

PUTTING LCT TO WORK

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Research Questions

- How has Design knowledge been recontextualised into the project briefs which constitute the studio based curriculum of a multidisciplinary Design Foundation Course?
- To what extent does this intended curriculum enable or constrain the potential development of design knowledge and consciousness over the course of a year?

What is Design?

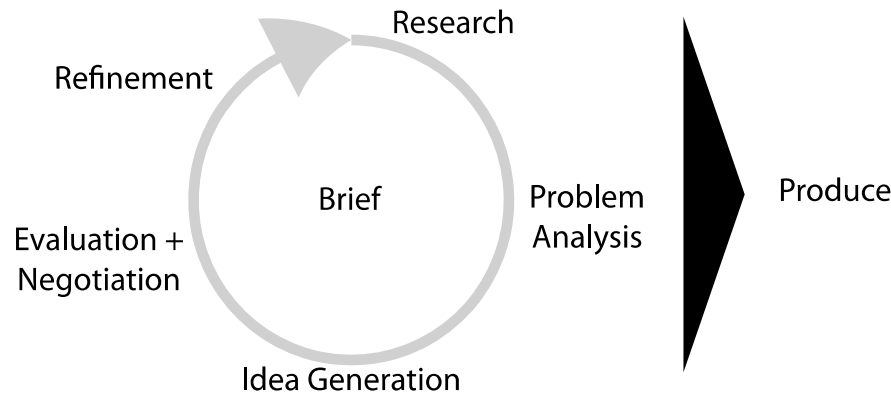
Understood in the broadest and most inclusive sense of the word, design can be defined as *'the human capacity to shape and make our environment in ways without precedent in nature, to serve our needs and give meaning to our lives'* (Heskett, 2005, p. 5).

Design knowledge in the FoP

- **FORM:** Giving form to objects, environments or systems requires knowledge of the canon and fluency in formal visual language and various methods of representation.
- **TECHNOLOGY:** Understanding how objects, environments or systems function and are produced requires knowledge about material properties and methods of production, and their environmental impact.
- **CONTEXT:** Conceptualising how objects and environments function and communicate meaning requires knowledge about human behaviour, social contexts, values and aesthetic preferences.
- **DESIGN PROCESS:** Knowledge of the design process enables the integration/synthesis of these knowledges towards a productive purpose.
- **PRACTICE:** Both noun and verb. Designers work for themselves or in a practice or agency. Think guiding principles, marketing ,branding, budgets, costing, sourcing, deadlines, legal issue, client relations, staff relations, bread on the table.

The Design Process

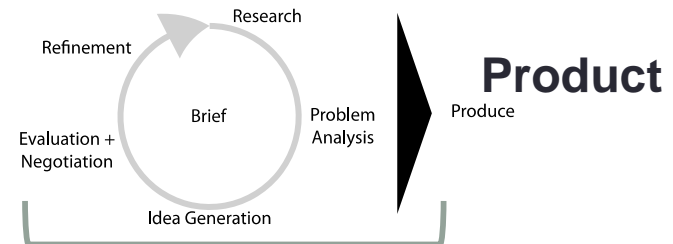
context specific



Knowledge Region



Solve problems



Supervening purpose of the region = **Practice**

Recontextualised regions = curricula that 'face both ways'

Project based Design curricula

The world
of work

Context-independent
disciplinary knowledge



Context dependent
knowledge of
specialized forms
of practice and of
professional
identity

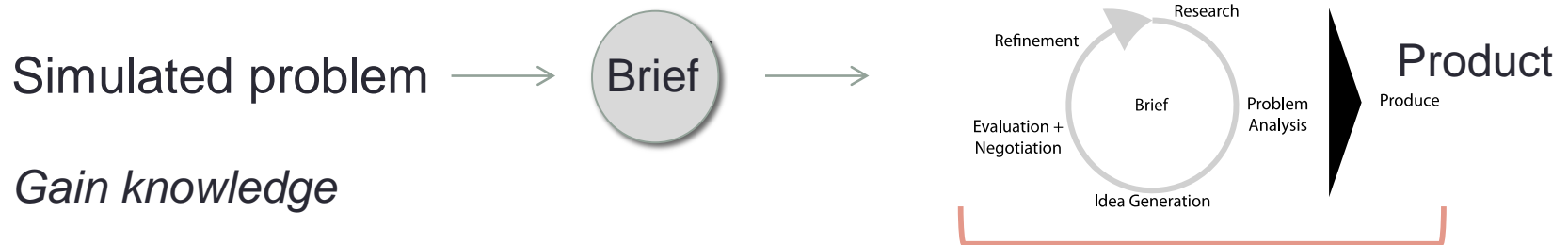
Professional/vocational curricula 'face both ways' (Barnett,2006)

