080/10095020.2017.1370177

Urban and Regional Information Systems Association (URISA) Journal (ISSN 1045-8077). Volume 28

A special edition of the URISA Journal, the peer-reviewed publication of the Urban and Regional Information Systems Association, was published December 2017, featuring contributions from many Geothink researchers.

Look out for our <u>URISA</u> feature in the next edition of the Geothink Newsletter.

http://www.urisa.org/resources/urisajournal/

Geothink Research Themes

Theme 1: Anywhere, Anyone, Anytime

We believe that the Web 2.0 and its associated technologies will dramatically shift the way cities talk to their constituents and others. People can communicate with cities from anywhere, outside of a jurisdiction, and at any time, for example, which means outside formal venues like city council meetings. Anonymity implies that you do not know the identity of the contributor. This challenges traditional definitions of community, citizen, and participation. We will evaluate the processes of technology development and that impact on its city and the citizen.

Theme 2: Spatial Authenticity, Accuracy, and Standards

The moment you bring up volunteered geographic information (VGI) (e.g., with Open 311), you worry about the quality of data. This theme considers questions of data structures, standards, and documentation practices used by public agencies. The research produced also aims to develop consensus on terminology, data standards, and dissemination regarding the opening up of government data and acceptance of VGI.

Theme 3: Laws, Norms, Rights and Code

Data related to governance is not simply a technical matter. Issues that are policy-related and legal in nature will be a primary focus as we try to understand the way Geoweb 1) fits within existing laws and policy, and 2) shapes new policies and law. Specific legal domains of interest are privacy, intellectual property, access to information, access to justice, and the interplay between norms, codes and technology with regards to governance.

Theme 4: Open Everything

We will track municipal open data engagement over time, theorize about the impacts of open data on governance, and understand and develop best practices. We also have the opportunity to document these approaches and track the evolution of open data practices over time.

Theme 5: Social Justice

We will explore aspects of Geoweb – Society relationships as they pertain to social justice. We will identify the success and failures of Geoweb for community development. Using a case study approach we will employ participatory research to identify emerging concepts of place, the intersection of community, engagement and social justice, and accessibility to the Geoweb.

Theme 6: Geoweb Political Economy

This theme will focus on understanding the political economy of the Geoweb as it concerns ownership structures, institutions, and policies. Power relationships between actors and processes of inclusion and exclusion among social media owners and users also will be our focus.



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Your participation in Geothink

For us to have the broadest impact with Geothink, we would greatly appreciate your input. This can mean providing monthly contributions to our social media outlets, writing blog posts, research updates, and being involved in future events. If you wish to be involved in our media output, please contact the editor.

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