

COVID-19 AND THE DISASTER RESEARCH 'GOLD RUSH'

by David Alexander

As I write, the Covid-19 pandemic has become an epoch-defining event in many countries. All over the world, academic authors from many different disciplines are rising to the challenge. A few years ago, three scholars, Gomez, Hart and Gaillard, published some interesting meditations on the phenomenon of the "disaster research gold rush". When a major disaster occurs there is an almost reckless desire to be first into print. This also exists outside the academic field. Indeed, someone ought to do a study of the "instant book of the disaster" and see who gets the prize for the earliest compendium of pictures and testimonies that commemorates the damage, destruction and casualties. Gomez and his colleagues drew attention to the worst traits of the "gold rush", namely potential abandonment of ethics and rationality in pursuit of a first-past-the-post research gain. The identification of a scholars' "gold rush" situation was inspired by some thoughts expressed in 1967 by eminent sociologists of disaster about problems associated with researching transient events. In the life-cycle of a disaster, when is it appropriate to do field research, and by what criteria should we judge such work?

Disasters give rise to many imperatives. They also generate 'perishable' data that, if they are not collected, will disappear without trace. A good example of how this problem can be solved productively is the set of Quick Response Grant Reports of the Natural Hazards Center (NHC) at the University of Colorado at Boulder. For 35 years, the NHC has had funding from the US National Science Foundation to send researchers to disaster sites in order to collect 'perishable' data. Currently, a special initiative is underway to extend the programme to Covid-19 research, difficult though this is in a state of lock-down. By common consent,

disaster researchers rarely go to events in the early stage of the crisis. To interrupt vital life-saving efforts with social surveys or demands for data would be unconscionable. However, it is a different matter if the researcher can work without visiting the site, putting a foot in the door of the emergency room or stumbling across the path of rescuers.

I am the editor-in-chief of a large international academic research journal. I was recently accused of "putting the careers of trainees and junior faculty at risk" because a member of my editorial team was slow to complete the review process on a paper that had been submitted to the journal. This reminded me that perhaps 70 per cent of academic publishing is for personnel reasons (to get a job, keep a job, obtain a salary raise, or achieve promotion). I cleave to the old-fashioned view that publishing should take place to further the sharing of good ideas. I also believe that academic work published in journals ought to survive the test of time, at least to some extent, rather than offer throw-away conclusions. Nevertheless, one cannot ignore the breakneck speed with which papers are propelled into print, or rather, into the digital equivalent, nowadays.

The first three years of the aftermath of the Great Eastern Japan Earthquake, Tsunami and Nuclear Release (GEJET, as it has come to be known), produced at least 2,000 papers and a variety of books. This is probably a substantial underestimate, but in any case, after that, works continued to appear right up to the present day. In almost a decade, the research bonanza is not over, but who has the time to read it all? Regardless of that, the GEJET publication surge is beginning to pale into insignificance next to the Covid-19 gold rush. We confront a new phenomenon: intra-disaster research publication.

At the time of writing (April 2020), the Covid-19 gold rush is well underway. The trickle of papers has already started to become a raging torrent, and the disaster is not yet half way through its crisis phase. This points to a conflict. On the positive side, academics wish to throw light on the problems caused by Covid-19, suggest solutions and launch valuable new initiatives. They also wish to capture experience and preserve it as evidence on which to base future policies and plans. On the negative side, there seems to be an urge to be the first in the field with a paper as if this were a race to be won.

Authors can write in haste and repent at their leisure: editors can rue the day. Much of what is written will need to be reconsidered in the light of the outcome of the pandemic and the post-event debate that follows it. My criticism is not aimed at those who express an opinion. Debate is healthy, even when there is a need for national and international solidarity. However, any analysis based on half the story is likely to end with conclusions that are suspect.

A positive side of the urge to publish is the desire to contribute to the debate before it lapses because attention is diverted to other issues. However, there is a prevailing question about how soon in the sequence of a disaster is it appropriate to take stock? This depends on how easy it is for earlier conclusions to be invalidated by the progress of events. The question is then, to what extent is the progress capable of being predicted and is it likely to develop in ways that contradict the present analysis? For example, any study based on the idea that Covid-19 consists of a single onslaught would have its conclusions put in jeopardy by the arrival of a second wave of infection.

The Covid-19 pandemic is distinguished by high levels of uncertainty in many of the tenets that anchor the scenario: infection rates, geographical spread, case-fatality rates, government policies and their impacts, public discipline or indiscipline in the face of emergency measures, and repercussions on the economy and people's livelihoods. These factors militate against an over-hasty academic response. So when you read academic papers written in the thick of Covid-19, caveat lector!

Between 1st January and 3rd April 2020, 6,659 papers on Covid-19 were published. Some 83% were in peer reviewed journals and 17% (1,135) came out as unreviewed pre-prints. According to a leading researcher, Erica Bickerton, "keeping on top of which preprints ... are relevant and have robust methodologies is one of the key challenges emerging from the scientific response to Covid-19". It is of note that many of the articles were in fields other than medicine, genetics and epidemiology, such as sociology, psychology, jurisprudence and international relations. In short, in the first quarter of 2020, papers on Covid-19 came out at the rate of 67 a day. It is highly probable that the flow will amply exceed 100 a day once research really gets into gear. It is predicted that, in the short term, the proportion of pre-prints will rise.

Much of the research that appears will be repetitive, short on insight, premature and lacking in rigour and scientific testability. Hence, these are some good criteria for presenting Covid-19 research to a potential readership.

Rigour. Does the research conform to the standard tenets of the scientific method: reproducibility, verification, completeness?

Novelty. Will the paper add anything to the debate on Covid-19, or our knowledge of the disaster, that is not already known and present in some of the many other articles that are available?

Utility. Will anyone read the paper? Will readers benefit from it in any way? How can a potential readership be convinced to read the paper rather than the other 66 that came out on the same day?

Transformation. Is there any way of measuring or monitoring the take-up of ideas that come from this paper?

There is still much value in papers that have no "pathway to impact". Moreover, it may be that the real impact of a piece of research is not being measured, because to do so is difficult or impossible. In that case, there needs to be another kind of justification for publishing the paper.

As the university world undergoes a radical metamorphosis and transfers its activity to remote working and distance learning, we are all asked to "do more" to achieve this seismic shift. One of the greatest failings of modern organisations is their utter lack of appreciation that time is not an elastic commodity. If we are asked to do more, it must be at the expense of some other activity. Paradoxically, "doing more" reduces our productivity, because it forces us to do less important-but more urgent-tasks in place of those that produce a more enduring, positive legacy. The compensatory mechanism involves providing evidence of productivity by going hell-bent for the "quick fix". The most absolute casualty is the time to read and bring oneself up to date with the latest developments.

Major disasters usually lead to a substantial increase in information flow. Covid-19 may be different because information may well become available to a greater order of magnitude than ever before.

It is obvious that much of what is written will be read by practically no one beyond the authors and perhaps a couple of referees. What use is it then? One should bear in mind that in older neglected literature there may be nuggets of gold that escaped the rush, if we only care to go back and look for them. But beyond that, the only valid survival technique is to try, perhaps vainly, to learn how to be ultra-selective about what one does read. ▲

References

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- iii. See: <https://hazards.colorado.edu/research/quick-response>
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