The design process



Supervening purpose of the region = Practice Design

The design process recontextualized



Practice how to Practice Design

Design Subjects

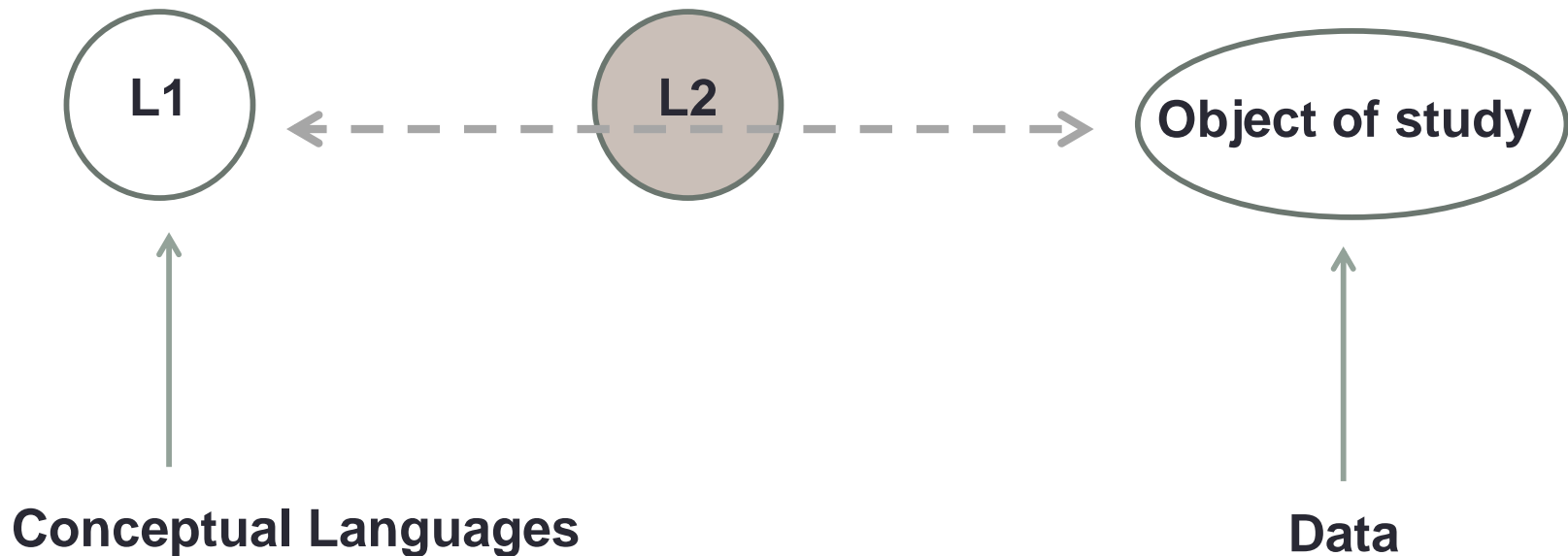
Lecture based

- History and Theory of Art and Design
- Professional Business Practice

Studio based

- Design (2D)
- Design (3D)
- Technology

'A language of description is a translation device whereby one language is transformed into another' (Bernstein, 2000:132).

