

TIM BROWN ON LEGO AND VERMEER | DESIGN THINKING

I was quite impressed with the Lego movie and its celebration of creative play.

Tim Brown thinks the same [\[Link\]](#) and makes some great connections with [Tim's Vermeer](#) – the documentary that challenges our assumptions about the relationship between art and technology. (And following on David Hockney's insistence that artists regularly used technical instruments – [\[Link\]](#))

Key point – the entanglement of technology, humanities, liberal arts in designer creativity.

Hockney's comment – [\[Link\]](#)

On Vermeer and Peter Greenaway – [\[Link\]](#)

DESIGN THINKING – CULTURAL ECOLOGIES – BETTER TEAMS

There's a great recent post on Tim Brown's Design Thinking blog from Tim and Jane Fulton Suri – [\[Link\]](#)

They present four tips, inspired by biology, to create better teams:

- 1. Design a Fertile Habitat
- 2. Create Simple Rules
- 3. Be Productive
- 4. Expect Collaboration

I think Tim and Jane are again raising the question –

Just what is the human in human-centered design?

OK – we are a biological species. But people also share culture. This makes us a co-evolutionary story of the interaction of biology and culture – a melange of instincts, genetics, psychology, learned behaviors, ethics and values, institutions and agencies, communities, historical forces and accidents.

So is this call to look to biology for tips about teamwork an *analogy*, where we consider that people are *like* biological communities?

I think it's more interesting than this.

Ben Cullen [\[Link\]](#) taught me how to look beyond the familiar contrast between culture and nature to find basic processes shared by both in what can be called *cultural ecologies* – the hybrid mixtures of humans and non-humans, things and other species, architectures and environments that are the heart of our everyday, and indeed our historical *human* experiences.

Put to one side the radical distinction between culture and nature

Design a fertile habitat – yes, we benefit from diverse cultural ecologies. Rich habitats are those that harbor great diversity both in genetic and cultural DNA (to use a fascinating metaphor this time – though we might consider Richard Dawkins's cultural *memes*).

Collaboration is quite normal – instead of relying on management experts, politicians, and power brokers to tell us how to be organized and creative (or not), we might realize that it is actually quite human to work together creatively, and requires only simple rules, not complex business/political expertise held by a minority. (I think this is a key message of Tom and David Kelley's new book *Creative confidence: unleashing the creative potential in us all* – [\[Link\]](#))

Work is what makes us human – the unceasing effort to express ourselves in the world with others.

Working *with* the world – we should realize that **the constraints on our making**

presented by the real world are critical to our creativity

And I would add to Tim and Jane's list – *family matters* – offer loyalty to group/community/team as if they were family, involving tolerance, care, shared aspiration.



*Cultural ecologies. Wild nature in the English Scottish borders? This is Chew Green – site of the Roman camp at the very edge of empire, and here looking as remote and uninviting as can be. Antiquarians called it *Ad Fines* – at the ends of the earth. But this isn't raw nature beyond the bounds of the civilized world. The rolling moorlands are the result of millennia of human inhabitation. Here was a major Roman outpost on the main road north, Dere Street. Here was a medieval village, Gemelspeth, where were held the border courts. Remote from centers of power maybe, but not remote to the many communities who have worked this land, making it their own.*

THE CULTURE OF THE ACADEMY — LESSONS FROM DESIGN THINKING

Across on archaeology.org Chris (Witmore) has taken issue with a comment [Tim Ingold](#) has made about the notion of a symmetrical archaeology. [\[Link\]](#)

Symmetrical Archaeology? Like many others, Archaeologists regularly do all they can to separate what they do from what they study, their work in the present from the past, past artifacts from the stories that give them life, scientific analysis from historical interpretation, even when there would be no past without their work now, when archaeology is the most interdisciplinary of practices that intimately mixes science and art. The proposition is that we should treat *symmetrically* both sides of the (Cartesian) dualisms that still bedevil archaeology: the separation of past and present, the researcher and the object of interest, real and imagined, the human and non-human worlds, sciences and humanities Archaeologists work in the past-present, actively, creatively shaping accounts of the past that orient us now and for the future.

(Here's something I wrote back in 2007 – [\[Link\]](#))

The work of Tim Ingold was quite influential in giving shape to this agenda. In his more recent work he has laid some firm foundations for understanding human experience in terms of environmental relationships, in a way that connects culture, nature, history, geography.

