Library Learning Spaces: One School Library's Initial Design Brief

By Anne Whisken

When you are asked to provide a brief about the spaces required in new a building which caters for the current and future functions of a school library, what will you include? To what will you refer to help you develop your ideas? Who will you consult? Where will you go to get the photos to illustrate your ideas?

Is there a lot of difference whether it is a makeover, a renovation, an addition to a current library, a new building added to an existing school or an entirely new school site?

I have done a couple of these library space changes, and now I am facing my biggest library building project: a new library in an innovation centre which will incorporate large and small learning, meeting and study spaces; specific-purpose science facilities; archives; and an area for the particular learning and reading that is the usual function of a library. In addition to that, of course, are staff work spaces and ICT hardware and connections for blended learning.

The learning journey I am on is similar to that facing most teacher-librarians as they seek ways to keep their library spaces appropriate for the rapidly changing educational environment. Some people are able to make only small changes due to space and budget limitations, while others have the good fortune to be at the library when their school has the funds to embark on a big building project.

In my last Learning Landscape article, I explored the digital spaces of a school library learning landscape. This time, I explore the physical spaces, but of course the two are very much linked, calling for the same flexibility of attitude and willingness to change according to learning purpose and need. Both the digital and physical learning landscapes must have the same focus as they are designed and managed: for what learning function is the space to be used?

. . . calling for the same flexibility of attitude and willingness to change . . .

Confession: of all the articles I have written, this has been the most difficult. Knowledge about learning architecture in both its physical and digital forms is undergoing such rapid change that as soon as I reach a point where I can say, aha, I can report on this, another *Scoop-It* suggestion comes along to show me that the stuff I thought was comprehensive is not.

There are five things I will not do in this article. I will not:

- tell you that the educational environment is changing rapidly (the mention above notwithstanding);
- report that many school libraries and their collections are either being replaced by changed spaces with less books and different staff structures, or are under threat of closure in a view which sees digital formats as the future form of information and reading;
- repeat the clarion calls from leaders in our school library associations that we need to reshape or ship out, because 'shift happens' (Hay, 2010);
- discuss staffing profiles or numbers apart from pointing to the need for appropriate spaces to support a team of people with particular expert skills to support teaching and learning;
- come up with a definitive name for the space (iCentre, library, information resource centre, learning commons?)

These points I will not make because others have made them comprehensively elsewhere.

The thing I will do is to take you with me on my 2012 journey as I undertook research for this article and to inform my contribution to the design brief for a new three level, $20 million building at my school combining library, science and general learning spaces.

iCentre, watering holes, campfires and caves

Lyn Hay (The What, Why, Who and How of Building an iCentre, Parts 1 and 2, 2011) advises that an iCentre view of school library design for the future dictates we first define the function, then the form – form of building, space size and arrangement, collections, furniture and staffing. What do we want the new school library information resource space *to do*? With that in mind, and some clear design principles from Fielding (2010), La Marca (2011) and Queensland Department of Education and Training (Learning Architecture, 2010), I developed my own view of a library information centre for my school which would have distinct zones of interaction:

- an outer zone supporting busy service points (watering hole?);
- an intermediate zone for purposeful group learning, interacting with resources (camp fire?);
- and an inner zone for group or individual focused learning, reflection and reading (cave?).

Thornburg's watering hole, campfire and cave concepts (1999, 2004) have proven a useful conceptual tool for learning and discussion about learning space design.

> *The campfire is the informational space associated with lectures and other methods of direct instruction. The watering hole is the conversational space occupied when learners converse among themselves or with their teachers about a particular topic. The cave is the conceptual space where ideas are developed in relative solitude and where student projects are designed and built* (Thornburg, 1999).

Possibly these zones will provide a locale for application of Vygotsky's Zone of Proximal Development (VELS Level 1 and 2 – Zone of Proximal Development and Scaffolding, 2009), ZPD being

> *the distance between what a learner can do alone (actual performance level) and what a learner can do in collaboration with guidance or more advanced peers (potential performance level)* (Wang, 2007).

The library learning areas will see information experts working strategically at the side of students as they progressively learn 21st century information fluencies and deal with hardware and network issues.