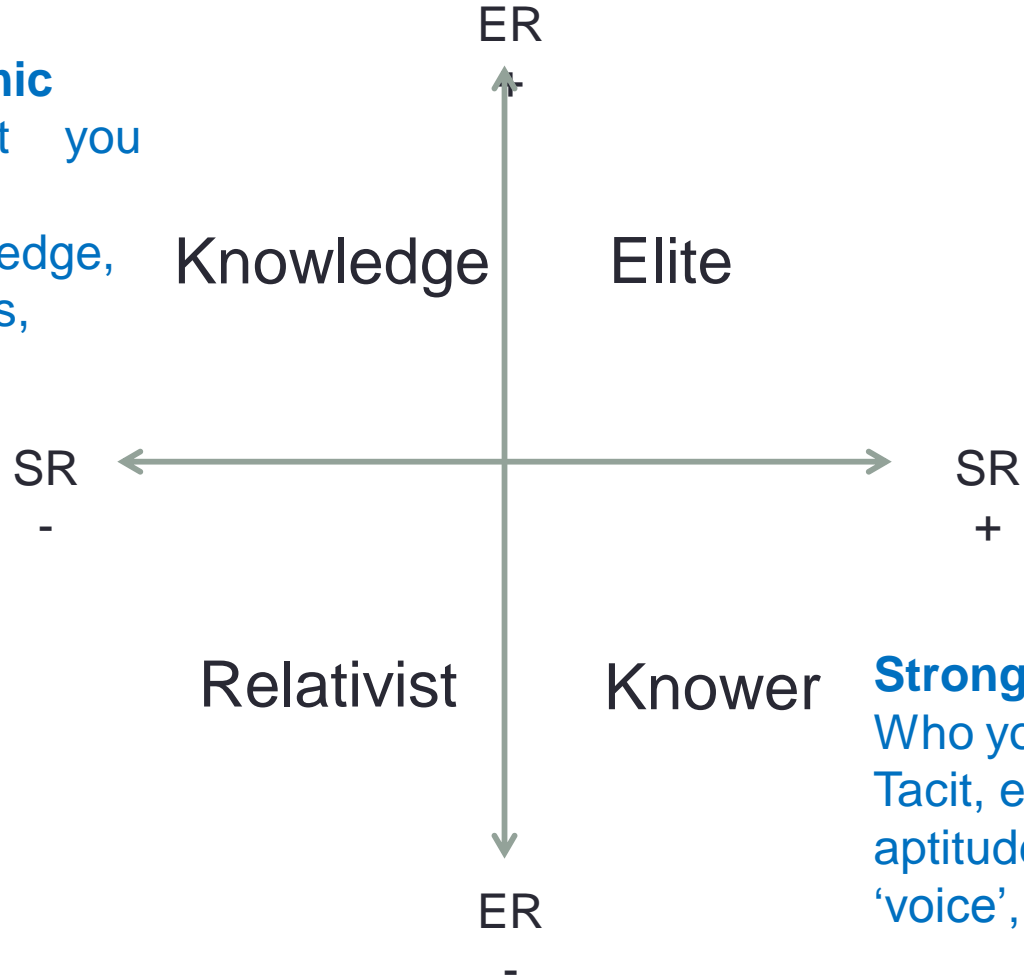


Legitimation code theory
(Maton,2010)

Curriculum texts

Design process research: Levels of Design
expertise/cognition (Dorst, (2008); Lawson,(2004); Cross, (2004)

Stronger Epistemic Relations: What you know/
Specialized knowledge, skills & procedures, explicit, principled



Stronger social relations
Who you are/
Tacit, embodied attitudes, aptitudes & dispositions
'voice', 'gaze', judgement

The Specialization codes

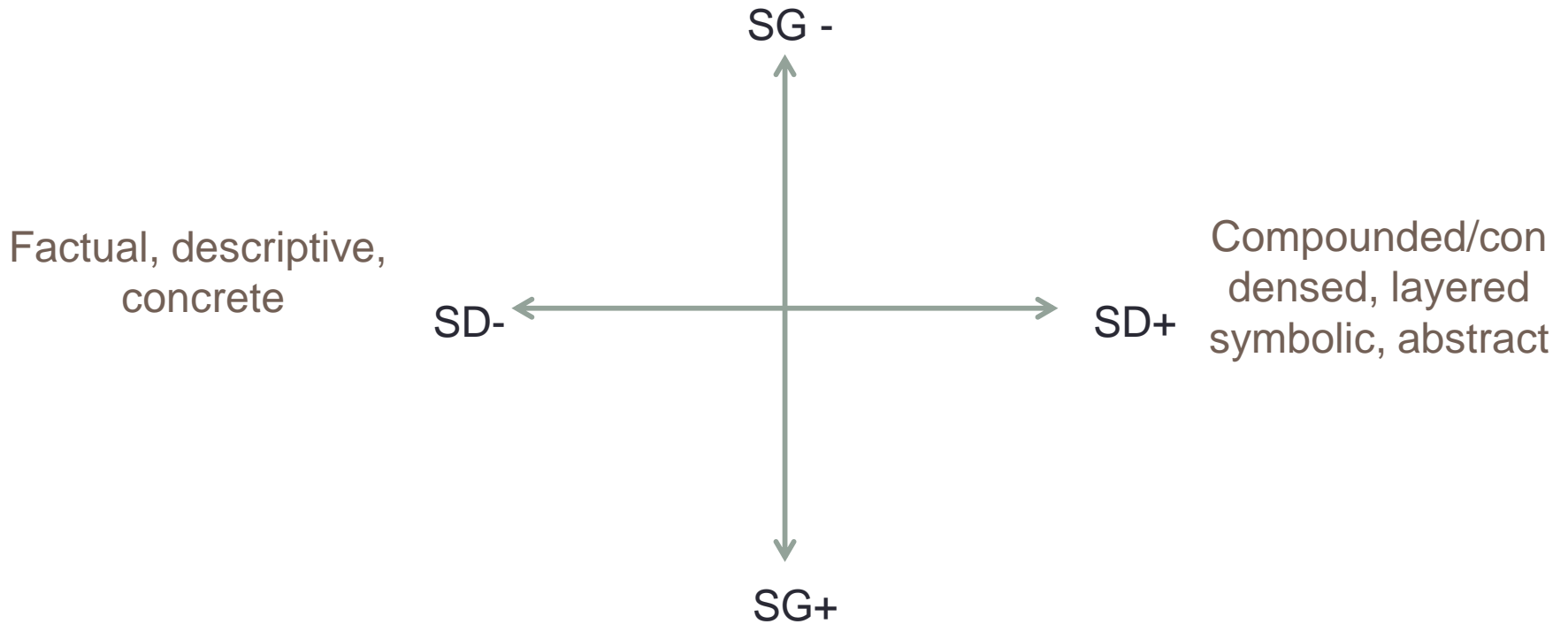
Knowledge code (ER+/SR-)

- Terminology and Theory and formal visual language
- Skills and Techniques of presentation and representation
- Material properties and costs
- Methods of fabrication
- Contextual understanding (social, environmental, legal, economic)
- History and Theory of Design : Knowledge and understanding of precedent

Knower code (SR+/ER-)