Ingold doesn't like the geometrical association. Fair enough. Indeed symmetry does assume bifurcation, even in its proposed resolution. But the introduction of the notion of symmetrical treatment of humans and non-humans in the field of science and technology studies (and in archaeology too) was always as much a rhetorical gesture, an intervention in debates about what it is that we study and how we do it, as it was an attempt to solve the problems of Cartesian thinking once and for

all. Here is Chris's definition:

“. . . the notion or principle of symmetry is meant to remind us not to decide in advance what role various entities play in a given situation by imposing arbitrary hierarchies of value or preformed dogmas concerning the nature of the real. Symmetrical archaeology is agnostic. I don't mean this in the smug sense of the skeptical critic who remains aloof from the seemingly wayward beliefs of others. No, I take this in a very analytical sense, in that symmetrical archaeology refuses to delimit a given situation by imposing any predetermined schemes. Rather it strives to allow entities to define, to frame, themselves. Symmetrical archaeology grants dignity to all participants in a given situation and it does so by placing them on the same footing at the start.”

Symmetry is about being open and not defining in advance what it is we are studying.

Ingold's main criticism is that the notion of *ontological* symmetry between humans and nonhumans leaves out other species – plants and animals, key members of the ecological communities that people inhabit. He thinks this is a reversion back to 19th century thinking, which considered humanity as the unique species that had progressed beyond all others. But this is really a red herring when you consider how the concept has been discussed and applied. And Chris points to the extensive discussion around the notion of a symmetrical archaeology that deals with this particular matter of humans and non-humans.

Zero sum scholarship

The issue, for me, is not whether “symmetry” can overcome the debilitating ontologies inherited from Descartes (!). This is about scholarship. Ingold has hardly engaged with the discussion in archaeology around symmetry, never mind science studies, and instead quotes selectively so as to make his own point, so as to strengthen his own position by putting others down. Ingold hasn’t done his reading. He sets up a straw man so as to knock it down. In this zero sum thinking one gains when the other loses; sketch out a loss, however cursorily, and you gain.

Let me take a step back to look at this everyday feature of academic life, at least in my experience.

The actual content of critique is typically less important than its *performance*. To be seen to be active in critique is usually enough, for this zero sum game is an abstract one that deals in quantities and not qualities. I know about this: I have been there.



The fortunate republic: From Lorenzetti’s murals on “good government” in the Palazzo Pubblico, Siena.

There are two components here of academic culture.

First. The nature of *scholarly critique*. For surely we should dig deep, read around, do our homework as scholars, pursue rich and deep research with care and concern, offering guarded and clear commentary. And surely we would wish that there would be genuine openness of response, so as to move the debate onwards. It is not good scholarship to be cursory in one's research and not to make adequate citation, reference to the depth of others' work.

Second. The status of an *argument*, a case, a proposition. While we might consider that academics should be in some kind of collective and collaborative effort, this is not always true. Full and open debate is quite unusual in the Academy. Scientific labs can be very hierarchical. It's not just that academics don't have as much time as you might think. Much publication, academic discourse more generally, actually aims to *close down* debate. The ideal is to present an impregnable case, to cover every possible criticism, to shut down debate, and, yes, then to move on. The ideal is a complete hermetic case, even if it can be held only locally. The ideal response to one's writing, for most academics, is (approving) silence, the acknowledgment that there is nothing more to say on the matter. This establishes a hierarchy, where higher position correlates with silence lower down. Moving up the hierarchy entails breaking the silence, giving critical voice, in whatever ways possible, so as to redistribute the silence.

(This might sound cynical. I am exaggerating to make my point – rhetoric again. There is a great deal of talking in the Academy. There is certainly a great deal of what passes for debate. But consider a seminar. A paper is offered for discussion. It is good if there is lively talking. What is best? Some certainly wish to display their skill in demolishing a case. They may think that this does them credit, under the zero sum mentality just mentioned. It is not good, nevertheless, if the paper is indeed poor. It is best, under zero sum scholarship, if the discussion is around points of clarification, or of the scope of application of points raised, of how the work may be profitably extended. Then everyone feels good. Credit goes to individual intellect and research while not formally denying that the Academy works best as a collaborative ecology.

Anecdote. The discussion was not going well for the presenter of the paper. It was indeed a poor piece of work and the audience knew it. The seminar host interrupted

the criticism. “We don’t kick cripples when they’re knocked down.”)