Curation

Into the mix came a new understanding of curation. From art and museum contexts, curation has grown to refer to a gathering and re-presentation of web and social network mediated information for particular purposes. In terms of library, I realised it was a way of looking at both the digital and physical collections as items which could be displayed in different ways to focus attention on particular aspects. In the physical learning architecture, there are many ways that the arrangement of learning spaces and materials can become *The Third Teacher* (2010), where the environment itself is a learning agent. It seemed to me that another function needed to be added to library design: curation. It also means giving up on the fear factor associated with attachment to strict Dewey Decimal and alphabetical order collections!

Gathering a broader picture of library learning space architecture

When strategic plans were announced at my school this year which included a three level learning and innovation centre, with the library at its base, I felt I needed a broader picture of what was possible. Not many

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schools have built centres as large as the one proposed. The tertiary field immediately provided more powerful examples of innovative learning spaces on a large scale, including the fast adoption of a learning commons concept, and exciting architecture. Expanding my search to new public libraries around the world gave a different vision: dramatic state-of-the-art architecture and very often the view of library user as client, with library materials as commodities to be presented in tempting retail displays (Almere Library by Concrete Architectural Associates, 2010). Unfortunately, many new libraries often seem more architecturally-focused rather than learning-focused – even in universities. A traditional view of libraries is still strongly in evidence with emphasis on visual impact, storage and traffic flow and small areas of actual interaction. When design moves its emphasis to people and their learning and creative collaboration, spaces become more inviting and interactive.

Surprisingly, in the midst of headlines about the death of libraries in the digital age, there is a steady stream of reports about cities committing huge funds to construction of ever-more magnificent library structures. There is talk of library as centre of the community, the go-to place for learning, creating, making, collaborating and presenting, supported by skilled people and specialist, often high-tech resources. Lyn Hay finds that the UK has changed public library spaces to bring together a variety of services into an 'ideastore' comprising library and other services. (Hay, 2011) Governments see new library buildings as places to demonstrate their commitments to the future, as symbols of being administrations with vision, and quite often, it seems, as a way of putting a city on the map!

Action research

A further expansion to my view was enabled by looking through the lens of the classroom teacher: what spaces and facilities do teachers want for teaching and learning? I joined a year-long Action Learning Team at my school which has new learning spaces as focus, and together we have investigated new ways of arranging classrooms, and the different teaching and learning which is enabled with adaptable furniture and multiple large screens. Interestingly, our team feels that to gather the views that teachers' hold of how they might use a new library space requires a different set of questions to those we might put to students. We feel it is rather more in the vicinity of, 'What spaces, equipment, facilities and resources would it take for you to leave your already well-equipped classroom and go to a library?' We will test this later in the year.

Our library team has undertaken investigation of new library spaces by taking group visits to inspiring new libraries in our area, sharing notes on the good ideas we found. We are experimenting in our own space using resources at hand, asking how many different furniture, shelf and resource arrangements we can provide and how will students use them? The answer: every different option we present is immediately adopted and for some becomes their preferred study mode. Some small bitter battles have been fought for ownership of new options. Single tables squashed between stacks and walls were claimed. Narrow benches with tall, high-backed swivel stools were an immediate hit. Big comfy cushions against walls have always been popular for fiction and non-

fiction reading, study – and sleeping! We 'collectionised' (curated the collection into smaller components for more user-friendly presentation and access) into fiction genres and non-fiction curriculum research areas – and user browsing behaviour and loans changed.

Personal learning networks for research

After my literature review of what had happened recently in library-design world, I came to realise that I needed a service to advise me of what is happening *now*. Coincidentally I was doing a PLN (Personal Learning Network, 2012) course with State Library of Victoria, designed to coax 'newbies' into the world of personal learning networks. I learned *Twitter* at ASLA XXII Biennial Conference 2011 and had found that while it kept me up to date with what was happening in eLearning and school libraries, it was expanding at a rapid rate and I couldn't see how I could manage to follow even more people to cover library design. The PLN course introduced me to curation, and *Scoop-It*. A site for scanning and gathering postings about specified topics from social media, *Scoop-It* provides a way of quickly checking, selecting and organising incoming material. That alone would be a useful aggregation, but it also enables the curator to add meaning to the collection, and has optional links to *Twitter* and *Facebook* to expand readership of published material.

