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Learning The 4Rs Of Computer-Assisted Reporting In Australia

Investigative computer-assisted reporting, or deep CAR, has evolved in the United States over the past decade. In that time, the academy and industry have come to recognise it as a valuable tool for journalists. This paper considers the situation in Australia. It used a phone study and an e-mail survey to discover the extent of knowledge about deep CAR in Australia and whether it is being taught in journalism courses.

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Computers have come to dominate the production of newspapers and magazines in Australia for the past ten to fifteen years. Much research has been done on these "front-end" systems, looking at their use for production. But since the late 1980s, journalists in the United States have also been using computers for newsgathering. The most common term for this newsgathering form is computer-assisted reporting, or CAR. Most American journalism academics and the bulk of newspapers in the US recognise the significance of CAR. Reavy (1996) and others maintain that the concept of computer-assisted reporting has finally "caught on" in the United States since the University of Missouri founded the National Institute for Computer-Assisted Reporting (NICAR) in collaboration with the Investigative Reporters and Editors organisation (IRE) in 1989.

Reavy (1996) noted that: "Most journalists in the US admit its advantages and agree it offers reporters a unique method for advancing their professional principles. New technology and new teaching techniques have reduced its complexity to the point that reporters can pick up the basic skills in a single weekend. Advancements in on-line data retrieval and analysis, including heightened interest in Internet, could well lower that complexity even further."

Editor and Publisher magazine in the United States called CAR "the newsgathering tool of the 1990s" and reported last year that it was "swarming over daily newspaper newsrooms" (Garrison, 1996a). Reddick and King (1995) maintain that online methods are the latest development in the technological evolution

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of newsgathering. They argue that online is a natural progression after the telegraph, telephone, and fax. "As with the new technologies of the past, the Internet and other online information networks will profoundly affect the art and craft of journalism" (Reddick and King, 1995). Berger and others have similarly hailed the Internet as the most exciting innovation for journalists since the fax or phone (Berger, 1996; Johnson, 1995; Paul, 1996). They say it has the potential to revolutionise the newsgathering process.

Given the spread of CAR in the United States, what is its status in Australia? To varying degrees, the general public and business appear to have ventured onto the information highway. But little information was available about journalists' use of CAR and the Internet. This paper sets out to investigate — via a phone study and an e-mail survey — the awareness of CAR among journalism educators and working journalists.

Small businesses in Australia are heavy users of the Internet, by world standards.[1] On 13 August 1997 the *Australian Financial Review* reported that at least 1.4 million Australians had access to the Internet. This represents about 10 per cent of people aged 15 or older. That same month *The Australian* reported the Federal Minister for Communications, Senator Richard Alston, as saying that 2.4 million Australians used the Internet. He said the figure would rise to 3.8 million by the turn of the century. "Australia ranks second only to the US in computer use, with 27 computers per hundred people," the minister said.[2]

Definitions Of Terms

It is important from the outset to define computer-assisted reporting, because it operates on several levels and it has attracted several interpretations. As Canadian journalism professor Dean Tudor says: "Computer-assisted reporting and research (CARR, or sometimes just CAR) means different things to different people." For the purpose of this paper CAR will be viewed as having several levels — from basic through to deep or investigative journalism. Basic CAR involves easy techniques such as using e-mail to arrange interviews or to locate experts (for example, ProfNet), and accessing the Internet. Basic CAR is easy to learn, involves relatively simple technology and is relatively inexpensive once the equipment is obtained. Journalists can generally produce stories within hours of starting.

The deepest level of CAR is the form of reporting that NICAR teaches. It is relatively difficult to learn, involves complex technology and requires newsroom executives with deep pockets who are willing to fund online searches and give journalists time to learn the technology and dig for stories. Journalists on some

US newspapers are given a year to learn the skills, after attending a one or two-week NICAR training course (known as a "boot camp"). These sophisticated techniques may take time but they also win the major awards. Reavy reports that stories that originated with or used the deepest levels of CAR won Pulitzer Prizes for investigative reporting between 1990 and 1996. Margaret DeFleur describes CAR as "a specialised area of study within the field of journalism" which she sees as introducing "an important new era in the history of the press".

CAR operates on many levels and forms that range from the basic through to the complex. As the level deepens so the amount of time and money that the publication must be willing to invest increases. Nora Paul of the Poynter Institute in the United States uses the phrase computer-assisted journalism (CAJ) to describe how American journalists use computers for gathering information. In her book *Computer Assisted Research: A guide to tapping online information (3rd edition)*, Paul says that CAJ can be broken into four sections: rendezvous, research, reference and reporting — what she calls the "4Rs". Each of these functions is critical to the information-gathering process. Each can be accomplished without a computer but a computer can accelerate, simplify, and/or expand the range of the work.