There is something of a bureaucratic mentality here, where the ideal is to have everything in its proper place, carefully defined and categorized, in a system that works and moves along according to one’s normative goals, that is, one’s particular purposes, shared by one’s affiliates and organization or institution. A key component of academic discussion is the constitution of the group – it works best among members who gain from affiliation and acknowledging group membership, by playing the game and respecting the rules, the discipline, the institution. Respect and welcome can be extended to outsiders, but only when they present no threat to the bureaucratic order of the institution.

But don’t just take my word for all this: the sociology of knowledge, science studies and research into behavior of organizations are almost disciplines in their own right and exist to explore all these social and cultural dynamics of the construction of knowledge. Thomas Kuhn, Michel Foucault and Bruno Latour are but three of the more well-known names, of course.

Instead of this, I am attached to an old fashioned notion of *collegiality*. Unfortunately I find it less often where it should be – in the Academy.

My friend at IDEO, Tim Brown, was interviewed a couple of weeks ago about the company’s creativity and expertise in innovation – [\[Link\]](#)

Tim credited IDEO’s success to its *culture*.

At IDEO we think our culture has been the single most important contributor to our success. Traditional creative organizations can be quite hierarchical, but this is a hard idea to scale, especially if you want to work on a diverse range of projects. We have tried to create an organizational culture where every individual is comfortable taking risks and exploring new ideas, but where they are also fixated on helping improve the

quality of each other's ideas.

He mentions the crucial role of pedagogy – always sharing the experience of learning:

This ideal of doing great work and helping others to do great work has led us to be passionate about teaching, which has been great for learning and recruiting. It has also made us comfortable with teaching our clients how to do what we do and discouraged us from being too proprietary about our knowledge

This is something I have discovered with my work in our d.school, and in running my lab and studio [\[Link\]](#).

The key is **sociality, care and respect for others and their ideas, open and sharing teams, flat, minimum institutionalization** [\[Link\]](#) This is

collegiality

I have also outlined how this is a matter of *political constitution* in design thinking [\[Link\]](#) To keep a neutral term and emphasize that this is indeed about the *constitution* of teams, I substitute *res publica* for politics.

IDEO, the d.school, their collegiality, is antipathetical to the moribund world of middle managers, those who populate the world of zero sum hierarchies, following bureaucratic procedures, unable to see any big picture, carping and nit picking, in a culture of intolerance, judging others on the basis of partial pictures, manipulating to achieve a sense of self worth in systems that privilege the corporate and the institutional over the collective.



For three years my lab ran an experimental seminar with Doug Carmichael exploring what could be done to facilitate something very simple – the *conversations* that are the heart of democracy and collegiality – [Link] Lorenzetti's murals for a council room in Sienna, depicting a world of good government and reasoned constitution, and contrasted with the opposite, were inspirational.

THE POLITICS OF DESIGN – THE T CHARACTER REVISITED

Topic – how to be interdisciplinary – and more

Quick recap.

For some time I have been interested in the notion of the “T character” – an attitude or disposition, a skill set, that facilitates the kind of interdisciplinary practice that is the heart of good design, bridging the different expertise and interests in a team.

This is how I put it last year [\[Link\]](#):

Real world problems don't fit into neat disciplinary categories. We hear much about the importance of interdisciplinary or even transdisciplinary work. (Multidisciplinary implies keeping the disciplinary distinctions we need to bridge?)

Stanford d.school 's mission is to promote design thinking as such a bridging field. And one that involves close attention to the human component in addressing real world problems.

Tom Kelley and Tim Brown have outlined the character types they think are the heart of design thinking [\[Link\]](#). The kinds of people who contribute to innovative design.

One is the “T” character – able to combine in-depth knowledge of a particular field or method (the vertical in the “T”) with an ability to connect across specialist expertise (the lateral). And Tom and Tim

identify design thinking with this creative, human-centered work of connection.

I have described how design thinking is a kind of pragmatism [\[Link\]](#) and this notion of a “T” character intrigues me. I want to sharpen up the idea, but am not sure how. Is it really a character type?

Well, yes and no.

Bridging different interests is all about diplomacy and translation, sensitivity, being mindful of others; it is about *representing* different interest groups.

Last summer, at EPIC (Ethnographic Praxis in Industry Conference) in Tokyo [\[Link\]](#), I suggested that we should think of the things we design as

... assemblages, bundles of materials, features, potentials, affordances, values, even different times – think of how they gather and connect people and possibility.