- Capacity to integrate different kinds of knowledge into design solutions
- Ability to communicate abstract concepts visually
- Ability to connect like with apparent unlike
- Creativity, imagination, curiosity
- Visual and Spatial judgment/discrimination
- Visual-motor skills
- Contextual understanding (human and social behavior)
- History and theory of design : extrapolation from and synthesis of precedent

Core, context independent
disciplinary knowledge, internal,
well defined, transferable



Factual, descriptive,
concrete

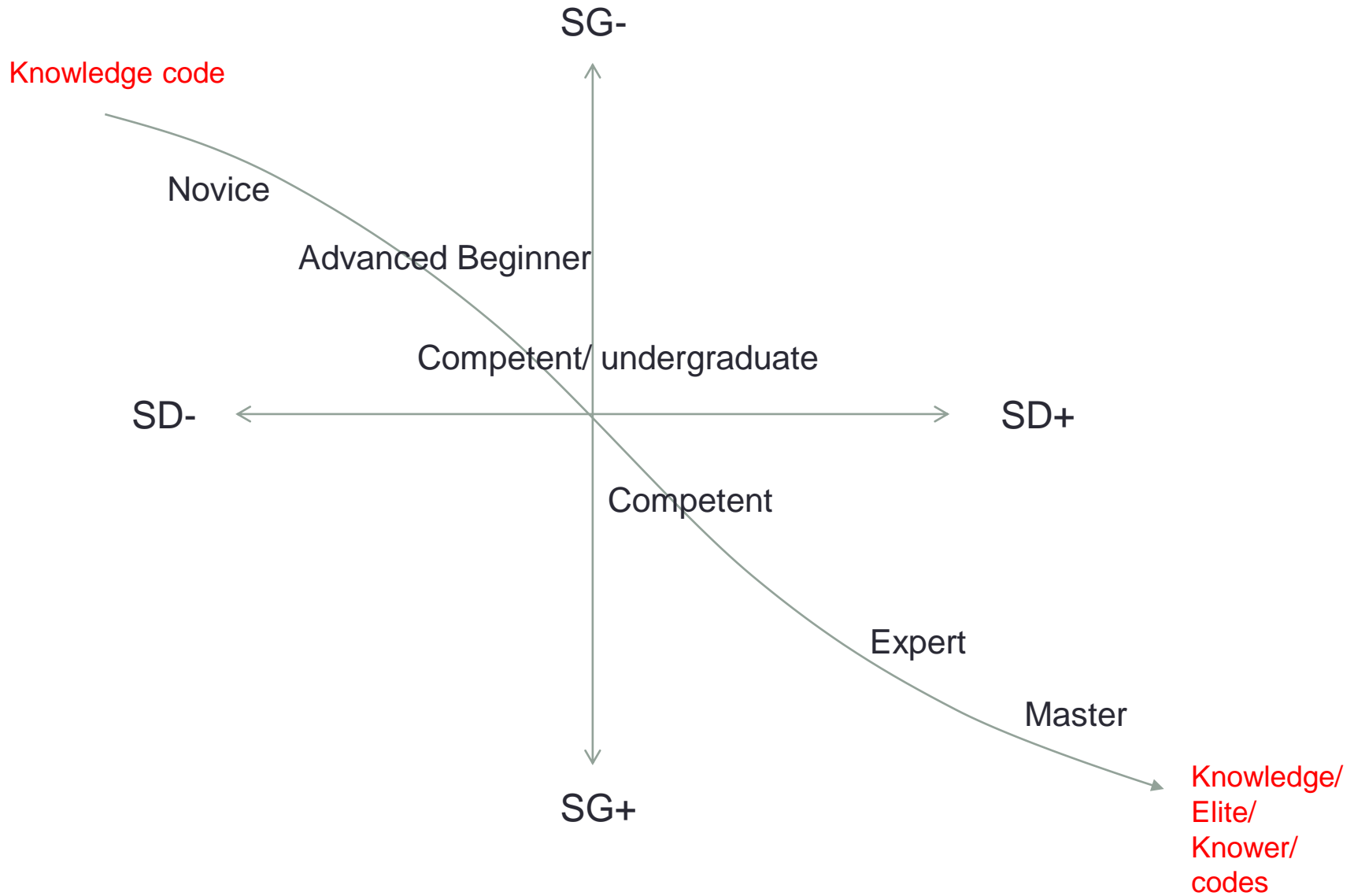
Compounded/con
densed, layered
symbolic, abstract

