OPEN ACCESS Freely available online

ISSN 2737-5293
Issue 2, Volume 4
https://www.iikii.com.sg/journal/IJSSAI
International Journal of Social Sciences and Artistic Innovations

Article

A Values-led Approach to Technological Change

Brian Stout

Pro Vice-Chancellor Learning & Teaching, Western Sydney University, Penrith 2751, NSW, Australia, B.Stout@westernsydney.edu.au

Received: Apr 20, 2024; **Revised:** May 20, 2024; **Accepted:** May 27, 2024; **Published:** Jun 13, 2024

Abstract: In this article, I argue that as technology advances at ever faster rates, it is imperative to approach each new technological development through the lens of core values. Criminal and community justice and higher education are discussed to highlight how technological developments can challenge our values and progress on parallel tracks. In community justice, technology has been most prominent in the utilization of electronic monitoring and tracking. EM was initially promoted as an alternative to custody but is increasingly utilized as an adjunct to custody, an extra element of punishment, or as an extra level of surveillance. It is important to interrogate the values of the use of this technology and the impact of monitoring on individuals and diverse and possibly disadvantaged groups. It is also important to study if the use of technology support inhibits rehabilitation. Higher Education has a long history of being challenged and disrupted by technology. Most recently, it is the use of Artificial Intelligence that has raised anxiety. If the skills and abilities that universities teach become redundant and how educators tell whether students are submitting assignments written by themselves are also important to research. The results of such discussions provide educational values in the purpose and nature of education.

Keywords: A values-led approach, Technological change

1. Introduction

Digital disruption and unpredictable technological changes that adhere to core values are discussed to provide navigational guidance. Two areas of public social life that have been recently impacted by technological change are considered: the Criminal Justice System (CJS) and Higher Education (HE). Technological advances have sometimes occurred without the necessary ethical engagement or discussion leading to misuse, confusion, and harm to individuals. A values-led approach protects individuals and groups and guidance, therefore mitigating against becoming too reactive to changes and developments that occur.

2. CJS and Community Justice Values

Values in the CJS are a site of contestation and often political conflict. In most jurisdictions, discussions of responses to offending are led by considerations of punishment or deterrence with the assumption that these approaches are best able to lead to public protection. It is much less common to observe criminal justice innovations being assessed on their contribution to promoting rehabilitation or human rights. Amidst a debate as to who can be most demonstratively punitive, or introduce the most effective surveillance, it can be difficult for those who support humanistic or rehabilitative values to be heard (Nellis, 2005)

In criminal justice, the question of what can be done sometimes seems to be placed ahead of what must be done, as new technology is embraced and adopted. To date, technology has had the most impact on criminal justice in the use of electronic monitoring and other tracking systems. Electronic monitoring was initially presented as offering potential as an alternative to custody, particularly for remand prisoners but it then became more regularly used as a form of surveillance (Smith & Gibbs, 2013). It was seen as a way to promote public safety, particularly when high-profile sex offenders were released into the community after serving sentences or in domestic violence prevention (Martinovic and Schluter, 2012). GPS technology can be used to prevent absconding and so alleviate the need for the individual to be locked up. Electronic tagging is now widely used, with individuals wearing a bracelet, enabled with GPS technology, allowing authorities to track them at all times. It is utilized at all stages of the CJS including as an alternative to remand for prisoners awaiting trial, as an aspect of parole, as a staging post to a full release from custody, or for use with convicted lower-risk offenders or white-collar offenders, who do not present a risk of violence. In South Australia, another specific use of tagging is for people who have previous convictions for arson offenses. The Criminal Procedure (Monitoring Orders) Amendment Bill 2022 allows that during the hottest period of the summer when the fire risk is greatest, the police are able to apply for the movements of such convicted offenders to be closely tracked.

