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Founded in 1990, Design Providence is a multi disciplinary practice in the field of Interior Architecture and Product Design with expertise in Museum Design. Working in Service Design and Design Thinking since 2010 becoming a Partner with Amsterdam based DesignThinkers Group & Academy in 2013 facilitating rapid prototyping workshops, including the Global Goals Jam with Amsterdam University of Applied Sciences and the UNDP.

Mark held office as Vice President with the Victorian Chapter of the Design Institute of Australia, also as Director with Arts & Recreation Training Victoria advising on Design education into the Vocational Education sector under Chairs George Fairfax AO and Paul Clarkson AO, and also Artists & Industry under Chair the Hon. Evan Walker AO.

Mark has presented on Design in India since 2003 at Design Sutra Conference Mumbai, participated in the International Council of Societies of Industrial (ICSID) [now World Design Organisation] Interdesign Workshop "Humanising the Metropolis" Mumbai, also presented at IIT Delhi, IIT IDC, Mumbai, NID Ahmedabad and DYPDC Center for Automotive Research & Studies, Pune as well as

keynote at NatCon InDesia in Kolhapur in 2014 for the IIID. Forming the Indo Australian Design Research Alliance ten years ago and developing the concept as a NFP.

He is advisor to the India Design Festival, the Delhi Design Festival and Odisha Design Council as well as judging India's Best Design Studio /Project Awards 2017. He was Guest Editor of the 'Design for All of India'

Journal July 2017 Vol-12 No-7 and currently completing a second Guest editor role for this journal. He has been a keynote speaker at CII NID Design Summits 2010 in Delhi and 2017 in Hyderabad.

In 2017 participated with the Australia India Institute as Incoming Leaders Fellow researching Air Quality in Delhi incorporating World University of Design and CSIR – NEERI. He has accepted a role as Adjunct Professor with WUD in Delhi looking at Integrated Design strategies in Urban Design.

Access Denied: Inequality in Informal learning in Cultural Institutions.

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Abstract

The aim of this paper is to open up new ways of reducing inequality through increasing access to informal education for all while addressing blocking issues around tactility and hygiene. A desk top survey of current literature is used to provide insights into possible actions which may lead to improved access to cultural institutions. It is concluded that India may benefit from a rethink on the use of cultural institutions to meet other social objectives not usually recognised as part of that services provision. It is recommended that consideration be given to multi purposing cultural facilities to accommodate general hygiene in the design of infrastructure to cater for these needs.

Keywords: Design, Museums, Libraries, Galleries, Non-formal Education, Informal Learning, Civil Society, Access, Hygiene, Equality.

Introduction

With the World concentrating on the doomsday clock⁴ and its 100 minutes to midnight timeline, though more focussed on the climate crisis than the initial fear of a nuclear holocaust, the push for achieving the Sustainable Development Goals (SDGs) by the year 2030 as framed by the United Nations Development Program⁵ (UNDP) has formed the focus of research and endeavours across the arts and sciences.

⁴ *Doomsday Clock - Bulletin of the Atomic Scientists (2022). [Online]. Available at: <https://thebulletin.org/doomsday-clock/> (Accessed 8 April 2022)*

⁵ *Sustainable Development Goals | United Nations Development Programme [Online]. Available at: <https://www.undp.org/sustainable-development-goals> (Accessed 8 April 2022)*

With the 17 goals as set out by the UNDP, research is structuring its outcomes with reference to the Goals and Targets. So, the framing of this paper will look to opportunities surrounding the SDGs #4 Quality Education embedded within #10 Reduced inequality and #11 Sustainable Cities & Communities.

SDG #4⁶ set targets for 4.1 through to 4.7 relate particularly to formal education settings such as primary, secondary, and tertiary education, the targets expand to 4.a which stipulates “Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.”

With this journal’s focus on the principles of Universal and Inclusive Design, the opportunity here is to expand the discussion beyond the normal realm of disabled access towards design for all.

As the discipline of ergonomics has expanded its remit into workplace psychology so too universal / inclusive design could benefit from expanding into areas to better fulfil a commitment to the SDGs.

The opportunities we expand on here look to other institutions outside of the formal education sector of schools, colleges and universities and focusses on museums, galleries and libraries.

As these informal places of learning have struggled to meet community needs, especially in contemporary times beset with global pandemics, difficulties associated with access and handling of associated materials emerged, leading to disruption of this public service of knowledge and experience within these cultural centres of learning.

