

Languaging Co-Creation

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“The creative act is not performed by the artist alone; the spectator brings the work in contact with the external world by deciphering and interpreting its inner qualifications and thus adds his contribution to the creative act.” (Marcel Duchamp, 2022).

INTRODUCTION

That our ‘reality’ is structured by language is ancient idea (e.g. Bhartrihari, 450-510 CE). But how can we investigate our own thought processes if we are always immersed in the language structures that make thinking possible? This is slightly depressing. We may feel we are free to create new ideas but are being pushed around by tired metaphors and inappropriate grammars. Fortunately, by introducing new and insightful meanings into language we can expand what is ‘thinkable’. But we must do more than invent a new word or metaphor. If, as Wittgenstein argued, no language can be private, ‘languaging’ is always a co-creative act. Raphael Lemkin (1900–1959) was a Jewish lawyer who saw similarities between the persecution of the Jewish and Armenian peoples. However, steeped in the legalistic vernacular of the day, other experts merely saw them as extreme acts of military aggression. So, in 1943 Lemkin invented the term ‘genocide’. Only then did the League of Nations understand what he had been saying. By gaining acceptance for his concept, he co-created a new legal paradigm that continues to influence international relations. This should encourage creative readers to invent new words and meanings. The article is offered as an alphabetical glossary of concepts and neologisms. Feel free to take what you want and reinvent it. Then, popularise the improved versions and make the world better.

1). ABDUCTIVE REASONING

The Sherlock Holmes stories were written only a few years after Charles Peirce invented the term ‘abductive reasoning’ in 1883. Abduction reverses the logic of deductive reasoning. In deduction, once we know that fact A and fact B are the case, then fact C follows naturally. Abductive thought starts with a surprising fact (e.g. C) and asks what unknown facts (e.g. A, B or D) might have caused it. It therefore requires suppositional information from outside the problem space (Ibri, 2022). Whereas AI systems synthesise this heuristically from large bodies of data, humans can also draw upon personal and tacit forms of knowing. Gregory Bateson has described the anatomy and physiology of the body as a “vast abductive system with its own coherence within itself at any given time” (Bateson, 2002, p. 134). And it seems likely that some of Newton’s insights were informed by his early experiences of making things in workshops. Similarly, Einstein explained how the embodied sensation of falling helped him to formulate his theory of gravity.

2). ARTIFICIAL INTELLIGENCE

(See ‘search’ and ‘research’). Some AI systems apply abductive reasoning within Large Language Models. They draw upon case histories using Bayesian-style probability calculations. Some therefore see AI as a co-creative tool, given that it can aggregate, draw inferences and re-confabulate the opinions of many speakers. But whereas AI machines only mashes up large bodies of written data from the past human co-creativity harnesses the complex gut feelings of those dealing with a current predicament. In the Menexenus, Plato’s idea of ‘voices of the dead’ may remind us that, while inert data may augment human wisdom it cannot replace it. In short, AI is more allopoietic than autopoietic. Which is our more

important task: enhancing the co-creative skills of the living, or continuing to training a new species of machine to outperform us?

3). AUTOPOIESIS

(See 'Ubuntu' and 'sympoiesis'). In urban situations, fashion-conscious individuals may spend a lot of their time honing their self-identity. However, if you are alone in the wilderness, your identity may become a genuine life-or-death issue. Imagine that you are wearing a lion suit and a real lion approaches you. Hypothetically, if your acting is convincing, the tiger will see you as another tiger, otherwise he will identify you as lunch. Humberto Maturana and Francisco Varela speak of 'autopoiesis' when explaining how 'living systems' self-sustain their survival in their immediate environment (Maturana & Varela, 1980). Their systemic notion of 'living systems' is useful as it can also be applied to non-biological entities, such as political parties or commercial brands. One aspect of the theory proposes that a 'living system' will only perish when it can no longer reconcile its interior with its exterior identity. This concept can be a helpful building block in understanding the role of collective pride, or shame in shaping co-creative strategies. Obviously, autopoietic organisations also consist of individuals who are autopoietic, too. This explains why members will shift their identities; i.e. presenting themselves as 'I', 'me', 'us', 'we' and 'they' in different contexts.