I elected to call my *Scoop-It* **Library learning spaces**: **Design, creation & management of library learning spaces** to keep my focus on the learning which is the function of our digital and physical space forms. I experimented with the terminology required to bring in good daily suggestions relevant to my research, and also decided to add a little metadata to help me find material in my collection of published 'scoops'. I now add one of these terms to each item I publish: School Library, University Library, Public Library, Learning Spaces, School Design, Classroom Design, Learning Commons. It means I or visitors can filter by those terms. A very tidy solution, I decided, as I moved along quietly gathering and publishing pretty much for myself.

Then I discovered that the site has algorithms which give you ratings for your site management effectiveness – measuring the social media tools you use to bring people to your site and providing tools such as a graph to see how many visit each day. I was hooked! Each day I checked my little graph, and then started to work out ways to bring more people to the site, just to see what generated interest in that pool of people around the world who are interested in library learning spaces. And to my delight, I have found that the most effective is good old OZTL_NET. A casual reference to my *Scoop-It* site on the email discussion list for teacher-librarians is guaranteed to produce a sharp rise in site visits – and a very satisfying leap on my graph. Oh, how easily are we bought! However, it does demonstrate the effectiveness of the engagement factor in learning. I suspect I might have become a little tired of maintaining my *Scoop-It* site – but the fun of checking that little graph each day keeps me motivated, and thus keeps me in touch with what is happening in the world of library learning space design.

Initial brief

I gathered the information I had gained from my research and observation of our current library users to provide an initial brief to the new building working group, presenting an overview of direction and understandings so far, and presenting it in a function and form table, with notes about furniture and ICT, as below.

What do we need for the future?

The current and future learning environment requires far more in terms of resourcing and supporting teachers and students, and in terms of the spaces used for multipurpose engagement

with resources and hardware, skills development, and creative projects.

What do we need in a centralised space that has as its basis the function of supporting and resourcing use of information and learning technology for teaching and learning at the start of the 21st century? A space that has also a key role in ensuring the ongoing engagement of students with the power of narrative in its many forms? A space to build the ability to communicate with others using digital and language fluency – fundamental in an age where networking is key to creating knowledge.

A form to meet function

This resource and support centre is both a physical and virtual space, built in both zones to incorporate functions we know as:

- **library** (people, resources, spaces to guide and promote reading, information, study and meetings);
- **eLearning** (people and resources to guide use of software and applications to engage, extend, enable learning);
- **ICT** (people and resources to guide use of hardware and software to manage learning);
- **language** (people, resources, facilities, spaces to promote immersion, exchange, creation in languages other than English);
- **digital creation** (people, resources, spaces to facilitate use of multimedia software and hardware to create and demonstrate multimedia digital learning experiences and responses);
- **writing and publishing** (people, resources, spaces, equipment to develop talent for competitions and publishing in traditional media and online spaces);
- **fun and games** (spaces and equipment for traditional and digital games for fun and learning).

This focus on function to guide form is largely based on the work of Lyn Hay and the idea of iCentre, a place that actualises the blending of library functions with other learning support functions.

Zones of engagement: spaces and facilities for function variety

The place that replaces our current library will be a meeting place and information help and service commons in its outer zone, moving into more focused areas to cater for specialised purposes and needs.

The outer zone will have help desks staffed by specialist support staff, power charge connections, walk-up screens and will allow food and drink. From there patrons enter more secure spaces for focused activities – theatrettes, meeting spaces, reading and reference tables and lounges, access to book and journal collections, reference staff, loans check-outs, creation studios and presentation stages, small labs, large open lounges, covered outdoor patio gardens. The spaces will be flexible, the furniture easily moved and changed to provide for different purposes.

The building will be constructed to maximise views over the city and adjacent oval and gather natural light.

Staffing

The areas will be well-staffed to provide for high levels of user support and guidance to focus on the tasks at hand.

Staff job descriptions will reflect the new functions. There will be a move away from traditional understanding of library, ICT, audio visual, eLearning roles where structure of the service defines

the job description. The purpose of the role will be defined in future by how it supports teaching and learning in a blended learning environment.

The physical space – literature review

An initial literature review focusing on libraries around the world produced results which tend to be architecturally-focused rather than learning-focused. Further, there is evidence of continuation of a traditional view of libraries with big stack storage areas, vast tracts for traffic flow and visual impact and small areas of actual interaction. A search for designs with learning as a focus produced results with more inviting spaces for interaction and collaboration. Of particular interest to design of the library learning space is the SKG Project and its seven principles of learning space design (Creating Flexible Learning Spaces (n.d.), Fielding's *Learn, Light and Colour* (2010) and Qld DET Learning architecture principles (2010).