⁶ Goal 4 | Department of Economic and Social Affairs (2022). [Online]. Available at: <https://sdgs.un.org/goals/goal4> (Accessed 8 April 2022)

Inequality, sanitation and hygiene

The current COVID19 pandemic that has swept the world since late 2019 is clearly the worst in living memory, with previous examples happening more than a century earlier in the form of the Spanish flu which rippled across the globe and here also in Australia⁷ for at least 3 years.

This current disruption to the world's population has tested societal norms and raised research in post COVID scenarios, clearly the issues of hygiene are most prevalent in a return to a new normal.

The major revelation of the predominant spread of COVID19 through airborne particles led to strategies to limit contamination through the use of face masks and personal protective equipment or PPE and the instituting of hygiene or cleanliness standards to limit cross contamination from surfaces and environments.

This is not a new remedy as is evident from the Spanish Flu outbreak⁸ coming on the back of the First World War and the development of new techniques in disease and infection control.

⁷ *Department of Health | History of pandemics (2008). [Online]. Available at: <https://www1.health.gov.au/internet/main/publishing.nsf/Content/about-pandemic-history> (Accessed 22 April 2022)*

⁸ *The Mask Slackers of 1918 (Published 2020) New York Times (2020). [Online]. Available at: <https://www.nytimes.com/2020/08/03/us/mask-protests-1918.html> (Accessed 22 April 2022)*



1918 image of Californian Rail passengers showing compliance during Spanish Flu outbreak

And more than a century later society is being tested by issues of personal freedoms and the contestation of government mandates.⁹

Within the Indian context sanitation has taken a central role in sustainable development with the Indian Government platform *Swachh Bharat Abhiyan (or the Clean India Mission)*¹⁰

With a focus on clean drinking water and faecal waste treatment this societal need arose around female safety and open defecation.

As India makes progress on Citizen's empowerment¹¹ through its Department of Social Justice and Empowerment there seems to be

⁹ ***Judge Strikes Down TSA Mask Mandate on Planes, Public Transportation [Online]. Available at: <https://www.healthline.com/health-news/federal-judge-strikes-down-tsa-mask-mandate-on-planes-and-public-transit> (Accessed 22 April 2022)***

¹⁰***Swachh Bharat Abhiyan (Clean India Mission) | Department of Economic and Social Affairs (2014). [Online]. Available at: <https://sdgs.un.org/partnerships/swachh-bharat-abhiyan-clean-india-mission> (Accessed 22 April 2022)***

more a focus on economic elevation of the target sectors. As with most Governments, the bureaucracies tend to silo their efforts and cross sectoral interactions i.e. education and sanitation face limited opportunities to access mainstream funding to creatively and innovatively respond to people's needs.

Civil Society, Education and hygiene

Civil Society¹² according to Jezard writing for the World Economic Forum in 2018 and citing the World Bank "*Civil society ... refers to a wide array of organizations: community groups, non-governmental organizations [NGOs], labour unions, indigenous groups, charitable organizations, faith-based organizations, professional associations, and foundations.*"

While academia has identified the quadruple helix¹³, that of the government – academia – industry – civil society silos, I include some Government organisations such as libraries and museums in this sector of civil society, some acting as trusts to remain independent from Government ideologies, to tell the facts rather than the "alternate facts" that have prevailed amongst some of the world's leading nations.

According to the National Education Policy of the Indian Government 2020, "Education is the single greatest tool for achieving social justice and equality. Inclusive and equitable education - while indeed an essential goal in its own right - is also critical to achieving an inclusive and equitable society in which

¹¹Brief overview | Department of Social Justice and Empowerment - Government of India [Online]. Available at: <https://socialjustice.gov.in/common/76661> (Accessed 22 April 2022)

¹² Jezard, A, (2018). Who and what is 'civil society?' [Online]. Available at: <https://www.weforum.org/agenda/2018/04/what-is-civil-society/> (Accessed 25 April 2022)

¹³ Roman M, Varga H, Cvijanovic V, Reid A. Quadruple Helix Models for Sustainable Regional Innovation: Engaging and Facilitating Civil Society Participation. *Economies*. 2020; 8(2):48. <https://doi.org/10.3390/economies8020048>

every citizen has the opportunity to dream, thrive, and contribute to the nation. The education system must aim to benefit India 's children so that no child loses any opportunity to learn and excel because of circumstances of birth or background.”¹⁴

The international COVID19 pandemic has only exacerbated the problem of formal education delivery as reported by Reuters¹⁵ where regional villages closed down schools due to the pandemic, leaving disadvantaged groups isolated due to poor access to online digital platforms of formal learning. An interesting addition to the curriculum in this informal setting of an open air street school was hand washing.