4). BISOCIATION

(See 'genius'). Arthur Koestler's term 'bisociation' is based on the assertion that all creative thinking is combinatorial (Koestler, 1967). Here, several seemingly incompatible frames of thought are forced together to produce a creative leap that may surprise all. This challenges the myth of the lone genius, as is sometimes applied to celebrity characters, such as Sherlock Holmes, or Elon Musk. If acts of creation are always co-located, 'co-creative acts' might equally well derive from different regions of one brain, or from different individuals within a group (Sawyer & DeZutter, 2009).

5). BODY-MIND DUALISM

(See 'Head/Hand/Heart/Humour'). The following quadrant is offered as a preliminary attempt to dissolve the often value-laden polarisation of 'practice' and 'theory'.

	knowing <i>that</i>	knowing <i>how</i>
reading and writing	texts that address truths rather than making things work better directly (e.g. scientific papers)	texts that seek to outline methods intended to make things work better (e.g. metadesign texts)
doing and making	playful artefacts of satire or critique that offer no practical options (e.g. Critical Design)	plans, sketches or 3D models made for reasons of utility (e.g. inventing, making, crafting, designing)

Fig. 1. A quadrant linking theory to practice.

6). CATALYSIS

(See 'bisociation', 'emulsifier', 'endo-synergy' and 'exo-synergy'). In chemistry a 'catalyst' is a substance that will enhance or quicken a chemical reaction without undergoing change itself. Catalysis can also stand as a vivid metaphor for acts of creation. For example, a good literary editor can catalyse a text by excising all inessentials whilst leaving the authorial voice intact. In 2021 David MacMillan and Benjamin List received a Nobel prize for jointly inventing a rapid catalysis method. MacMillan was asked how he got the idea, "growing up in Scotland...you learn how to tell a joke and you can get to a punchline...". (BBC New, 7th October 2021, <https://www.bbc.co.uk/news/uk-scotland-58828279>).

7). CHORAL SINGING

(See 'Ubuntu'). Whereas verbal dialogue is asynchronous, each choir member simultaneously adds their voice to the collective sound. The process can enhance feelings of presence and heighten feelings of affinity with others. It calls for skills of self-moderation in the context of the whole and is, therefore, a co-creative process (Damsgaard, et al. 2022).

8). CO-AUTHORING

(See 'co-languaging'). This term may refer to the executive editing of another person's text. But Wittgenstein's term 'language games' likens the less hierarchical and ad hoc nature of game playing to how we select and re-negotiate words and phrases within conversations. In a professional context, the co-authoring process can become uncomfortable if it compels co-creators to challenge cherished assumptions, adapt to a new 'reality' or question their own identity. When the process is radical enough to convince others to use these words or grammars it might call it 'co-languaging'.

9). CO-LANGUAGING

(See 'co-authoring'). Often, a metaphor underpinning a concept may seem alien or confusing in another language or at least until the extra effort makes it illuminating (Lakoff & Johnson, 1980). If language is to communicate it must contain 'essential' commonalities. 'Private languages' are therefore impossible, although it may also contain 'accidental' features. These are more idiosyncratic and 'expressive'. By ossifying the 'essential' features of language dictionaries and phrase books enable newcomers to memorise nouns and rules. But this is not how babies learn. They apply heuristic thinking on the basis of what seems to work within their immediate co-creative context.

10). CONSCIENCE

(See 'consciousness'). Before anatomical science became so sophisticated, we identified 'conscience' with the 'heart'. Today, we might experience similar feelings of shame or regret but attribute them to neurotransmitters or other parts of the endocrine system. Thus, while an AI system may be trained to discuss moral principles based on data from Large Language Models it will not have the capacity for conscience in this human sense.

11). CONSCIOUSNESS

(See 'conscience'). Although philosophical theories of 'consciousness' are too complex to outline here, the word is a derivation of 'conscience'. Marvin Minsky famously argued that consciousness is merely a "low-grade system for keeping records" (Horgan, 1994, pp. 88-94). He based on his observations of LISP, an early programming language which was designed to make very frequent 'inquiries' about its own state. He concluded that computers are, therefore, already 'more conscious' than humans. However, until machines can 'think outside the box' this seems a dubious claim.

12). CONTEXT

(See 'relevation', 'relational learning framework', 'relevation'). This term is used as a reminder that no proposition (e.g. co-creative idea) makes sense when isolated. Every proposition has a purpose identified by its creator. Thus, it is only definable with respect to some focal event within a frame and not independent of it.