The SKG project has established seven principles of learning space design which support a constructivist approach to learning: that is, principles which support a learning environment which is student-centred, collaborative, and experiential . . .

Comfort: a space which creates a physical and mental sense of ease and well-being

Aesthetics: pleasure which includes the recognition of symmetry, harmony, simplicity and fitness for purpose

Flow: the state of mind felt by the learner when totally involved in the learning experience

Equity: consideration of the needs of cultural and physical differences

Blending: a mixture of technological and face-to-face pedagogical resources

Affordances: the 'action possibilities' the learning environment provides the users, including such things as kitchens, natural light, wifi, private spaces, writing surfaces, sofas, and so on.

Repurposing: the potential for multiple usage of a space (Creating Flexible Learning Spaces, n.d.).

LEARNING FUNCTION	SPACES	FURNITURE/ ICT
VISION: We interact with each other and resources as we collaborate and get expert help to define, search, select, share, connect, collaborate, create, innovate, make, publish, present, practice We take time to find quiet so we can read, reflect, imagine, study, create	**Adaptable and specialised** – is that possible? Some must be quite specialised, built for particular learning purpose, but others must be totally adaptable to provide for constantly changing need and focus: Individual, small & large groups, Classes Closed and open Teacher-directed and self-directed Formal study, relaxed reading, listening, viewing Capacity to engage with resources – study and group spaces proximate to both hard copy on shelves and to digital resource access and display screens	**GENERAL:** Emphasis on easily moved furniture to enable constant re-arrangement to suit learning – sled base chairs (if on carpet), tables on wheels, big foam stackable cushions, lounge chairs on castors Noise control Ubiquitous network connections with sufficient wire and points for data and power and provisions for future usage increases

Spaces move from an 'outer' or 'watering hole' zone for general help & service desk which allows noise & possibly food/drink; to an 'intermediate' or 'campfire' zone of work, consultation, collaboration & specialisation; to 'inner' or 'cave' zones of increasing quiet for focused reading & reflection	Quiet spaces for reading and reflection must have a priority in the whole mix. Bright & diffused natural light very important, darker spaces for screen work. Take advantage of both northern and southern exposures	
Individual study Students undertake focused tasks or reflective study	Student self-selected preferences show very different choices: Small tight, enclosed spaces between shelves or walls; study carrels with sides Single space and table, but with view and company of others similarly engaged Sitting singly at long benches or tables or high benches Lying on floor cushions Sitting close to relevant books, selecting and browsing Lounge chairs for study with tables close by Reclining on floor/wall cushions Complete silence; moderate noise; wearing headphones in noisy area Supervised; unsupervised	Correctly positioned/height tables or benches and chairs with lumbar support. If on carpet, chairs to be sled-base. Preference for tables on wheels. Big cushions on floor need back support against wall Stools for lengthy work at high benches need to be comfortable, adjustable, high backed with ring foot rest
Small groups Students sit together in pairs for company or to collaborate	Two person study is a popular choice. This size group seems able to sustain productive study with minimal distraction. Once it becomes 3 or larger, unless there is immediate assessment pressure or particular teacher-directed tasks, the group becomes distracted and non-productive and disruptive to others. Lots of two person practice using flash cards at exam time If adjacent to relevant book/journal resources they are selected for use and discussion	Correctly positioned/height tables or benches and chairs with lumbar support. If on carpet, chairs to be sled-base. Preference for tables on wheels. Tables with surface area for 2 persons which can be brought together for larger groups; small lower tables on wheels which can be brought to sit beside or between lounge chairs, low stools/pouffes, divans/ottomans High benches along windows/walls
Group work 3-8 people in class time, study periods or break times work on focused	Tends to be noisier A Carey Senior School culture at exam time is for groups to use flash cards to	Correctly positioned / height tables or benches and chairs with lumbar support. If on carpet, chairs to be sled-base. Preference for tables on wheels.