Cultural institutions such as libraries and museums provide the public with a balanced view of the world, a window of sorts for all to gain informed yet informal educated glimpses of what could be, in terms of an inclusive society.

These institutions also have an educative role to play across all sectors and strata of society as non-formal or informal learning providers¹⁶, and the placement of barriers to the lower socio-economic groups is detrimental to sustainable development.

As the World emerges from the privations caused through this global pandemic, authorities will look to mitigate risk through better protocols on hygiene across all venues be it marketplaces or learning spaces.

¹⁴ **MHRD India 2020. National Education Policy. Available at: https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf (Accessed 7 May 2022)**

¹⁵ **Chowdhuri, R. D, (2021). In remote Indian village, teacher turns walls into blackboards to close school gap [Online]. Available at: <https://www.reuters.com/world/india/remote-indian-village-teacher-turns-walls-into-blackboards-close-school-gap-2021-09-16/> (Accessed 16 May 2022)**

¹⁶ **Erich, Agnes. (2018). Erich, A. (2018). The Role of Public Libraries in Non-Formal Learning. Revista Romaneasca pentru Educatie Multidimensionala, 10(3), 17-24**

Water and Air Quality

Leading research in formal educational spaces¹⁷ in the Australian context, being mindful of the greater trends in pedagogy and architecture, place Inclusive Design principles to the fore, but post COVID19 as research points to airborne¹⁸ and surface transmission or fomites of the virus much effort has been placed on dealing with issues of ventilation and hygiene¹⁹.

Western societies have long been aware of disease transmission and sources since the Middle Ages and evolving hypotheses on spread and transmission narrowing down the environmental issues on realisation that crowded housing with poor diet and sanitation were a major contributor.

The advent of the middle classes drove the segregation of utilisation of space as workers became more prosperous and housing as well as education improved but only for some. Disadvantage today is still tinged with this segregation of lower socio-economic citizens and their take up and access to non-formal education institutions.

With chroniclers such as Charles Dickens writing of the period encompassing the Industrial Revolution especially in Europe (or England to be more precise), attention was drawn to sanitation and the spread of disease, instigating major civil works such as sewerage systems and fresh water to the home as a mandated feature.

¹⁷ University of Melbourne, (2022). *The next generation of Australian schools* [Online]. Available at: <https://pursuit.unimelb.edu.au/articles/the-next-generation-of-australian-schools> (Accessed 7 May 2022)

¹⁸ Victorian Government 2022, *Ventilation and Air Purification*. [Online]. Available at: <http://www2.education.vic.gov.au/pal/ventilation-air-purification/policy> (Accessed 7 May 2022)

¹⁹ Victorian Government 2022, *Covid19 – School Operations*. [Online]. Available at: <http://www2.education.vic.gov.au/pal/covid-19-school-operations/resources> (Accessed 7 May 2022)

To the advent of sanatoria at the turn of the 20th century and the remedial benefits of fresh air seeing hospitals equipped with openable windows and doorways opening onto external balconies.

Most developed countries have seen these amenities set as standards within building codes alleviating or offsetting the need to increase hospital facilities through prevention of illness. At the turn of last century in Victoria, Australia an article²⁰ from the Age newspaper illustrates a patronising bureaucracy barring access to a young man in 1856 asking him to “go home and wash your hands” with the author recounting that the young man most probably did not return to the library after such a request.

Inequality of Access

One tool that drives this wedge and entrenches this divide is the paid access to these institutions, especially the museum and gallery sector, on the one hand liberal economics would hold it as a ‘user pays’ approach to economic management but a more cynical view would hold it as a barrier to participation for the more needy in our communities.

Libraries typically do not use a user pays regime in meeting the needs of its citizens but limit access through the use of a membership or library card which uses a fixed address as a requirement. Museums too, discriminate through paid admission largely to fund programming costs to maintain visitation numbers.

Inequality here is of a temporal nature and the inequitable allowance of access discriminates against the very people who have most to benefit through these services of informal education.

²⁰ *A VISIT TO THE PUBLIC LIBRARY. - The Age (Melbourne, Vic. : 1854 - 1954) - 23 Jul 1856 [Online]. Available at: <http://nla.gov.au/nla.news-article154863720> (Accessed 14 May 2022)*

The sanitary habits of this particular group are exacerbated by their living condition and add to segregation in non-formal education.