Message – think of the human as being distributed through these assemblies and gatherings.

(This is why it is so right to hold that better design will come from an emphasis not so much on a particular product as on what it may offer – focus more on

experience, interaction, service, platform – the assemblages.)

A word that means “thing” and captures all this is the Latin RES.

And it is entirely right to think in a collective way – RES PUBLICA is the commonwealth, the state, the assembly of the people and their goods, cultural and political ecologies. Keep in mind the *missing masses* in these assemblies that are our human being – not just things, but other species too, plants, animals, bacteria, viruses.

Have a look at the range of meanings and usage of RES – [\[Link\]](#)

In such an ontology of distributed human being, the apparent substantiality of a person or artifact is simultaneously vacancy, emptiness, openness perhaps; and the past haunts, present in its absence. We are no longer faced with the problem of connecting, for example, tangible and intangible, materials and immaterial values, pasts and presents, functions and emotions, people and their goods: these are already

connected. The task is to discover how.

Under such an ontology, how do we perform research?

What is the way, the DŌ of ethnography, in the terms of the conference theme?

- look to the **qualities** of human being – the quiddities and haecceities, the qualities of sustainable human living, and tell their story, lest we forget
- methodology – don't look for tight systematics – plunge **IN MEDIAS RES**, into the imbroglios – be pragmatic and opportunistic
- the challenge is one of **re-presentation** (in the political sense too), of giving voice, speaking-for, witnessing
- consider research (ethnographic, design, contextual, whatever) as **intervention** in the RES PUBLICA
- intervention in cycles of ideation/design/manufacture | exchange and distribution | consumption | reuse | discard – a **political economy**

RES PUBLICA

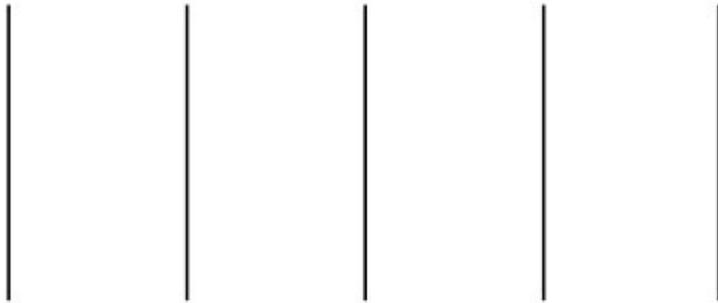
(constitutional arrangement)

social relations | representation

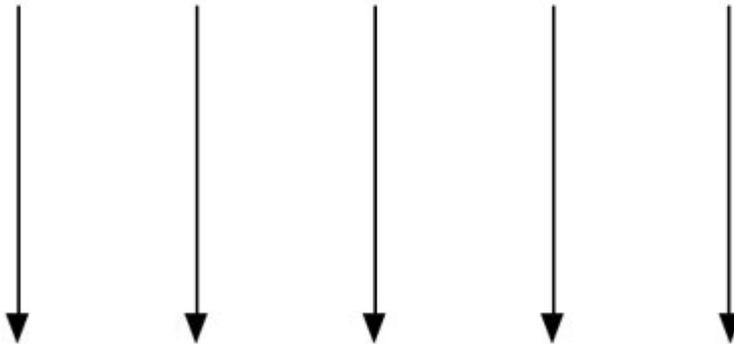
PRAXIS

(thoughtful/informed practice)

← theory | design process | iteration →



specialized expertises



problem | design brief | challenge

ISSUES

(articulating themes)

MINDFULNESS

Here then is a diagram that aims to capture this. Experts in teams drill down into a design problem. One connection is precisely the messiness of problems – they

don't fit into disciplines. And things don't fit either. Issues and themes offer connection – this is often how we configure messy spaces – according to themes such as sustainability, or health and wellbeing (see my comments on the Durham conference last year on “Water in Antiquity” [\[Link\]](#)).

Design thinking, as an iterative process or pragmatics [\[Link\]](#), offers a connecting medium. And theory enables translation across radically different fields. Praxis is a term that refers to such thoughtful practice.

Crucial also is how we get on with others, a constitutional arrangement that enables sensitive, mindful respect and care for others.

This is the human in human-centered design

I was going to talk about this at the COINs (Collaborative Innovation Networks) Conference in Basel last week [\[Link\]](#), but a family emergency stopped me going. There are some fascinating matters being raised in relation to this political economy of design by social software – collaborative and cocreative authoring worlds.