tasks or undertake collaborative study	practice recall, or to coach and mentor each other in groups	Tables with surface area for respectively 2-4 persons which can be brought together for 6-8 person work; small lower tables on wheels which can be brought to sit beside or between lounge chairs, low stools/pouffes, divans/ottomans
Collaborative, interactive group work around large screens Students collaborate to engage with information, apps & games in small & large groups using large screens to easily view & share	Clear need for large screens so groups of 2-6 can work and discuss common digital content Moveable sound-barrier screens or pod/booth structures Chairs and cushions grouped around device/screen which is playing to a number of people Floor to ceiling screens for standing individual & group games – needs to either be in noisy outer zone or in sound-proofed room	Blue tooth connections to devices Cubicles/booths/pods with benches for large screen work? But static fixed form limits adaptability and movement: perhaps screen on wall or divider with long narrow table on wheels and long backless benches or normal chairs. Interactive screen work – bluetooth connections to devices
Quick, informal collaboration Students & teachers meet casually to exchange information & collaborate	Readily accessed stopping places in high traffic outer areas, or within more confined & private spaces in intermediate collaborative zones	High swivel stools at benches, low stools/pouffes around low tables, broad divans/ottomans to lie on or bring pouffes around small booths with benches
Conference, meetings, large group work Teaching & learning & professional development & meetings use facility outside timetabled classes & school hours	Capacity to access building outside usual hours & use facilities without jeopardising security of equipment & resources Capacity to close off particular areas	6-8 person narrow tables on lockable wheels; sled chairs (if on carpet). Chairs on wheels nice but not good longevity in a school. Interactive screen work – bluetooth connections to device
Formal research classes Students are guided to use of best practice research techniques & information use within the context of subject disciplines using hard copy (books, journals, etc) & digital resources	Best use of books is if they are displayed on shelf 'walls' rather than stack configuration – ie, shelves around a meeting or class furniture configuration so that the shelves form part of the area's 'walls' and it becomes a 'room'. It has a topic or subject focus reflecting current curriculum studies – e.g., modern history 'room', ancient history 'room', literature 'room', drama and theatre 'room', threatened species 'room', etc.	Noise control in addition to shelf 'walls' Interactive screens interspersed in 'walls' Shelves with provision for QR codes to be easily added and moved with need Large screens in 'room' for teacher presentation then student group work using large screen Interactive screen work – bluetooth connections to devices
Recreational reading Students learn to engage in sustained narrative in hard copy & digital format fiction books, & audio books	Essential that there be spaces for silence – distinct spaces separated by walls & doors & effective soundproofing	Lounge position with back support can be provided by: traditional lounge chairs with or without arms – students like low curving styles

	Recreational reading has a relaxed posture requiring good back support Student self-selection shows: floor/wall cushions very popular some prefer more formal lounge chairs Modern small pouffes or large divans/ottomans are uncomfortable over a period of time Sofas are unwieldy – better to have armless lounge chairs to provide space demarcation required for immersion in story	very thick foam cushions on floor against wall cushions cushions collected from repository and placed on stepped space NOT EVER bean bags – noisy, unhygienic, space wasteful, untidy, difficult, ugly Prefer textured self- pattern fabric for all chairs and cushions, NOT mock suede single solid colour Media players: vision and sound – bluetooth connections to devices and headphones
Non-Fiction reading & selecting Students learn to browse to select & engage with hard copy and digital materials adjacent to & part of learning spaces	Seating near book shelves so students can easily browse & select books or scan QR codes then sit as they skim through information & rest laptops & mobile devices on small mobile tables	Traditional lounge chairs with or without arms – students like low curving styles; low stools/pouffes, divans/ottomans Small regular height small surface tables on wheels or small trolleys with table surface and basket beneath
Gaining expert help: Specialists are increasingly able to support student needs for assistance with · Research, resources, writing, creating, software applications · Training and troubleshooting in use of software and learning device hardware	Main help/service desk is for assistance, direction, guidance in use of facility, resources and ICT (replaces separate ICT & library help centres) Self-checkout of resources with RFID security & check system Staffed by multi-skilled technicians, resource and eLearning managers who refer to more specialised staff such as resource and eLearning managers and teacher librarians where required Devices requiring repair are routed to ICT department Help desk points throughout the space Staff on roving duty have headphones to respond to queries from help desk points	Staff areas: Central work office with windows for supervision on two or three sides, spaces for library & ICT technicians. Long central work bench with recessed cupboards for processing materials and supplies. Wall cupboards for stationery & supplies. Wall shelves for books waiting for processing. Spaces for resource and eLearning technicians Spaces for storage of learning devices being routed to ICT for repair Sink with drainer & hot & cold water, fridge, jug. Separate hand basin for hygiene hand washes. No cooking or toilet facilities within library areas. Offices for Head of Library, Head of eLearning, teacher-librarians, resource/eLearning specialists