4"Rs" Of Computer-Assisted Journalism

Computer-assisted rendezvous takes place when journalists visit "virtual communities of the wired world". These areas include listservs and newsgroups — the electronic equivalents of meetings. "The ability to hang out, listen in, seek advice and tap into other people's networks of sources is the newest and, perhaps, most exciting aspect of computer assisted journalism," Paul says. Computer-assisted research involves the use of the Internet, especially the World Wide Web, to check facts and uncover information via search engines and Internet directories.

Computer-assisted reference refers to searching online reference works such as dictionaries, encyclopaedias and books of quotations through the Internet and CD-ROMs. "These virtual reference shelves provide handy and quick access for quick fact-checking, spellings, and definitions," Paul says.

Computer-assisted reporting involves going online to access large electronic databases. In America, CAR reporters use spreadsheets and databases to crunch numbers from various sources. They base their stories on analysis of this information, followed by interviews with key players. Each of these aspects of computer-assisted journalism requires different software, skills, and knowledge. But all are important parts of journalism, says

Paul. This paper will concentrate on the last form of CAR, which will be called deep or investigative CAR. In the US it is a tool for investigative journalism, and requires special training. The Internet home pages of organisations like NICAR and Investigative Reporters and Editors (IRE) 3 provide information about the courses they offer.

It is also important to note here that most academics and practitioners regard deep CAR as only a tool for achieving more thorough or more complete reportage. The key word in the phrase is "assisted". Koch and others say that shoe leather, the telephone and traditional journalistic skills will always be just as useful as computers (Koch, 1991). CAR allows reporters to be better prepared for conducting interviews. It helps to accelerate the information gathering part of the newsgathering process.

Methodology

Research for this article comprised a phone study of Australia's daily newspapers and an e-mail survey of journalism educators. For the phone study, I contacted the Chief-of-staff at all 49 Australian dailies, plus Australian Associated Press, the national news agency, during June and July 1997. Dailies were chosen because industry figures show that the bulk of Australia's journalists work in print (80-85 per cent), and more than a third of all journalists work on daily papers. Daily papers were expected to be the most likely adopters of any innovation that could accelerate the newsgathering process.

Results of the study were compared with 1996 research from the United States which showed that 87 per cent of newspaper journalists in the United States have access to the Internet. The study asked about reporters' use of the Internet, especially the icon-based World Wide Web and e-mail, for newsgathering. The aim of the study was to discover how many journalists use the Internet — particularly e-mail and the World Wide Web — for newsgathering. Chiefs-of-staff were also asked specifically about their level of nowledge of investigative CAR. The study also aimed to see if newsgathering methods were changing because of the availability of the Internet.

The e-mail survey consisted of a seven-question e-mail sent to the heads of Australia's 22 vocationally-oriented journalism courses. It contained a request to pass the survey to the person or person most knowledgeable about CAR. The aim was to ascertain the attitudes to CAR among educators, and to discover what levels of CAR were being taught in Australia.

The questionnaire to the Chiefs-of-staff on all Australian dailies contained 27 questions. Of these questions, two specifically

concerned deep CAR. The first asked if the CoS knew of the concept "computer-assisted reporting" in the American sense of investigative journalism. The second asked if they or any of their staff had received any specialist training in this area. Only one paper, *The Age* in Melbourne, said it had heard of deep CAR and only *The Age* said it had provided any CAR training. *The Courier-Mail* in Brisbane said it did not offer training because one reporter had come to the paper with the skills and was conducting informal lessons for colleagues.

Descriptive Findings

Fifteen out of 22 courses responded to the e-mail survey. All said they were aware of computer-assisted reporting and all said they taught some form of CAR, or planned to do so in the next one to two years. Most taught the basic level of CAR: that is, they showed students how to use e-mail for interviewing and data collection, and almost all showed students how to conduct research using Web search engines. A third of the courses offered subjects related to the deepest level of CAR.

The phone study confirmed the hypothesis that resource-rich metropolitan dailies would be more advanced in terms of online newsgathering than regional dailies. But all dailies that used electronic newsgathering methods were operating at the basic level of CAR. The availability of Internet resources and training, and the frequency of Internet use among reporters on quality metropolitan dailies was much higher than on regional dailies. On average, one in three reporters on Australia's metropolitan dailies regularly accessed the Internet, especially the World Wide Web. "Regular" access meant about once a week. But fewer than one in a dozen regional reporters used the World Wide Web.