There has been an ongoing debate about whether electronic monitoring (EM) is primarily a form of punishment or a form of surveillance. Arguably, it is best conceptualized as a form of surveillance, and being more like community service than a rehabilitation regime, as it controls the body, rather than the mind (Nellis, 2009; Hucklesby, 2013). EM also has an impact on family life as families also play a role in controlling the offender and can feel that they are both being punished and being the punisher. Several families find the experience stressful but others report positive aspects, including having the offender present and that his behavior has become more predictable (Vanhaelemeesch & Vander Beken, 2014).

3. Electronic Monitoring in Reducing Reoffending

Reducing reoffending and promoting public safety is a key community justice value, and there is some evidence to suggest that electronic monitoring can be effective in working with sex offenders providing that important contextual factors are taken into consideration (Belura et al., 2020). The logic behind the use of EM to reduce reoffending follows the following assertions.

- EM increases risks for individuals in further offending, in that they are more likely to be detected.
- EM increases efforts in committing a crime, particularly where those tagged have to remove the device.
- EM reduces the rewards of committing a crime.
- EM removes excuses for the commission of further offending, particularly where there are restrictions on the use of drugs or alcohol.
- EM reduces the provocations for offending, by imposing curfews and geographical restrictions that minimize the opportunity for peer pressure.

The use of technology has developed alongside wider community justice debates, without always being connected to discussions of community justice values. Technology developments have been led by the private sector, while discussions about community justice and values are primarily located within the public sector and academia, sometimes with suspicion about the advance of technology and the motives of those promoting it. However, there is no reason why community justice and technology cannot operate together and technological innovations can be introduced in a way that is compatible with community justice values. An EM intervention can be a positive, pro-social approach. A period of restriction, supported by EM can provide stability to an individual's life, allowing wider intervention, alongside a period of reflection, to address the underlying issues behind their offending behavior.

There are examples from Australia of technology being used in a positive way to support community justice interventions. A scheme in South Australia provided support to women in their efforts to gain up-to-date identification documents on their release from prison (Jarldorn and Emery, 2022). During the COVID lockdown, the use of virtual courts kept the justice system functioning and many of the approaches adopted have continued in the post-covid environment (Rossner et al., 2021). It is difficult to envisage a way in which the use of EM and other technological innovations can significantly advance the reduction in the use of custody (Stout, 2023). EM does meet many of the purposes of punishment, in that it incapacitates (at least partly), provides an element of punishment, facilitates rehabilitation, and can be swiftly and visibly applied. However, it can be perceived as a soft option by the public, and there have not yet been examples of the use of EM satisfying the public's desire for retribution. It is perhaps, unrealistic to contemplate that any technology could provide a widely accepted alternative to the use of custody:

"If moral argument and political strategies alone cannot galvanize commitment to reduced prison use, the availability of a new technology (at least this technology, in this context) cannot, by itself, be of help." (Mair and Nellis, 2013: 78).

Canton (2023) further argues that the use of electronic monitoring does not satisfy the emotional element of the public's demand for a response. In this sense, the current and future use of AI might be more directed to community interventions, presenting what appears to be a punitive edge, while also adding reliable surveillance to community interventions. An example of how this might work is found in Taiwan, where there have been connections between electronic monitoring and community justice approaches (Taiwan High Prosecutor's Office, 2024). The Taiwanese use what is termed a supervision diamond model to prevent crimes of sexual assault. This involves the creation of a prevention team including representatives from the community and various criminal justice agencies. The team uses EM to track a sexual offender who is in the community on parole or probation, but this is just one of the approaches taken. The team will also utilize professional interviews and home and workplace visits, including from the police. Psychological treatment units provide counseling. The EM is therefore connected to other approaches, promoting both rehabilitation and community safety. It is a good example of how electronic monitoring can form part of a fair and proportionate response, promoting public safety and treating the individual as worthy in their own right and capable of change. The use of technology becomes an inherent component of a community justice-led approach.