Specialized, discipline specific,
context dependent knowledge,
external, complex

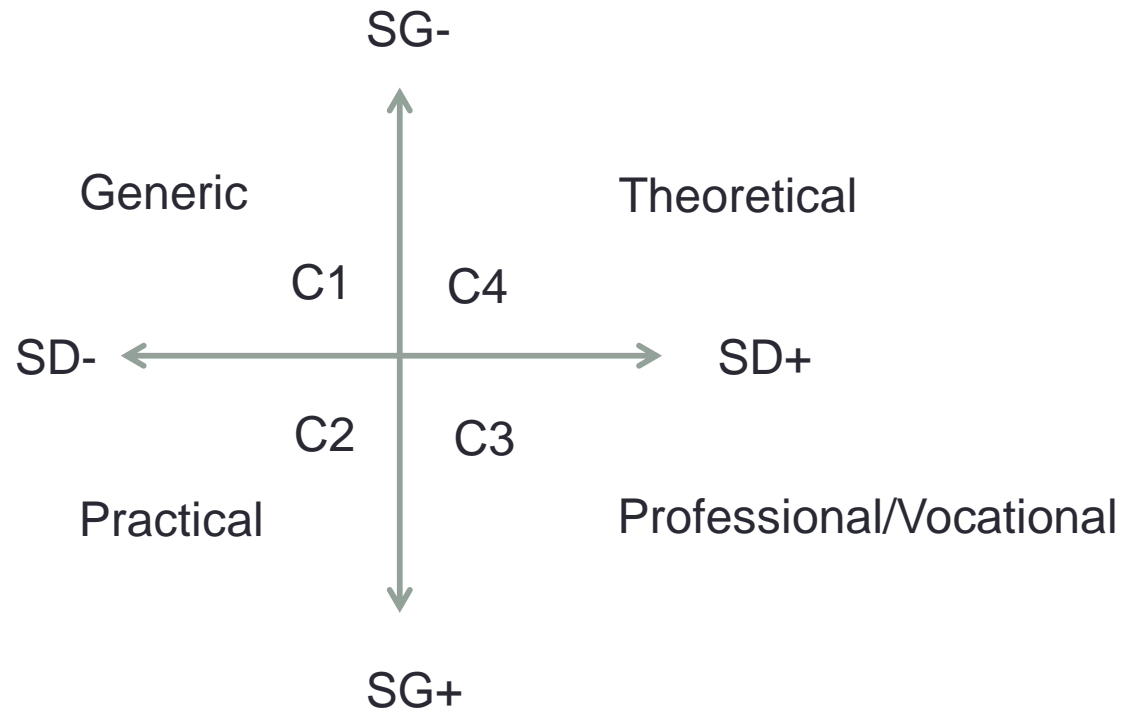
The Semantic codes: Semantic gravity(contexts) & Semantic density(concepts)

Levels of Design Cognition

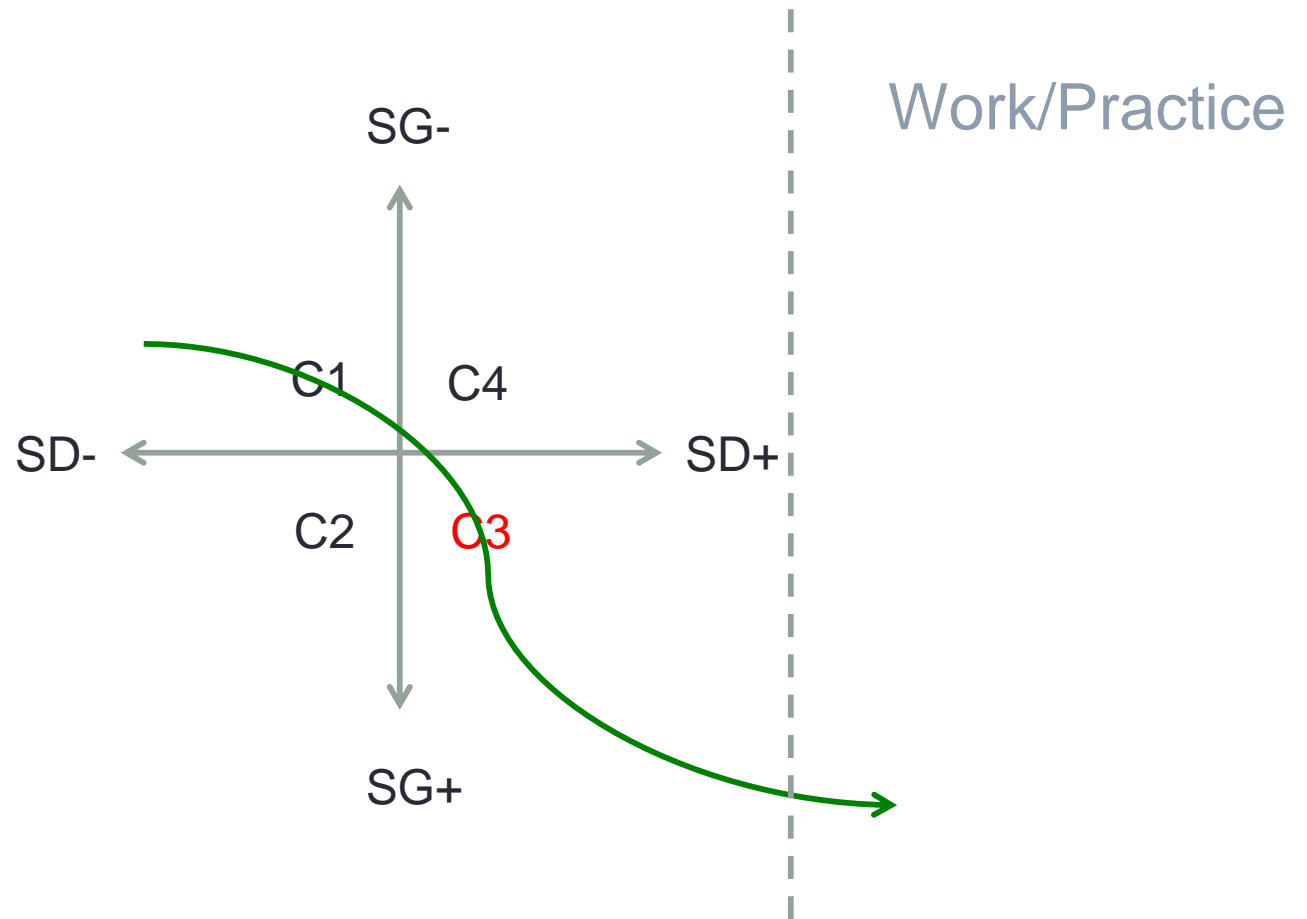
Design knowledge(ER/SR)	Design situation/context (SG)	Design process (SR)	Level
Acquire design domain schemata/ core knowledge	General	Rule following <i>How to use knowledge and methods.</i>	Novice
Develop a pool of precedent	Situated 'authentic'	Maxim following/ Reactive <i>When to use knowledge and methods?</i>	Advanced Beginner
Develop episodic/experiential memory of design knowledge and precedent	Situated 'authentic' and/or actual (WiL)	Self directed and reflective Involved. <i>What knowledge or experience is relevant?</i>	Competent
Use guiding principles routinely or to create new knowledge	Situated, actual	Intuitive/Pattern-based <i>Which guiding principles to use ?</i>	Expert
Consciously create new knowledge	Situated, actual	Intuitive <i>How to innovate and create new knowledge?</i>	Master