Learning commons

With a basic list of what seems to be essential to the way we currently operate and see as needing to provide for in the foreseeable future in school library information centres, what is the research and evidence that takes us even beyond that to new ways of operating?

Learning commons understandings and practice, in place in many academic environments and increasingly in schools in Canada, USA, UK and Australia, lead to some of those broader views.

In 2008, David Loertscher with colleagues, Carol Koechlin and Sandi Zwaan, developed an idea they called the school library learning commons, which requires a radical reinvention of our idea of how school libraries operate. (Loertscher, 2008)

. . . position the school library as a dynamic media literacy learning hub, anchoring entire schools around knowledge, expression, collaboration, and creation in both virtual and physical spaces.

Four years later, Mihailidis (2012) discusses this movement to integrate ' the new and the old in a seamless physical and virtual space in which all formats can be assimilated and studied', seeing 'transformation from information reserve to knowledge center'. He develops an argument "for media literacy education as the pedagogical foundation for the learning commons model for school libraries. This would position the school library as a dynamic media literacy learning hub, anchoring entire schools around knowledge, expression, collaboration, and creation in both virtual and physical spaces." His paper uses Chelmsford High School Learning Commons, Massachusetts, as an exemplar of a vibrant central space for this type of integrated learning with several key 'shifts' made to achieve it.

1. *Print to the Periphery* — print material was moved from the center of the space to the periphery to create "a space more accustomed to open learning, and collaboration, where the library can now be seeing as a dynamic space where teachers and students can explore *together"*.

2. *Introspective to Interactive* — a move from the traditional library position as information reserve for quiet, introspective study to one which encourages interaction and collaboration

3. *Information to Investigation* — directing research skills towards attention to "critical web navigation skills as central to building a strong knowledge base in a digital age".

4. *Consumption to Connectivity* — creating "a landscape for connectivity . . . within the learning commons space, and connectivity between the learning commons, the classroom, and the community. The learning commons in the end of the day is about providing students, teachers, and the community a way to connect to information, to each other, and to their aspirations and dreams . . . It's about finding a way to think about the library as a vibrant learning environment".

Sue Keefer, director of library and learning resources at Otero Junior College, Colorado, USA says the learning commons concept is becoming widely accepted in higher education.

A learning commons is more patron-centred than the traditional library. It transforms space which blends the library's traditional role as a holding place for books and contemplation with its emerging role as a place for learning and collaboration . . . We envision a place that will draw students in by encouraging them to work not only individually but also in groups. This new space will provide an abundance of printed and digital resources with the college providing expertise in interpreting information, solving technological problems, writing assignments and facilitating intellectual and social dialogue (OJC's Learning Commons to open in January, 2012)

My **Library learning spaces** *Scoop-It* site tracks learning commons concepts being used in designs for universities and schools, usually incorporating all or some of: ICT service, open and often meandering spaces with tables and chairs and relaxed lounge seating, cafes, small sound-proofed pods or booths, computer game hubs, 'maker' spaces – providing everything from lathes to knitting

materials to 3D printers, large and small conference and meeting rooms, small study rooms, sound and video studios.

A number of schools have started blogs about taking up the challenge of transformation from 'just' library to learning commons spaces which provide better for the learning which brings students and teachers together in changing combinations using rich print and digital resources to undertake collaboration for creation and problem solving,

Everything old is new again . . .

I once fell in love with a wonderful, very old book about Gothic cathedral architecture held by a Brisbane school library (oh, would that I'd 'forgotten' to return it) which referred to the Gothic stone masons as having "thrown their reins over the neck of experiment". There is something of that in the exciting designs being entered into competitions for new libraries all over the world, especially in China and Korea, and I feel that is an apt call for us as we work with school management and architects to reinvent our library learning spaces for new learning functions. Can we too throw our reins over the neck of experiment?

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