Tactility, Haptics and Affordance

The field of perception once a leading area of research in Design in the late 20th century through work by the likes of Bloomer²¹, Bloomer²² and Gibson²³ has relatively recently made a come back.

With the printed word being transitioned to the Information Technology world and image and artefact reproduced digitally, the exposure to informal learning has expanded exponentially over such a short period of time.

Virtual and augmented reality also has had an impact and scholars as well as designers are trying to interpret its use and impact on its audiences.

The unequal access to these technologies has been an issue and therefore its ability to provide informal education as per the example from the streets of the tribal village of Joba Attpara in Paschim Bardhaman district of the eastern state of West Bengal. Access to information technology platforms through hardware, software and networks makes an equitable approach to education difficult for governments delivering services in formal education let alone the informal.

Museums, galleries and libraries face this dilemma with physical artefacts not at the public's disposal to be handled physically and the associated problems in libraries with physical books being

²¹ Bloomer, Carolyn M. *Principles of Visual Perception*. 2nd rev.ed., Herbert, 1990.

²² Bloomer, Kent C., and Charles Moore. *Body, Memory, and Architecture*. Yale University Press, 1977.

²³ Gibson, James J. (James Jerome). *The Ecological Approach to Visual Perception*. Classic edition., Psychology Press, 2015.

handled by patrons with poor to no sanitary facilities at their disposal and little access to information technologies in accessing information at their respective levels of comprehension.

Affordance is discussed in Disability Studies in India²⁴ where Murugkar et al. have defined mobility, sensory and cognitive affordance as the “triad of affordances” (see fig. 17.3) in their research into disabled access to heritage sites.

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Fig. 17.3 Proposed theoretical model of ‘Triad of Affordances’



Too there is a movement towards making the formal education infrastructure more community accessible with outreach examples testing the bounds in making education more accessible. Government Schools in Australia are exploring the school infrastructures as community hubs²⁵ as well as United Kingdom

²⁴ Murugkar, K, (2020). *Examining the Experience, Barriers and Enabling Measures for Visually Impaired Visitors in Heritage Sites—A Study in the Indian Context to Enhance Accessibility and Inclusion* [Online]. Available at: https://link.springer.com/chapter/10.1007/978-981-15-2616-9_17 (Accessed 16 May 2022)

²⁵ University of Melbourne 2020 Dr Philippa Chandler, Dr Ben Cleveland, Sarah Backhouse, Professor Janet Clinton, Associate Professor Clare Newton and Dr Ruth Aston, University of Melbourne; Associate Professor Ian McShane, RMIT. "Building stronger connections between schools and communities." *Pursuit*, 11

research²⁶ into Libraries filling the same community need for informal education and participation.

Conclusion

It would appear efforts in habituation amongst the lower socio-economic groups in India into active participation within non-formal education via libraries and museums is an area of concern. Habituation would involve a scaffolded approach to access via innovative and relevant education programmes and projects to test new ways of engaging with physical artefact be they books or artefacts.

The leap to a technological solution is inevitable but needs to be tempered with an empathic understanding of economic and intellectual barriers in reaching the target audiences with accessible knowledge and context. To simply throw virtual reality goggles on citizens would be another imposition of barriers to their inclusive connection to material.

Museum curators and librarians need to scaffold structured lesson plans in designing programmes that engage all patrons at some level appropriate to their abilities, from basic literacy and numeracy to doctorate students researching aspects of the subject matter.

Similarly, there is a need to habituate hygiene within these sectors to fully develop haptic interaction with the materials be it books or artefacts to enhance engagement. Possibly the development of ritual processes in sanitation within the educative journey, similar to religious rituals of washing and cleanliness

May 2022, <https://pursuit.unimelb.edu.au/articles/building-stronger-connections-between-schools-and-communities>.

²⁶ *The role of libraries as community hubs - Renaisi (2021)*. [Online]. Available at: <https://renaisi.com/2017/09/01/the-role-of-libraries-as-community-hubs/> (Accessed 16 May 2022)

may be an opportunity to alleviate tensions across classes of participants.

Libraries and Museums as cultural hubs could engage with the Indian Governments aims at improving sanitation by opening up their remit to the public in providing services where these have not been engaged with before.

Designers would be well placed to rethink hygiene and sanitation into the offerings of non-formal education institutions. Lessons learnt from bathhouses in ancient Rome for example where public bathing was interconnected with informal learning through libraries and lecture halls may inform a multifunctional approach to the contemporary siloing of these institutions as a necessity rather than an extravagance.