Knowledge progression in design curricula (Steyn,2012)



Topology of curriculum modalities (Shay,2012)



Progression of Design knowledge in Vocational/Professional curricula

Level appropriate design curricula

Project based Design curricula

Context-independent disciplinary knowledge

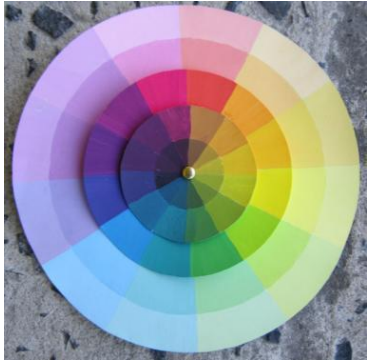


Context dependent knowledge of specialized forms of practice and of professional identity

The world of work



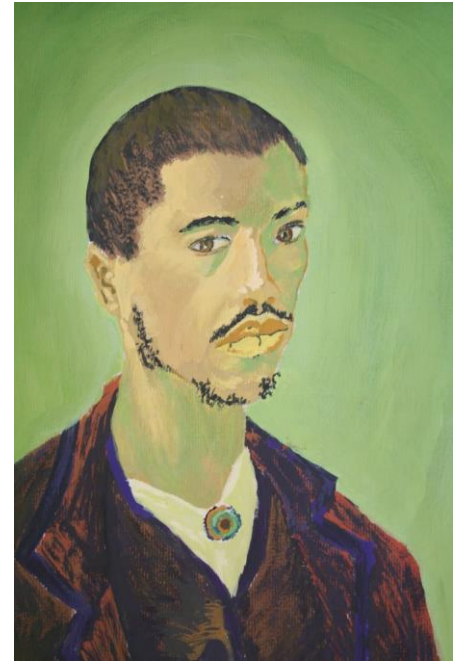
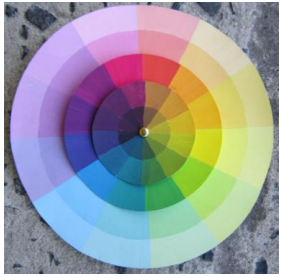