Ioachim Oudaans
ROOMSCHE MOGENTHEID
In gefag en staat-bekleeding der
OUDE KEIZEREN &c.



v. Dalen Sculp.

TOT AMSTERDAM
Voor FRANS KUYPER ANNO 1664.
Met privilegie.

OPTIMISM AND TRANSFORMATIVE DESIGN

Transformative Design, my class about design thinking that makes a real difference, run with Meghann (Dryer of IDEO) and Bernie (Roth of Stanford Engineering), opens again soon in the d.school.

I got thinking seriously about its themes this weekend at a fund-raising event organized by [Castilleja School](#), where Helen teaches and Molly learns, on the theme of “Optimism” – engaging possibility. Optimism at the heart of social change.

Not inappropriate in these times.

Zainah Anwar shared with us her great effort to create a feminist caucus in Islam.

Jill Tarter gave us a cosmic perspective with thoughts about the possibility of extra-terrestrial life (an optimistic counter to [“The Day the Earth Stood Still”](#)).

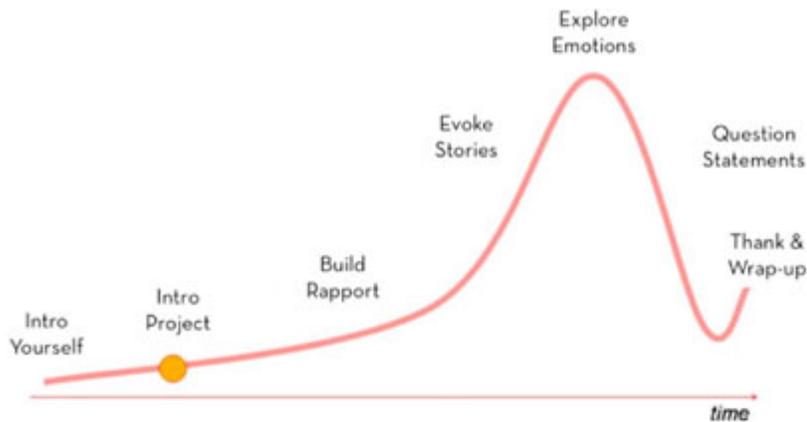
Cory Booker, Mayor of Newark, foregrounded listening in any address to social hardship. Classic anecdote – he visits a senior resident in a run-down housing project, wanting to offer help. She takes him out into the neighborhood and asks him to describe what he sees. Cory lists the problems, hardship, poverty, urban ruin, and, as he does, she grows more and more impatient with him, eventually saying he can do nothing for her. Why? Because, if that is what he sees in the neighborhood, that is what he will perpetuate. He needs to see the potential and possibility.

We heard Tim Brown ([IDEO](#)) on design thinking and the crucial importance of empathy, collaboration and risk taking, making mistakes – all key components of optimism.

Elizabeth Vargas, Anchor journalist with ABC News, did a fine job of interviewing.

METHOD

INTERVIEW FOR EMPATHY



WHY interview?

We want to understand a person's thoughts, emotions, and motivations, so that we can determine how to innovate for him or her. By understanding the choices that person makes and the behaviors that person engages in, we can identify their needs and design for those needs.

HOW to interview

Never say "usually" when asking a question. Instead, ask about a specific instance or occurrence, such as "tell me about the last time you ___"

Ask why. Even when you think you know the answer, ask people why they do or say things. The answers will sometimes surprise you. A conversation started from one question should go on as long as it needs to.

Encourage stories. Whether or not the stories people tell are true, they reveal how they think about the world. Ask questions that get people telling stories.

Look for inconsistencies. Sometimes what people say and what they do are different. These inconsistencies often hide interesting insights.

Listen to nonverbal cues. Be aware of body language and emotions.

Don't be afraid of silence. Interviewers often feel the need to ask another question when there is a pause. If you allow for silence, a person can reflect on what they've just said and may reveal something deeper.

Don't suggest answers to your questions. Even if they pause before answering, don't help them by suggesting an answer. This can unintentionally get people to say things that agree with your expectations.

Ask questions neutrally. "What do you think about this idea?" is a better question than "Don't you think this idea is great?" because the first question doesn't imply that there is a right answer.

Don't ask binary questions. Binary questions can be answered in a word; you want to host a conversation built upon stories.

Only ten words to a question. Your user will get lost inside long questions.

Only ask one question at a time, one person at a time. Resist the urge to ambush your user.

