*Oblique strategies for ambient journalism*

## *Oblique Strategies* for Ambient Journalism

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Alfred Hermida recently posited 'ambient journalism' as a new framework for para- and professional journalists, who use social networks like Twitter for story sources, and as a news delivery platform. Beginning with this framework, this article explores the following questions: How does Hermida define 'ambient journalism' and what is its significance? Are there alternative definitions? What lessons do current platforms provide for the design of future, real-time platforms that 'ambient journalists' might use? What lessons does the work of Brian Eno provide—the musician and producer who coined the term 'ambient music' over three decades ago?

My aim here is to formulate an alternative definition of ambient journalism that emphasises craft, skills acquisition, and the mental models of professional journalists, which are the foundations more generally for journalism practices. Rather than Hermida's participatory media context I emphasise 'institutional adaptiveness': how journalists and newsrooms in media institutions rely on craft and skills, and how emerging platforms can augment these foundations, rather than replace them.

### Hermida's Ambient Journalism and the Role of Journalists

Hermida describes ambient journalism as: "broad, asynchronous, lightweight and always-on communication systems [that] are creating new kinds of interactions around the news, and are enabling citizens to maintain a mental model of news and events around them" (Hermida 2). His ideas appear to have two related aspects. He conceives ambient journalism as an "awareness system" between individuals that functions as a collective intelligence or kind of 'distributed cognition' at a group level (Hermida 2, 4-6). Facebook, Twitter and other online social networks are examples. Hermida also suggests that such networks enable non-professionals to engage in 'communication' and 'conversation' about news and media events (Hermida 2, 7). In a helpful clarification, Hermida observes that 'para-journalists' are like the paralegals or non-lawyers who provide administrative support in the legal profession and, in academic debates about journalism, are more commonly known as 'citizen journalists'. Thus, Hermida's ambient journalism appears to be: (1) an information systems model of new platforms and networks, and (2) a normative argument that these tools empower 'para-journalists' to engage in journalism and real-time commentary.

Hermida's thesis is intriguing and worthy of further discussion and debate. As currently formulated however it risks sharing the blind-spots and contradictions of the academic literature that Hermida cites, which suffers from poor theory-building (Burns). A major reason is that the participatory media context which Hermida builds his work on often has different mental models and normative theories than the journalists or media institutions that are the target of critique. 'Ambient journalism' would be a stronger and more convincing framework if these incorrect assumptions were jettisoned. Others may also potentially misunderstand what Hermida proposes, because the academic debate is often polarised between para-journalists and professional journalists, due to different views about institutions, the politics of knowledge, decision heuristics, journalist training, and normative theoretical traditions (Christians, Glasser, McQuail, Nordenstreng and White 126; Cole and Harcup 166-176).

In the academic debate, para-journalists or 'citizen journalists' may be said to have a communitarian ethic and desire more autonomous solutions to journalists who are framed as uncritical and reliant on official sources, and to media institutions who are portrayed as surveillance-like 'monitors' of society (Christians, Glasser, McQuail, Nordenstreng and White 124-127). This is however only one of a range of possible relationships. Sole reliance on para-journalists could be a premature solution to a more complex media ecology. Journalism craft, which does not rely just on official sources, also has a range of practices that already provides the "more complex ways of understanding and reporting on the subtleties of public communication" sought (Hermida 2). Citizen- and para-journalist accounts may overlook micro-studies in how newsrooms adopt technological innovations and integrate them into newsgathering routines (Hemmingway 196). Thus, an examination of the realities of professional journalism will help to cast a better light on how ambient journalism can shape the mental models of para-journalists, and provide more rigorous analysis of news and similar events.

Professional journalism has several core dimensions that para-journalists may overlook. Journalism's foundation as an experiential craft includes guidance and norms that orient the journalist to information, and that includes practitioner ethics. This craft is experiential; the basis for journalism's claim to "social expertise" as a discipline; and more like the original Linux and Open Source movements which evolved through creative conflict (Sennett 9, 25-27, 125-127, 249-251). There are learnable, transmissible skills to contextually evaluate, filter, select and distil the essential insights. This craft-based foundation and skills informs and structures the journalist's cognitive witnessing of an event, either directly or via reconstructed, cultivated sources. The journalist publishes through a recognised media institution or online platform, which provides communal validation and verification. There is far more here than the academic portrayal of journalists as 'gate-watchers' for a 'corporatist' media elite.