The figure was even lower for e-mail use: one in 15. It is important to note that we are talking here about basic CAR; investigative CAR did not figure in the results. This was confirmed via an e-mail inquiry to CARR-L, the mailing list used and monitored worldwide by journalists interested in computer-assisted reporting. CARR-L, founded in September 1992, stands for the "computer-assisted reporting and research list". As of October 1997 it had almost 1800 members in 55 countries. An e-mail inquiry was sent to CARR-L in August 1997 asking for the names of any Australian journalists actively involved in using deep CAR methods. It received no replies. An inquiry to the same list a year earlier produced one reply from Thom Cookes.

Cookes, a reporter at *The Age*, is one of a handful of reporters in Australia who employ deep CAR methods. He has been

producing stories based on analysis of spreadsheets and databases since February 1996. CAR was "mostly virgin territory in Australia", Cookes said. He maintained that journalists must learn how to apply technology to the reporting process:

"The organisations and people that we are reporting on are now more often than not keeping their records electronically. Sometimes there is no paper document to be FOI'd [obtained via Freedom of Information legislation] or leaked. Government is scrutinising itself — and is being scrutinised by others — with the aid of computers and we should be learning how to do the same."

Cookes said that deep CAR could easily be sold to news executives because it produced exclusives. "News executives love exclusives because by their very nature they are not on the news agenda, they come out of the blue. It's a major selling point for CAR," he said.4 But Cookes also said that "very few" Australian journalists were using deep CAR methods.

Rodney Chester, computer and technology writer for *The Courier-Mail* in Brisbane, said that his paper used some deep CAR methods. For at least two years the Courier-Mail has taken examination results from schools around Brisbane, dropped them into Excel [a spreadsheet] and analysed them to produce stories. "Every week reporters here connect to databases such as the Australian Stock Exchange to do company searches."

Chester said that investigative journalism was limited in Australia because of "the small number of available databases in Australia compared with America". The other issues for Chester were resources and time. "The problem with CAR is the lack of resources and time. Not everyone is Net savvy yet and often people don't think of using the Net unless they are specifically directed. The attitude to CAR at the top levels is that it can be an useful tool." [5]

The *Queensland Times* in Ipswich, west of Brisbane, is an example of a newspaper that does not use deep CAR methods, but which is interested in the use of technology to enhance reporting. Deputy chief of staff Mark Strong said four of the paper's 12 reporters and the editor used the Web and e-mail for newsgathering. But no-one yet used deep CAR methods such as analysing databases and spreadsheets. He said reporters used e-mail for monitoring specific news issues, and the Web for obtaining information about prominent people, such as MPs.

Controversial MP Pauline Hanson is the local member, so Strong (who covers politics and business) monitors the official and unofficial Hanson Web pages. Strong said that the public seemed more willing to communicate via e-mail, where in the past they would not talk to the media. "They seem to feel as

though they're more in control of the material they're presenting when they use e-mail," he said. [6]

This introduces an interesting and very relevant aside. In his book *Politics on the Nets,* Wayne Rash Jr discusses ways in which politicians are using the Internet and other computer-based resources to bypass journalists. Rash said one of the most persistent themes he encountered among the politicians he interviewed was the desire "to get information to voters without a filter" (Rash, 1997:63).

Many candidates said the unfiltered access to voters was "the most compelling reason of all to take to the nets. Their word gets out as they intended, without the interpretation of the media" (Rash 1997:68). Rash predicted that by the time of the next presidential election in the year 2000, the Internet would have as major an influence as television in the results. This is an interesting development which deserves further research.

Another issue thrown up by this research is the evolution of systems for the electronic distribution of press releases. Two Australian organisations specialise in distributing press releases to the media. They are *Newsnet* and AAP *MediaNet.* Richard Hollingdale, manager of news distribution for *Newsnet,* said that journalists still preferred to receive press releases via fax but he was noticing a trend towards e-mail distribution.

"We're in an aggressive market and news releases are unsolicited, so we tend to use the fax because it's invasive and it's physical. The fax is visible when it arrives in the newsroom and journalists have something they can hold in their hand" (Hollingdale, 1997). He said that faxes also meant that company logos were displayed to journalists.

High-tech and financial media outlets were the most advanced in terms of receiving press releases via e-mail. Hollingdale said that he had seen European research which showed that PR companies there sent faxes to news organisations to alert them to the fact that an e-mail press release had been sent. "I suspect that journalists in this country do not check their e-mail as often as we'd like them to. Low-tech methods such as the fax appear to be more effective at the moment." [7]

The Victorian branch of the Public Relations Institute of Australia (PRIA) did not know how many public relations companies issued press releases via e-mail. Acting executive director Joanna Cody said the only way to find out would be to compile a list from the telephone book and phoning individual companies. [8] The Sydney office of the PRIA could not help either. It said that the booklet which listed all registered members was being updated and would "possibly" include members' e-mail addresses. [9] A spokesperson said it was impossible to give an

accurate figure of wired PR companies because not all companies were PRIA members.