13). CONVIVIALITY

(See 'Ubuntu'). In an anglo-saxon context 'convivial' means cosy, friendly and celebratory. Ivan Illich (1975) helpfully re-defined it in the ecological sense of 'life forms supporting one another.' Here, conviviality represents the living fields of cohesion that facilitate our collective collaboration and survival.

14). CO-OPTIMISM

(See 'co-pessimism'). Research has shown that optimists are 'luckier' than pessimists (Wiseman, 2003; Taleb, 2007). This is because the 'glass half-full' mindframe 'relevates' more beneficial opportunities. States of collective optimism, or 'co-optimism', can sustain themselves when teams are 'contagiously optimistic'. Here, 'contagion' denotes what, in

systems theory, is called 'positive feedback 'within the team. One of the team tools we invented to support this idea was to transform the management acronym 'SWOT' (Strengths, Weaknesses, Opportunities and Threats) into our 100% optimistic version POUT (Predicament & Potentials / Outcomes & Opportunities / Unnoticed & Unnameable / Transformers & Triggers). We deliberately excluded 'Weaknesses' and 'Threats' for phases to reduce the risk that anxiety or suspicion might conceal an unforeseen opportunity.

15). CO-PESSIMISM

(See 'co-optimism'). Our informal research suggests that pessimism within co-creative teams is more 'contagious' than optimism. We therefore designed team training tools to address this issue. Here, 'contagion 'denotes what, in systems theory, is called 'positive feedback 'within the team. If an influencer within a team is convinced that a particular task is impossible then they are likely to be proved right. One of our team tools was the 'No-Buts' rule, which encourages discussions to filter out doubts and negativity in favour of positive creativity.

16). CO-SEMIOSIS

(See 'co-authoring' and 'co-languageing'). Where 'co-languageing' may create neologisms the term 'semiosis' ('semiose', verb) refers expressly to the creation of new meanings and, thereby, new opportunities and affordances. In 1670 Henry Stubbes coined the term 'semeiotics 'from Greek words meaning 'observant of signs 'and 'a sign, a mark 'to describe how doctors read a patient's symptoms. John Locke (1602-1734) later wrote about the 'doctrine of signs', using the term 'semeiotike' to describe how scientists reconcile the nature of things with human happiness, purpose and morality. Charles Sanders Peirce (1839–1914) broadened the term 'semiosis' to any action that uses signs to create, or to interpret meaning.

17). CREATIVE QUARTETS

(See 'context' and exo-synergy'). Most acts of creation and co-creation are defined, shaped and judged within their context. This includes an assumed purpose and other elements within the larger situation. Although, the precise purpose and client may initially be unknown or ambiguous, it can be useful to try to map them out in a way that reveals possible unforeseen relationships, their affordances and opportunities. Figure 2 maps a tetrahedral set of relations from the perspective of a co-creator.

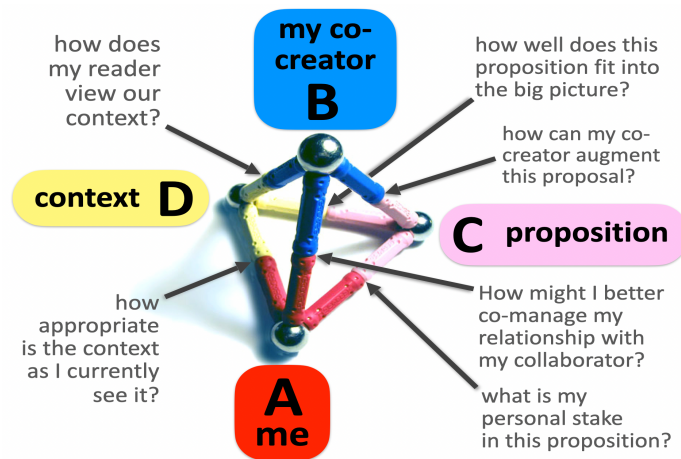


Fig. 2. A Creative Quartet.

(See 'exo-synergy') the four-fold (i.e. tetrahedral) format is both cognitively and mathematically auspicious. Figure 3 is a diagram that loosely interprets John Ruskin's (1819–1900) writings about the multiple benefits of the craft culture. Unlike Figure 2 it presents it as an overview, rather than from the standpoint of one of the agents. It happens to illustrate the fact that four agents have six potential relations that may each be valued somewhere between synergistic or dysnergistic. In this case, all can be seen to be exo-synergistic.