Warm



Cold



SD -
SG -

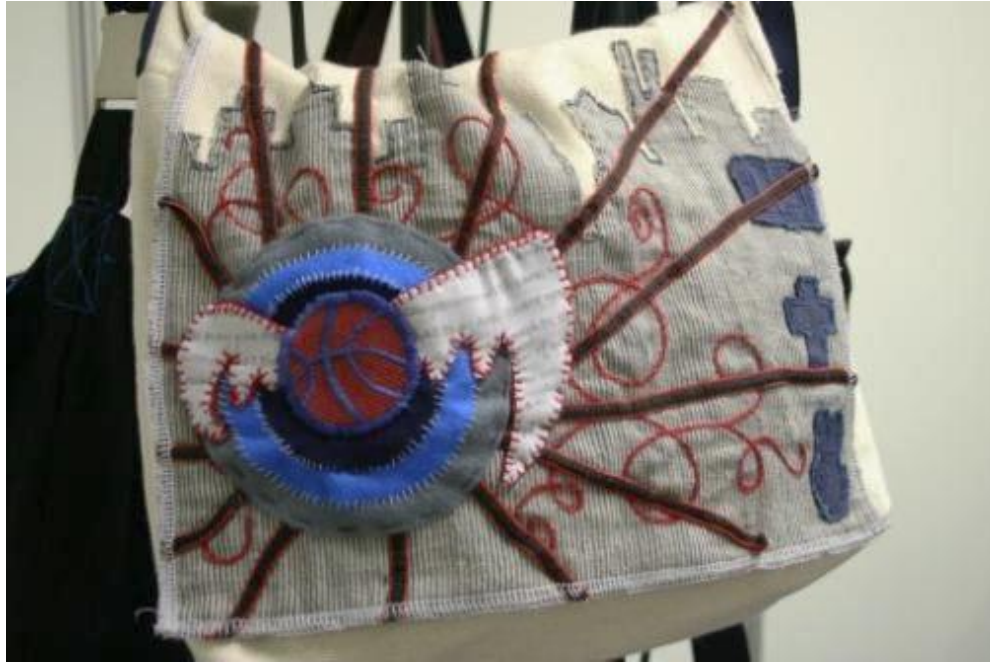


SD+
SG+

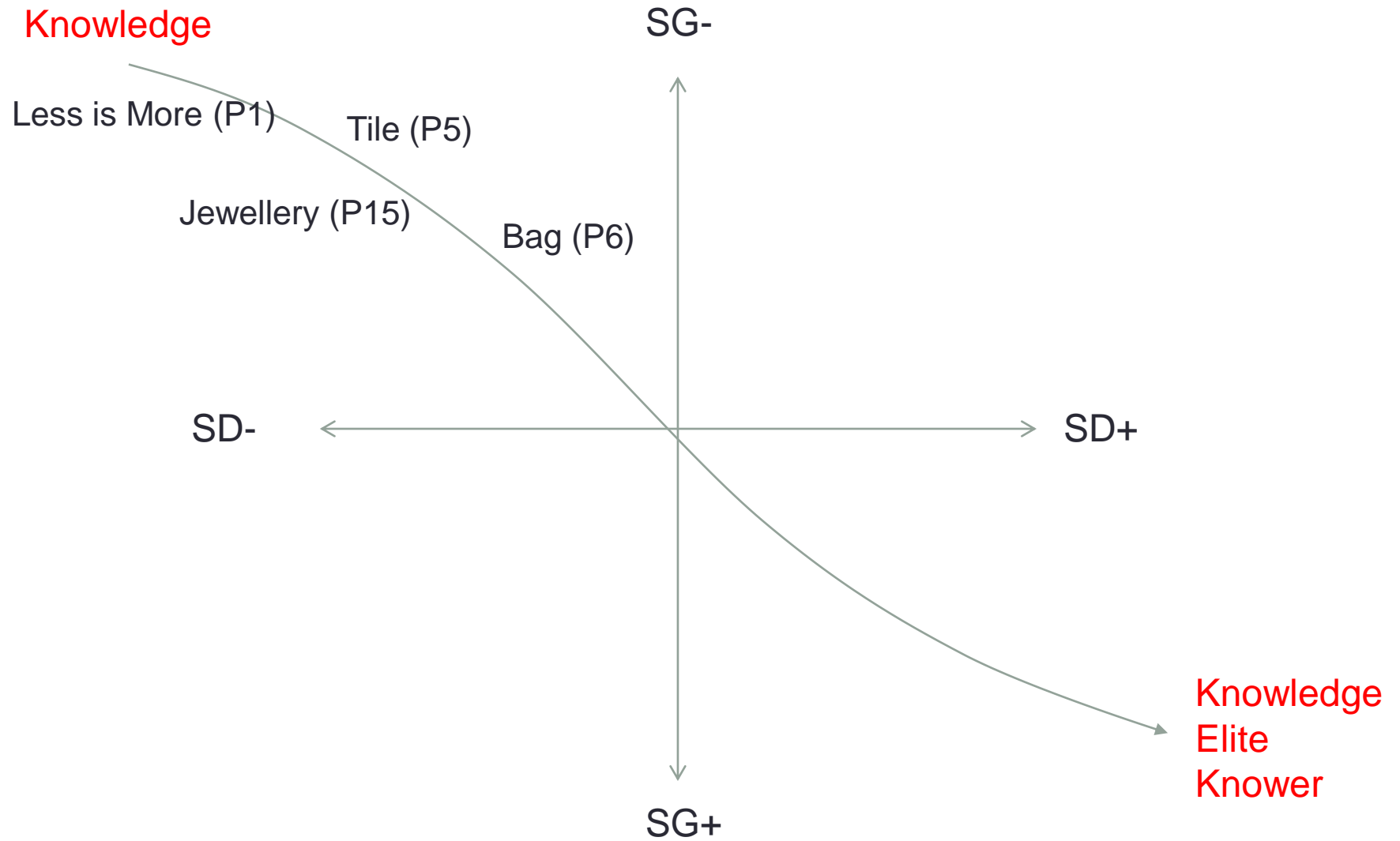




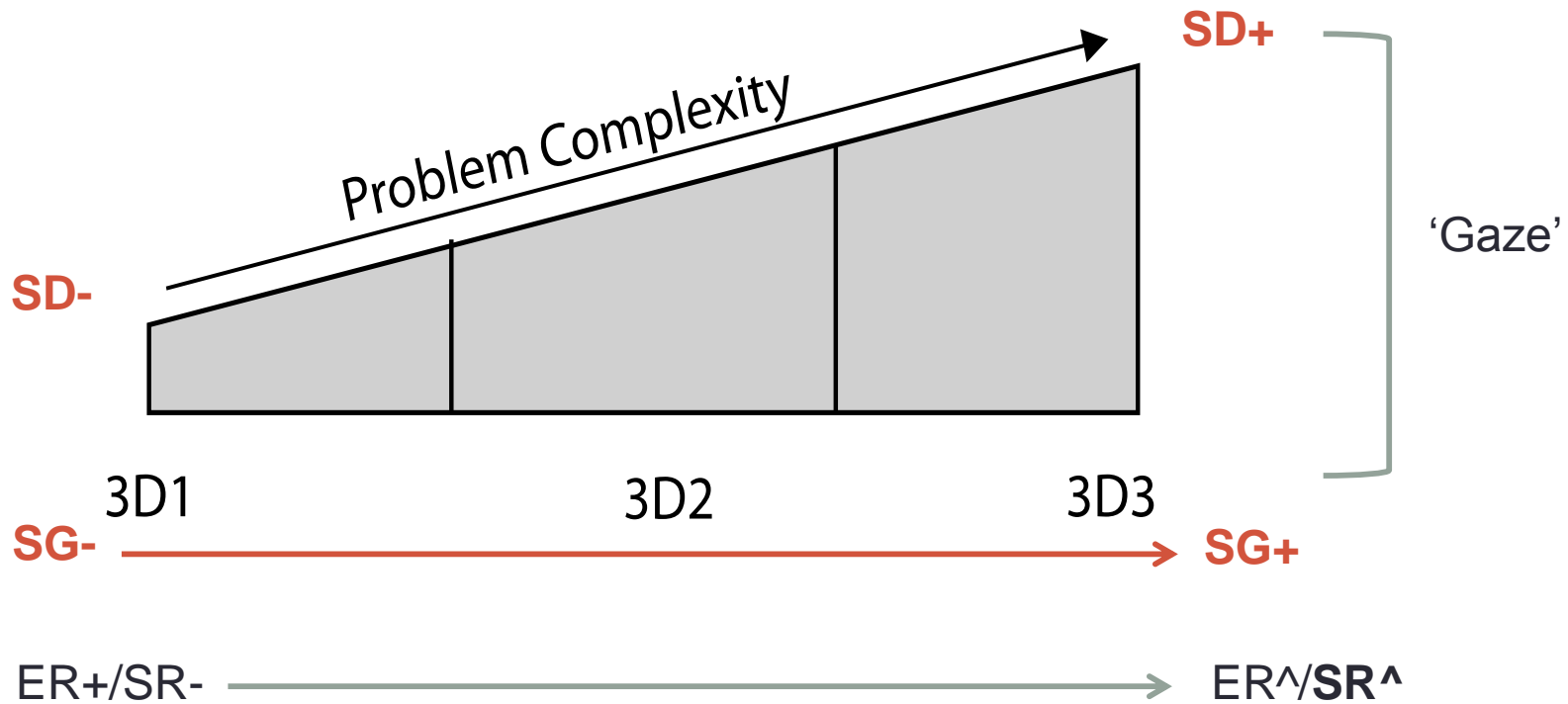




Knowledge



Product Design 1, 2 & 3



Useful References

- BARNETT, M. 2006. Vocational knowledge and vocational pedagogy. *In: YOUNG, M. & GAMBLE, J. (eds.) Knowledge, curriculum and qualifications for South African further education.* Pretoria: Human Resources Research Council Press
- CROSS, N. 2004. Expertise in design: an overview. *Design Studies.* 25(5): 427-441.
- DORST, K. 2008. Design research: a revolution-waiting-to-happen. *Design Studies.* 29(5): 4-11.
- HESKETT, J. 2005. *Design: A Very Short Introduction.* Oxford: Oxford University Press.
- LAWSON, B. 2004. Schemata, gambits and precedent: some factors in design expertise *Design Studies.* 25(5): 443-457.
- MATON, K. 2014. *Knowledge and knowers: Towards a realist sociology of education.* London Routledge.
- SHAY, S. 2012.. Conceptualizing curriculum differentiation in higher education: a sociology of knowledge point of view. *British Journal of Sociology of Education.* 34(4): 563-582.
- SHAY, S. & STEYN, D (forthcoming) Enabling knowledge progression in vocational curricula: Design as a case study. In Maton, K., Hood, S., Shay, S. (editors) *Knowledge-building: Educational Studies in Legitimation Code Theory.* Routledge.
- STEYN, D. 2012. [Conceptualising design knowledge and its recontextualisation in the studio-work component of a design foundation curriculum]. Cape Town: University of Cape Town. (Unpublished MA thesis)