Educators And CAR

In an article in *Australian Studies in Journalism* in 1994, [10] journalism lecturer Kerry Green predicted that the Australian news media would eventually adopt CAR techniques. He wrote that the adoption would occur "probably sooner than later". Three years later, he was still optimistic but accepted that CAR had not developed as quickly as he expected. Costs, management attitudes and time for training were the major reasons for the delay, he said. "Someone in control of the purse strings at a publication must support CAR developments." Green said CAR was more likely to evolve at the big metropolitan newspapers because these were more likely to commit resources and pay to have people trained. Smaller dailies were reluctant to invest in training because of a concern that the people they trained would leave or be poached. "CAR people on smaller papers are invariably enthusiasts who teach themselves." [11]

All journalism educators who responded to the survey were aware of the concept of computer-assisted reporting. Two thirds of the 15 respondents said they taught students basic CAR methods — that is, they showed students how to use e-mail for locating experts, and how to conduct interviews and collect data. A similar proportion showed students how to use e-mail for monitoring electronic mailing lists (listservs) to get story ideas, and how to obtain information from the Web. Almost all educators said they taught students how to conduct research using Web search engines and 80 per cent said they taught students how to perform simple tasks such as accessing library catalogues remotely.

But only a third said they taught what we have classified as deep CAR methods. This involved tasks such as how to obtain files from remote computers using file transfer protocol (ftp). Just over a third said they taught students how to download data from professional databases such as Lexis or Dialog. Some were concerned whether students had the technical skills to handle such activities. A related issue in terms of teaching new media skills is whether students learned the skills before they arrived at university, and whether they used the technology provided at university.

Students at most Australian universities have been given access to e-mail and the Web in the past couple of years. But a survey of second year journalism majors at James Cook University, taken at the start of second semester 1996, showed that almost half (48%) of the 37 students had never used e-mail, or had used

it only a couple of times — even though they were already half way through their degree. This issue was surmounted by placing course notes and reading material on a dedicated Web site and requiring students to submit all their assignments via e-mail. [The author taught at James Cook University in 1996.]

In second semester 1997, about 100 third-year journalism majors at Deakin University were placed on an e-mail list designed for sharing information about sub-editing, a course I was teaching. Students' use of e-mail was monitored during the semester (these were all on-campus students). During a lecture at the start of semester on July 29, only two of the 88 students in attendance said they had read e-mail from the list in the past week. Three weeks later, on August 19, that number had risen to 22 out of 90 in attendance (24 per cent).

Despite my updating the list every couple of days, the average number of readers remained constant at 24 or 25 per cent for the rest of the year. Access was not a problem because Deakin University provides several rooms on campus where students can access their e-mail. Some of these rooms are open 24 hours a day. This suggests that only 24-25 per cent of students were interested in using technology to access the mailing list.

Conclusion

CAR is rapidly becoming accepted as a reporting tool in the United States, and most journalism educational institutions offer training in it. The level of understanding of CAR in Australia is high among educators but low among practitioners. It would be safe to say that CAR is more appreciated among journalism educators than practising journalists in Australia. The number of working reporters who use CAR methods is small. This raises some important issues. For example, if universities decide to boost their CAR courses, they may have problems finding suitably-qualified teachers. The industry in Australia needs to accept that CAR will become a key area of journalism.

Anecdotal evidence suggests that only a section of any journalism class will have the technological skills and interest to investigate CAR in depth. Perhaps it is not appropriate to insist that all students study CAR. There are related equity issues because some off-campus students will not have access to technology. The solution might be to offer CAR as a separate subject or elective — perhaps in year three or four — rather than require all students to study it.

NOTES

1. The Australian, 11 August 1997, p.21 "Surf's up — poll finds 23pc now using the Internet"
2. The Australian, 14 August 1997 p.7
3. IRE <http://www.ire.org/>
4. Personal interview 21 August 1997
5. E-mail interview 20 November 1996
6. Phone interview 3 July 1997
7. Phone interview 6 August 1997
8. Phone interview 8 August 1997
9. Phone interview 8 August 1997
10. Green, Kerry (1994). "Computer-assisted reporting — sources from cyberspace" in Australian Studies in Journalism vol 3. pp 219-230
11. Phone interview 4 November 1996

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