Craft and skills distinguish the professional journalist from Hermida's para-journalist. Increasingly, media institutions hire journalists who are trained in other craft-based research methods (Burns and Saunders 2009). Bethany McLean who 'broke' the Enron scandal was an investment banker; documentary filmmaker Errol Morris first interviewed serial killers for an early project; and Neil Chenoweth used 'forensic accounting' techniques to investigate Rupert Murdoch and Kerry Packer. Such expertise allows the journalist to filter information, and to mediate any influences in the external environment, in order to develop an individualised, 'embodied' perspective (Hofstadter 234; Thompson; Garfinkel and Rawls). Para-journalists and social network platforms cannot replace this expertise, which is often unique to individual journalists and their research teams.

**Ambient Journalism and Twitter**

Current academic debates about how citizen- and para-journalists may augment or even replace professional journalists can often turn into legitimation battles whether the 'de facto' solution is a social media network rather than a media institution. For example, Hermida discusses Twitter, a micro-blogging platform that allows users to post 140-character messages that are small, discrete information chunks, for short-term and episodic memory. Twitter enables users to monitor other users, to group other messages, and to search for terms specified by a hashtag. Twitter thus illustrates how social media platforms can make data more transparent and explicit to non-specialists like para-journalists. In fact, Twitter is suitable for five different categories of real-time information: news, pre-news, rumours, the formation of social media and subject-based networks, and "molecular search" using granular data-mining tools (Leinweber 204-205). In this model, the para-journalist acts as a navigator and "way-finder" to new information (Morville, *Findability*).

Jaron Lanier, an early designer of 'virtual reality' systems, is perhaps the most vocal critic of relying on groups of non-experts and tools like Twitter, instead of individuals who have professional expertise. For Lanier, what underlies debates about citizen- and para-journalists is a philosophy of "cybernetic totalism" and "digital Maoism" which exalts the Internet collective at the expense of truly individual views. He is deeply critical of Hermida's chosen platform, Twitter: "A design that shares Twitter's feature of providing ambient continuous contact between people *could perhaps drop Twitter's adoration of fragments*. We don't really know, because *it is an unexplored design space*." [emphasis added] (Lanier 24).

In part, Lanier's objection is traceable back to an unresolved debate on human factors and design in information science. Influenced by the post-war research into cybernetics, J.C.R. Licklider proposed a cyborg-like model of "man-machine symbiosis" between computers and humans (Licklider). In turn, Licklider's framework influenced Douglas Engelbart, who shaped the growth of human-computer interaction, and the design of computer interfaces, the mouse, and other tools (Engelbart). In taking a system-level view of platforms Hermida builds on the strength of Licklider and Engelbart's work. Yet because he focuses on para-journalists, and does not appear to include the craft and skills-based expertise of professional journalists, it is unclear how he would answer Lanier's fears about how reliance on groups for news and other information is superior to individual expertise and judgment.

Hermida's two case studies point to this unresolved problem. Both cases appear to show how Twitter provides quicker and better forms of news and information, thereby increasing the effectiveness of para-journalists to engage in journalism and real-time commentary. However, alternative explanations may exist that raise questions about Twitter as a new platform, and thus these cases might actually reveal circumstances in which ambient journalism may fail.

Hermida alludes to how para-journalists now fulfil the earlier role of 'first responders' and stringers, in providing the "immediate dissemination" of non-official information about disasters and emergencies (Hermida 1-2; Haddow and Haddow 117-118). Whilst important, this is really a specific role. In fact, disaster and emergency reporting occurs within well-established practices, professional ethics, and institutional routines that may involve journalists, government officials, and professional communication experts (Moeller). Officials and emergency management planners are concerned that citizen- or para-journalism is equated with the craft and skills of professional journalism. The experience of these officials and planners in 2005's Hurricane Katrina in the United States, and in 2009's Black Saturday bushfires in Australia, suggests that whilst para-journalists might be 'first responders' in a decentralised, complex crisis, they are perceived to spread rumours and potential social unrest when people need reliable information (Haddow and Haddow 39). These terms of engagement between officials, planners and para-journalists are still to be resolved.

Hermida readily acknowledges that Twitter and other social network platforms are vulnerable to rumours (Hermida 3-4; Sunstein). However, Hermida's other case study, Iran's 2009 election crisis, further complicates his vision of ambient journalism, and always-on communication systems in particular. Hermida discusses several events during the crisis: the US State Department request to halt a server upgrade, how the Basij's shooting of bystander Neda Soltan was captured on a mobile phone camera, the spread across social network platforms, and the high-velocity number of 'tweets' or messages during the first two weeks of Iran's electoral uncertainty (Hermida 1). The US State Department was interested in how Twitter could be used for non-official sources, and to inform people who were monitoring the election events.