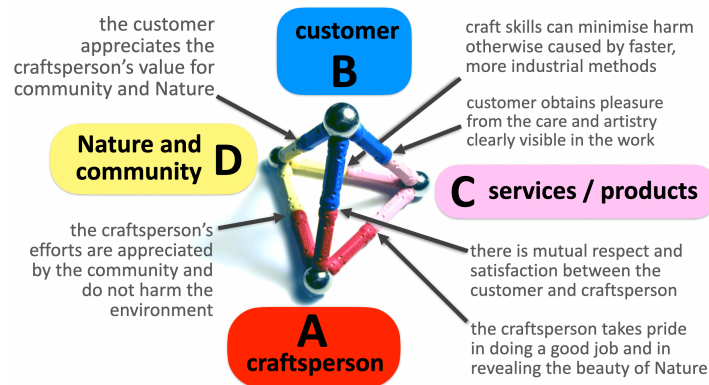


Fig. 3. The craft economy mapped as a four-fold framework.

18). ENTREDONNEUR

(See 'exo-synergy', 'co-optimism'). Richard Cantillon created the term 'entrepreneurship' around 1730. Etymologically speaking it suggests 'taking from between'. Disappointingly, Cantillon described it merely as a risk-taking activity. The economist Jean-Baptiste Say (1767-1832) later characterised it more in terms of planning, i.e. "one who undertakes an enterprise, especially a contractor, acting as intermediary between capital and labour" (Cantillon, 2017). It is remarkable that the concept of taking has come to seem normal, within the current economic order. Today we sometimes associate it with business that is exploitative or predatory. In reality, it is hard to find any enterprise that is exclusively selfish, or exclusively altruistic, hence a reason to introduce the idea of 'entredonneurship' ('giving from between') as a companion term for 'entrepreneurship'. Using the two terms together might help corporations to reform the traditional model of accountancy that conveniently conceals their eco-dysergic practices by labelling them as 'externalities'.

19). EMULSIFIER

(See 'catalyst', 'co-pessimism'). It's almost impossible to keep oil and water mixed together without an emulsifier to bind them. While a diversity of opinions can be potentially productive (see 'bisociation') in a team, they may lead to vehement disagreement or mutual avoidance. A human 'emulsifier' is likely to be someone emotionally literate enough to facilitate creative collaboration between the parties concerned.

20). ENDODYSERGY

(See 'exodysergy', 'exosynergy', 'endosynergy'). In orthodox macro-economic theory it is customary to disregard the unwanted side effects of trading by dismissing (i.e. 'discounting') them as 'externalities'. The same kind of myopia appears to pertain to the original Greek word 'synergos' (συνεργός) which, literally, meant 'working together'. This contrasts with Aristotle's description: "The whole is more than the sum of its parts", which clearly identifies synergy as a potential source of abundance. In order to differentiate between the two notions I have divided 'synergy' into two new words: (i.e. 'endosynergy' and 'exosynergy').

	SYNERGIES beneficial combinations	DYSERGIES unhelpful combinations
CAN AFFECT ADJACENT PLAYERS	EXO-SYNERGIES	EXO-DYSERGIES
EFFECTS ARE LOCALLY CONTAINED	ENDO-DYSERGIES	ENDO-SYNERGIES

Fig. 4. Relevating hidden aspects of synergy.

Normal dictionaries and the established usage show the term 'dysergy' as the opposite of 'synergy' (i.e. bad effects deriving from the combination of things). Hypothetically, therefore, 'endodysergy' refers to situations in which the harmful effects are contained within the place of combination. In chemistry, we might consider salt (sodium chloride) to have come from an endodysergic process, as it is less poisonous than either of its constituent parts.

21). ENDOSYNERGY

(See 'exosynergy'). This applies to synergies that are 'discreet' - i.e. they create benefits that are local to the place of combination but little or none to other agents in the vicinity. A good example is that of Emperor penguins, which huddle together to conserve more body heat than they would as individuals. While this is advantageous to the group it may offer little benefit to the surrounding ecosystem.

22). EXODYSERGY

(See 'endodysergy', 'exosynergy'). Whereas 'endodysergy' refers to a dysergy in which the bad effects are confined to the local space of combination, 'exodysergies' also exert a bad influence on external agents or factors.