4. Artificial Intelligence (AI) and Higher Education

The CJS has had many years to come to terms with the impact of technology and the lines of debate are now well established. Higher Education, in contrast, had a matter of months, or even weeks, to respond to the impact of generative AI, in the form of ChatGPT, at the start of 2023. Generative AI refers to AI systems that can create new content, such as text, images, or music, by learning patterns and structures from existing data sets. AI was not invented in 2023, but the advent of ChatGPT at that time made it considerably more widespread, more user-friendly, and more accessible. Universities reacted quickly, and initially defensively, with the immediate responses, both publicly and within institutions, focusing on what measures needed to be taken to ensure work submitted by students was genuinely their work and not the product of generative AI. This conversation soon expanded into a broader discussion about how AI might impact the work of universities and the approaches of both students and academics. In Australia, the Tertiary Education Quality and Standards Agency (TEQSA) Chief Commissioner, Professor Peter Coaldrake, made an early and helpful intervention to set the tone (TEQSA, 2023):

"*Institutions must balance the best way to leverage potential benefits while mitigating the risk that generative AI presents to academic integrity. The power of generative AI tools requires a deep rethink of approaches to teaching and learning and assessment practices and how higher education institutions are ensuring that students have attained the skills and knowledge they need to graduate with their awards.*"

Coaldrake focused on assessment and the need for a creative and positive approach. After the first year of engaging with ChatGTP, there are four key questions that HE engages with:

- What are students allowed to do?
- How do universities prepare students for the world of work?
- What behaviors do universities model?
- What values must universities seek to promote in education?

These questions can be answered regarding key university values. Most universities set out statements of their values as part of their strategic vision or mission statements. These are determined by individual institutions but there are strong similarities across the sector. The author has used the values of his institution as a means of the article. These are boldness, fairness, integrity, and respect. These values appear in the mission statements of many institutions and are widely shared across the sector.

Universities can engage with AI with boldness. There is always a temptation, when faced with a new and unknown challenge, to retreat to established practice. Universities assessed students for generations prior to the advent of any form of technology and they can return to such approaches (Cassidy, 2023). Pen and paper exams cannot be delegated to ChatGPT so returning to these manual, invigilated assessments would seem to be a straightforward way of preventing that form of academic misconduct, and several institutions and programs have already taken such an approach. However, this is a strategy with significant limitations. There were good reasons for the move away from an exam-based assessment in many subjects and those reasons remain, despite new arguments extolling the value of exams. Universities in recent decades have moved to creative and varied assessments that are more realistic, more authentic, and less reliant on rote learning and memory testing. Returning to pen and paper exams, simply as a response to the perceived threat from AI, would seem to be a retrograde step. A bolder approach would be to continue to be creative and innovative in assessment design, particularly in seeking alternative approaches to extensive reliance on essays and reports.

Universities also need to determine whether they see their roles as leaders in AI and, if so, what that will mean in practice. Tech companies and commercial entities are currently leading the debate on what AI can and must do. Universities, both through their computing academics and elsewhere, must be prominent in these debates, particularly around the ethical engagement with AI.

Fairness is a core value of the university sector and AI, such as all technology, has the capacity either to increase fairness or to perpetuate inequities already present in society. AI, on its own, will not be able to fix systems that are already inherently unfair. AI will provide the greatest benefit for those who are able to afford to use it, particularly when subscriptions are required for more advanced services. It will also provide greater benefits for those who have already acquired the skills and education that allow them to utilize AI most effectively. This will mean that when universities do permit the use of AI for academic assessments, students who cannot afford a higher level of access could be disadvantaged unless universities take measures to address this. With regard to issues of academic integrity, there is also a risk of differential impact of measures that are introduced to prevent cheating. Software designed to detect the presence of machine-written text can inadvertently pick up translation software used, legitimately, by international students. Similarly, software that is designed to support those with disabilities or students who are neurodiverse may be inadvertently picked up by AI detection software. While a fair application of university misconduct processes must ensure that such students ultimately face no sanction, the process of being investigated is itself stressful and demanding. A perhaps ironic development in the advent of ChatGPT is the negative disruptive impact that it appears to be having on the business model of essay mills which had previously provided paid services to write essays for students that they could then illicitly claim as their work

(Stacey, 2023). Students seem to be unwilling to pay to have someone write an essay for them when they can access such a service through ChatGPT for free, and more quickly.