Twitter's perceived 'success' during Iran's 2009 election now looks rather different when other factors are considered such as: the dynamics and patterns of Tehran street protests; Iran's clerics who used Soltan's death as propaganda; claims that Iran's intelligence services used Twitter to track down and to kill protestors; the 'black box' case of what the US State Department and others actually did during the crisis; the history of neo-conservative interest in a Twitter-like platform for strategic information operations; and the Iranian diaspora's incitement of Tehran student protests via satellite broadcasts. Iran's 2009 election crisis has important lessons for ambient journalism: always-on communication systems may create noise and spread rumours; 'mirror-imaging' of mental models may occur, when other participants have very different worldviews and 'contexts of use' for social network platforms; and the new kinds of interaction may not lead to effective intervention in crisis events. Hermida's combination of news and non-news fragments is the perfect environment for psychological operations and strategic information warfare (Burns and Eltham).

**Lessons of Current Platforms for Ambient Journalism**

We have discussed some unresolved problems for ambient journalism as a framework for journalists, and as mental models for news and similar events. Hermida's goal of an "awareness system" faces a further challenge: the phenomenological limitations of human consciousness to deal with information complexity and ambiguous situations, whether by becoming 'entangled' in abstract information or by developing new, unexpected uses for emergent technologies (Thackara; Thompson; Hofstadter 101-102, 186; Morville, *Findability*, 55, 57, 158). The recursive and reflective capacities of human consciousness imposes its own epistemological frames. It's still unclear how Licklider's human-computer interaction will shape consciousness, but Douglas Hofstadter's experiments with art and video-based group experiments may be suggestive. Hofstadter observes: "the interpenetration of our worlds becomes so great that our worldviews start to fuse" (266). Current research into user experience and information design provides some validation of Hofstadter's experience, such as how Google is now the 'default' search engine, and how its interface design shapes the user's subjective experience of online search (Morville, *Findability*; Morville, *Search Patterns*).

Several models of Hermida's "awareness system" already exist that build on Hofstadter's insight. Within the information systems field, on-going research into artificial intelligence—'expert systems' that can model expertise as algorithms and decision rules, genetic algorithms, and evolutionary computation—has attempted to achieve Hermida's goal. What these systems share are mental models of cognition, learning and adaptiveness to new information, often with forecasting and prediction capabilities. Such systems work in journalism areas such as finance and sports that involve analytics, data-mining and statistics, and in related fields such as health informatics where there are clear, explicit guidelines on information and international standards. After a mid-1980s investment bubble (Leinweber 183-184) these systems now underpin the technology platforms of global finance and news intermediaries.

Bloomberg LP's ubiquitous dual-screen computers, proprietary network and data analytics (www.bloomberg.com), and its competitors such as Thomson Reuters (www.reuters.com), illustrate how financial analysts and traders rely on an "awareness system" to navigate global stock-markets (Clifford and Creswell). For example, a Bloomberg subscriber can access real-time analytics from exchanges, markets, and from data vendors such as Dow Jones, NYSE Euronext and Thomson Reuters. They can use portfolio management tools to evaluate market information, to make allocation and trading decisions, to monitor 'breaking' news, and to integrate this information.

Twitter is perhaps the 'para-journalist' equivalent to how professional journalists and finance analysts rely on Bloomberg's platform for real-time market and business information. Already, hedge funds like PhaseCapital are data-mining Twitter's 'tweets' or messages for rumours, shifts in stock-market sentiment, and to analyse potential trading patterns (Pritchett and Palmer). The US-based Securities and Exchange Commission, and researchers like David Gelernter and Paul Tetlock, have also shown the benefits of applied data-mining for regulatory market supervision, in particular to uncover analysts who provide 'whisper numbers' to online message boards, and who have access to material, non-public information (Leinweber 60, 136, 144-145, 208, 219, 241-246). Hermida's framework might be developed further for such regulatory supervision.