Make sure you're prepared to capture. Always interview in pairs. If this is possible, you should use a voice recorder—it is impossible to engage a user and take detailed notes at the same time.

Visual adapted from Michael Barry, Point Forward



Anna Deavere Smith wound up the inspiring evening with three of her monologues (she interviews and listens to people then acts out their words). They were about the way that struggle is at the heart of optimism – a mid-west rodeo rider's experiences of medical care (a flat rate of 1200 dollars to sort out the kidney the

steer kicked), a medic in a charity hospital abandoned by state and federal agencies in the wake of hurricane Katrina, a feisty feminist governor of Texas facing cancer.



This is extraordinary “documentary theater”. Anna is precisely the “representative”

– listening, respecting, conveying, authentically witnessing those whom she represents, in her own voice. It is [a model of political representation](#)

(Inspiring for the class – listen and witness in your design work, and also resonant for me, because my new book on the archaeological imagination has an extended discussion of eighteenth century debates about authenticity in the voice from the past.)

DESIGN – CULTURAL LITERACY

This post is in a series of commentaries on a class running at Stanford, Winter Quarter 2010 – “Transformative Design” ENGR 231 – [\[Link\]](#)

This evening – a group of friends and colleagues discussing education and schooling with [Tony Wagner](#). Our warm and welcoming hosts were Joan Lonergan and John Merrow at [Castilleja School](#).

Topics: skills needed for life today – creativity, problem solving – the challenge of overcoming disciplinary divisions – entrepreneurial skills and business in a globalist 21st century – are US schools and the academy failing to prepare students?

Tony has made a strong case for schooling to shift from teaching to tests to teaching skills – have a look at his great books [\[The Global Achievement Gap\]](#) and [\[Making the Grade: Reinventing America’s Schools\]](#).

Tony Wagner’s Seven Survival Skills for Careers, College, and Citizenship in the 21st Century

1. Critical Thinking and Problem Solving

2. Collaboration Across Networks and Leading by Influence

3. Agility and Adaptability

4. Initiative and Entrepreneurship

5. Effective Oral and Written Communication

6. Accessing and Analyzing Information

7. Curiosity and Imagination

We talked about innovation. Entrepreneurial skills look to be an instinctive human trait, reckoned Paul (Holland).

My response – creativity may well indeed be a human trait. Another way of putting this is that it's not creativity that we need to explain in human history, but why there isn't more. Of necessity, people remake their worlds constantly in every smallest act. We are born into a world that makes us what we are – tangible environments, intangible values – yet we also constantly (re)make that world through living it.

So what hinders innovation and change?

Sometimes it's schooling.

Design thinking encompasses many of Tony's skills. As Bernie (Roth) says – "design is living" [\[Link\]](#)

I shared a concern of mine expressed a few times recently in this blog – [\[Link\]](#) – that design, as one field that emphasizes innovation and creativity, can be too

focused on *behavior*, on what people do and how they perform. And Tony's list of crucial life skills is quite abstract: it similarly makes little reference to culture, human values, history and the *qualities of human life*.

Human centered design, for that is what design thinking is, should be critically asking – just what is the human? Living is more than what people do.

[Tim \(Brown\)](#), of design consultancy IDEO, asked what difference such questioning would make to design practice. He posed a great question – aren't designers just the stone masons of the modern world?

Absolutely! There's a double edge to this observation. On the one hand masons may indeed get on with the job, apply their skills to stone and build, leaving questions of life and cosmos to philosophers, theologians, academics. On the other hand, the masons responsible for the cathedrals of mediaeval Europe embodied human vision and divine utopia in their work in stone. Richard Sennett has captured the deeply human character of work in his book [The Craftsman](#) – hand, heart and mind combined.

Isn't every act of making an argument, better or worse, for a world immanent or transcendent, an argument for "the good life"?

To understand creativity, problem solving, innovation, collaboration, I argue we should look as much to culture. Culture – processes of making and building worlds, the core of human creativity.

**To our list of crucial human skills should be added
cultural literacy**

Of course, this then begs the question of just what cultural literacy is! Linda (Yates), instantly connected it with the way language carries culture, identity and experience (see the image below).

And how can human-centered design encompass such expanded and often contentious notions of what it means to be human?



Our work in Stanford Strategy Studio aims to bring Humanities insight into what it is to be human to bear on matters of common pressing concern, such as environmental change, education, globalism.