The concept of Integrity is central to the role of AI in HE. How do we know that the named authors of a paper wrote what they claim to have written? Authorship of text has varying degrees of importance in university life. At one extreme, it is of little relevance whether marketing text was written by an individual or by a machine. At the other extreme, however, it is vital for medical or engineering students to demonstrate knowledge and competence before being assessed as fit to practice and accredited for their professional role. AI presents a series of ethical challenges but the need to maintain academic integrity is central to the university's mission. As happens so often, technological solutions are offered to solve technological challenges and detection software quickly became available to identify the use of AI. This software cannot currently claim to be entirely reliable, and it is very possible that soon AI will evolve to be solely or primarily undetectable. Ethical use of AI requires that authors must always be clear about what is written by humans, and what is written by computers. Universities must adopt the role of guardians of integrity. Currently, the role of the writers of rules for AI has been taken by state governments, often led by the fear of foreign interference in domestic affairs, but there's an important leadership role that could be played by academics (Yang and Bernot, 2023). At present, only a quarter of top academic journals guide the appropriate use of AI (Ganjavi et al., 2024).

The fourth principle that universities must be guided by, is that of excellence**.** AI must have a potentially transformative effect on research, teaching, and the business of the university. The Group of Eight universities in Australia comprises the nation's leading research-intensive universities and they issued a statement to say that AI might be as important as the industrial revolution, and have developed principles to respond appropriately (Group of Eight, 2023). Universities need to work together to develop and promote best practices and to take on a role as leaders in how AI can be used for the benefit of society.

Having considered the value position, it is now possible to return to the four key questions relating to AI and HE. The first of these is what is it permissible for students to do? A survey in Australia, at the end of 2023, showed that 82% of students had used AI (Skeat and Ziebell, 2023). They used it for summarizing, editing, testing, and proofreading. Several students are required to use AI for assignments. Other assignments prohibit AI use, and students may encounter both approaches during their studies. Students say that they are clear about the limitations of AI. However, they are less clear about the rules imposed and enforced by their institutions and what they are allowed to do. The approach to AI is not consistent across institutions, within institutions, or even within courses, making it difficult for students to follow and comply. Universities' guidelines must be clearly stated and widely promulgated. Any rules on the use of AI need to be consistent with the institution's ability to enforce them. Guidelines must not assume the worst of students, including in their use of AI, and must not assume that all students will attempt to cheat unless they fear detection. Universities must educate students on how to use generative AI technology in the right way.

The second question that needs to be addressed by universities is how they prepare students for future employment, when, for many of them, generative AI will be a significant part of their future working lives. Computers can and will be able to replicate elements of human intelligence so some of the tasks that they had previously been employed to do will be done by AI. It is in this context that it is vitally important to ensure equal access to generative AI so that all students will be able to be equipped for future employment. Universities need to empower students, not restrict them. The assessment strategy must engage directly with generative AI and how it can be used effectively in the workplace. This will include the ethical dimension of utilizing AI for writing, particularly in health and human services courses where a seemingly quicker, more efficient approach to report writing could result in a diminution of professionalism or vital human engagement. Where AI is used to support a medical diagnosis or social assessment, the methodology applied and the inherent assumptions within the AI determination must be clear and transparent.

The third key question for universities to engage with is what behavior they must model. This applies both at an institutional level and to the practices of individual academics. At present, there is little open discussion of how AI is being used, or how university academics and leaders are themselves making use of generative AI. Universities set rules as to how it is appropriate to use AI, and how that work must be referenced and attributed, but it is, as yet, rare to see examples of this happening. Academics must be open about their use of generative AI, to avoid giving the impression that AI use is somehow secretive or shameful. As well as their use of AI, universities could take a role as a community leader, supporting local organizations, such as community groups and schools, in their adoption of the use of generative AI. Universities often find themselves in competition with each other but the challenges of AI require an approach that is collaborative, not competitive.