Hermida's "awareness system" may also benefit from the algorithms found in high-frequency trading (HFT) systems that Citadel Group, Goldman Sachs, Renaissance Technologies, and other quantitative financial institutions use. Rather than human traders, HFT uses co-located servers and complex algorithms, to make high-volume trades on stock-markets that take advantage of microsecond changes in prices (Duhigg). HFT capabilities are shrouded in secrecy, and became the focus of regulatory attention after several high-profile investigations of traders alleged to have stolen the software code (Bray and Bunge). One public example is Streambase (www.streambase.com), a 'complex event processing' (CEP) platform that can be used in HFT, and commercialised from the Project Aurora research collaboration between Brandeis University, Brown University, and Massachusetts Institute of Technology. CEP and HFT may be the 'killer apps' of Hermida's "awareness system". Alternatively, they may confirm Jaron Lanier's worst fears: your data-stream and user-generated content can be harvested by others—for their gain, and your loss!

**Conclusion: Brian Eno and Redefining Ambient Journalism**

On the basis of the above discussion, I suggest a modified definition of Hermida's thesis: 'Ambient journalism' is an emerging analytical framework for journalists, informed by cognitive, cybernetic, and information systems research. It 'sensitises' the individual journalist, whether professional or 'para-professional', to observe and to evaluate their immediate context. In doing so, 'ambient journalism', like journalism generally, emphasises 'novel' information. It can also inform the design of real-time platforms for journalistic sources and news delivery.

Individual 'ambient journalists' can learn much from the career of musician and producer Brian Eno. His personal definition of 'ambient' is "an atmosphere, or a surrounding influence: a tint", that relies on the co-evolution of the musician, creative horizons, and studio technology as a tool, just as para-journalists use Twitter as a platform (Sheppard 278; Eno 293-297). Like para-journalists, Eno claims to be a "self-educated but largely untrained" musician and yet also a craft-based producer (McFadzean; Tamm 177; 44-50). Perhaps Eno would frame the distinction between para-journalist and professional journalist as "axis thinking" (Eno 298, 302) which is needlessly polarised due to different normative theories, stances, and practices.

Furthermore, I would argue that Eno's worldview was shaped by similar influences to Licklider and Engelbart, who appear to have informed Hermida's assumptions. These influences include the mathematician and game theorist John von Neumann and biologist Richard Dawkins (Eno 162); musicians Eric Satie, John Cage and his book *Silence* (Eno 19-22, 162; Sheppard 22, 36, 378-379); and the field of self-organising systems, in particular cyberneticist Stafford Beer (Eno 245; Tamm 86; Sheppard 224). Eno summed up the central lesson of this theoretical corpus during his collaborations with New York's 'No Wave' scene in 1978, of "people experimenting with their lives" (Eno 253; Reynolds 146-147; Sheppard 290-295). Importantly, he developed a personal view of normative theories through practice-based research, on a range of projects, and with different creative and collaborative teams.

Rather than a technological solution, Eno settled on a way to encode his craft and skills into a quasi-experimental, transmittable method—an aim of practitioner development in professional journalism. Even if only a "founding myth", the story of Eno's 1975 street accident with a taxi, and how he conceived 'ambient music' during his hospital stay, illustrates how ambient journalists might perceive something new in specific circumstances (Tamm 131; Sheppard 186-188). More tellingly, this background informed his collaboration with the late painter Peter Schmidt, to co-create the Oblique Strategies deck of aphorisms: aleatory, oracular messages that appeared dependent on chance, luck, and randomness, but that in fact were based on Eno and Schmidt's creative philosophy and work guidelines (Tamm 77-78; Sheppard 178-179; Reynolds 170). In short, Eno was engaging with the kind of reflective practices that underpin exemplary professional journalism. He was able to encode this craft and skills into a quasi-experimental method, rather than a technological solution.

Journalists and practitioners who adopt Hermida's framework could learn much from the published accounts of Eno's practice-based research, in the context of creative projects and collaborative teams. In particular, these detail the contexts and choices of Eno's early ambient music recordings (Sheppard 199-200); Eno's duels with David Bowie during 'Sense of Doubt' for the *Heroes* album (Tamm 158; Sheppard 254-255); troubled collaborations with Talking Heads and David Byrne (Reynolds 165-170; Sheppard; 338-347, 353); a curatorial, mentor role on U2's *The Unforgettable Fire* (Sheppard 368-369); the 'grand, stadium scale' experiments of U2's 1991-93 ZooTV tour (Sheppard 404); the Zorn-like games of Bowie's *Outside* album (Eno 382-389); and the 'generative' artwork *77 Million Paintings* (Eno 330-332; Tamm 133-135; Sheppard 278-279; Eno 435). Eno is clearly a highly flexible maker and producer. Developing such flexibility would ensure ambient journalism remains open to novelty as an analytical framework that may enhance the practitioner development and work of professional journalists and para-journalists alike.

## Acknowledgments

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