The final and overarching question to engage with is what the purpose of university education is. In the same way, the use of technology in criminal justice must be led by an understanding of the purpose of criminal justice and the promotion of rehabilitative values, so that must apply to Higher Education. If the response to generative AI is simply to see it as a threat to current assessment strategies, then that will omit the crucial positive aspect of education. Too narrow a focus on employment preparation will fail to equip students for a changing employment environment; universities must prepare students to think ethically and to be ready for the future world that they will encounter. The advent of generative AI presents an opportunity to engage directly with key ethical

questions both now and into the future Even though machines cannot be moral, it is possible to allocate decisions of a moral nature to them (Walsh, 2022). It is these ethical questions about values and fairness that cannot be delegated to computers, they require human decision-making.

Funding: This research did not receive external funding

Acknowledgments: The author is grateful to the College of Humanities and Social Sciences, Chaoyang University of Technology, for the invitation to the IEEE International Conference on Social Sciences and International Management in December 2023, where this paper was first presented.

Conflicts of Interest: The author declares no conflict of interest.

References

1. Australian Government Tertiary Education and Quality Standards Agency (TEQSA). Chief Commissioner outlines academic integrity risks in 2023. Post on February 1, 2023. Available Online：https://www.teqsa.gov.au/about-us/news-and-events/latest-news/chief-commissioner-outlines-academic-integrity-risks-2023（accessed on May 1, 2024）.
2. Belura, B., Thornton, A., Tompson, A., Manning, M., Sidebottom, A., & Bowers, K. (2020). A systematic review of the effectiveness of the electronic monitoring of offenders. *Journal of Criminal Justice*, *68*, 101686. https://doi.org/10.1016/j.jcrimjus.2020.101686
3. Canton, R. (2022). *Punishment*. London, UK: Routledge.
4. Cassidy, C. Australian universities to return to 'pen and paper' exams after students caught using AI to write essays. Post on January 10, 2023. Available Online ： https://www.theguardian.com/australia-news/2023/jan/10/universities-to-return-to-pen-and-paper-exams-after-students-caught-using-ai-to-write-essays（accessed on May 1, 2024）.
5. Ganjavi, C., Eppler, M., Pekcan, A., Biedermann, B., Abreau, A., Collins, G., Gill, I., & Cacciamani, G. (2024). Publishers and journals' instructions to authors on use of generative AI in academic and scientific publishing: bibliometric analysis. *British Medical Journal*, *384*, e077192. https://doi.org/10.1136/bmj-2023-077192
6. Group of Eight Australia. Group of Eight principles on the use of generative AI. Post on September 20, 2023. Available Online： https://go8.edu.au/media-release-group-of-eight-principles-on-the-use-of-generative-artificial-intelligence（accessed on May 1, 2024）.
7. Hucklesby, A. (2013). Insiders' views: Offenders' and staff's experiences of electronically monitored curfews. In M. Nellis, K. Beyens and D. Kaminski (Eds.), *Electronically Monitored Punishment: International and Critical Perspectives*, Abingdon, IN, USA: Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9780203103029-15/insiders-views-anthea-hucklesby
8. Jarldorn, M., & Emery, S. Getting ID after exiting prison is harder than you might think. So we built a chatbot to help. Post on April 25, 2022. Available Online：https://theconversation.com/getting-id-after-exiting-prison-is-harder-than-you-might-think-so-we-built-a-chatbot-to-help-180570（accessed on May 1, 2024）.
9. Martinovic, M., & Schluter, P. (2012). A researcher's experience of wearing a GPS-EM device. *Current Issues in Criminal Justice*, *23* (3), 413–432. https://doi.org/10.1080/10345329.2012.12035932
10. Nellis, M. (2005). Dim Prospects: Humanistic values and the fate of community justice. In J. Winstone and F. Pakes (Eds.), *Community Justice: Issues for Probation and Criminal Justice*. Cullompton, UK: Willan. https://www.taylorfrancis.com/chapters/edit/10.4324/9781843925781-3/dim-prospects-humanistic-values-fate-community-justice-mike-nellis
11. Nellis, M. (2009). Surveillance and confinement: Explaining and understanding the experience of electronically monitored curfews. *European Journal of Probation*, *1* (1), 41–65. https://doi.org/1177/206622030900100104
12. Rossner, M., Tait, D., & McCurdy, M. (2021). Justice reimagined: challenges and opportunities with implementing virtual courts. *Current Issues in Criminal Justice*, *33*(4), 94–110. https://doi.org/10.1080/10345329.2020.1859968
13. Skeat, J., & Ziebell, N. Australian uni students are warming to chatGPT. But they want more clarity on how to use it. Post on November 29, 2023. Available Online：https://theconversation.com/australian-uni-students-are-warming-to-chatgpt-but-they-want-more-clarity-on-how-to-use-it-218429?utm_medium=email&utm_campaign=Latest%20from%20The%20Conversation%20for%20November%2030%202023%20-%202809328441&utm_content=Latest%20from%20The%20Conversation%20for%20November%2030%202023%20-%202809328441+CID_0dc8fad7b83a84e195717683ef46f6cb&utm_source=campaign_monitor&utm_term=Australian%20uni%20students%20are%20warming%20to%20ChatGPT%20But%20they%20want%20more%20clarity%20on%20how%20to%20use%20it(accessed on May 1, 2024.
14. Smith, R., & Gibbs, A. (2013). Extending the electronic net in Australia and New Zealand: Developments in electronic monitoring down under. In M. Nellis, K. Beyens and D. Kaminski (Eds.), *Electronically Monitored Punishment: International and Critical Perspectives*,

Abingdon, UK: Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9780203103029-6/extending-electronic-net-australia-new-zealand-russell-smith-anita-gibbs

15. Stacey, S. 2 writers who get paid to produce assignments to let lazy students cheat suspect ChatGPT is stealing their customers. Post on February 18, 2023. Available Online：https://www.businessinsider.com/writers-for-hire-lazy-students-cheat-suspect-chatgpt-stealing-customers-2023-2?utmSource=twitter&utmContent=referral&utmTerm=topbar&referrer=twitter（accessed on May 1, 2024）.
16. Stout, B. (2023). *Community Justice in Australia*. Oxford, UK: Routledge.
17. Taiwan High Prosecutor's Office. Electronic Monitoring System. Post on April 19, 2024. Available Online：https://www.tph.moj.gov.tw/5520/5522/5556/837805/837808/（accessed on May 1, 2024）.
18. Vanhaelemeesch, D., & Vander Beken, T. (2014). Between convict and ward: The experience of people living with offenders subject to electronic monitoring. *Crime Law and Social Change*, *62*, 389–415. https://doi.org/10.1007/s10611-014-9535-5
19. Walsh, T. (2022). *Machines Behaving Badly*. Victoria, UK: La Trobe Press.
20. Yang, F. and Bernot, A. Who will write the rules for AI? How nations are racing to regulate AI. Post on November 8, 2023. Available Onlin：https://theconversation.com/who-will-write-the-rules-for-ai-how-nations-are-racing-to-regulate-artificial-intelligence-216900?utm_medium=email&utm_campaign=The%20Weekend%20Conversation%20%202792028251&utm_content=The%20Weekend%20Conversation%20%202792028251+CID_bfdb7eea392827e4a199353a7b394ea8&utm_source=campaign_monitor&utm_term=Who%20will%20write%20the%20rules%20for%20AI%20How%20nations%20are%20racing%20to%20regulate%20artificial%20intelligence（accessed on May 1, 2024）.