23). EXO-SYNERGY

(See 'co-optimism', 'endosynergy'). We usually focus on the complementarity of parts that create synergy. But some potential synergies are also structurally dependent on the number of agents (e.g. participants) working together within a cluster. In 1751, Euler noticed a pattern of abundance in polygons. His Law states that:

$$V + F = E + 2$$

where:

- V represents the number of vertices
- F represents the number of faces
- E represents the number of edges

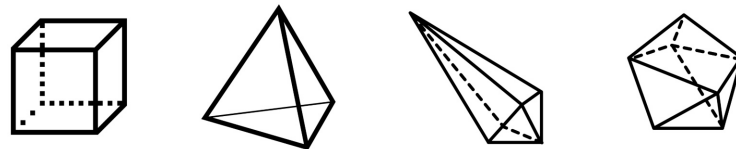


Fig. 5. Different types of polygon.

We can apply this mapping method (polygons) to team participants and the relationships between them (i.e. nodes represent participants and the interconnecting lines represent their relationships).

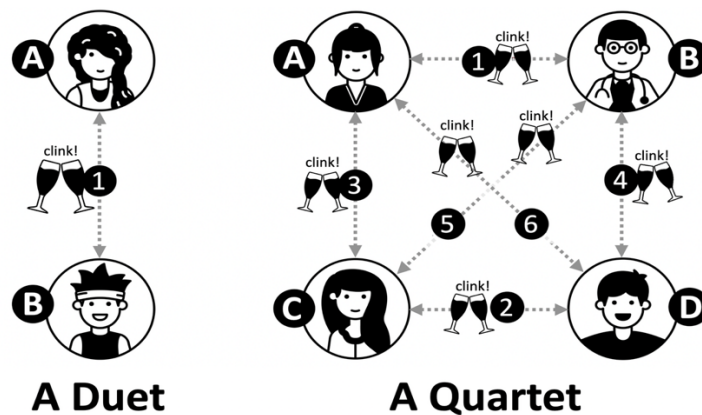


Fig. 6. A quartet holds 6 times more potential for synergy than a duet.

The number of relationships relative to participants, demonstrates how exo-synergies produce outputs exceeding 100% of input.

For example:

- In a team of 8, each team member is responsible for 25% of all relations
- In a team of 4, each team member is responsible for 50% of all relations
- In a team of 3, each team member is responsible for 66.6% of all relations
- In a team of 2, each team member is responsible for 100% of all relations

n.b. In practice a team's synergistic abundance is also likely to be affected by its organisational latency and whether it has a requisite variety of members (see also 'co-optimism').

24). FINDING

(See 'Artificial Intelligence', 'research'). Although, in reality, the concept of 'research' is often co-creative and radically innovative, the prefix 're' suggests that it is a post hoc activity. Science's eagerness to establish evidence-based data is useful in formulating predictable forecasts or 'laws' of physics. Hence, we can review records from the past and make observations in the present but it is harder to derive evidence from the future. By contrast, artists are often more interested in flukes, exceptions and anomalies than in experimental repeatability (c.f. Ljubec, 2022). As Picasso put it, "I do not seek, I find". As Freud said: "It is obvious that in cases of losing, the object is already provided; in cases of finding, it first has to be looked for" (Freud, 1967). In the absence of a clearly defined purpose, human 'browsing' for ideas works by eliciting unconscious and tacit concerns rather than following explicitly formulated goals.

25). GENIUS

(See 'bisociation'). In the era of 'genius' few people notice that ego obstructs co-creation. The myth of Archimedes and his 'eureka moment' valorises invention as a moment of individual epiphany. In a 1784 essay Kant laments mankind's failure to use reason, intellect and wisdom 'without the guidance of another'. Nietzsche (1844-1900) even saw it as a demiurgic 'will to power' ('Der Übermensch', 1883). It therefore led to a form of exceptionalism in which certain unique, self-styled individuals were excused from adapting to the 'normal' world of the everyday (e.g. Schopenhauer (1788-1860)).

26 > 29). HEAD/HAND/HEART/HUMOUR

(See 'body-mind dualism', 'exo-synergy', 'search' and 'research'). Currently, academia straddles a fault-line separating two approaches to co-creation. Whereas mainstream education's concern with 'critical thinking' reflects the cloistered scholasticism of the ancient monasteries, art schools emerged from the more 'hands-on' methods of the mediaeval Crafts Guilds. It would be good to unify these, and other, approaches within a more comprehensive and transdisciplinary education system. Fig. 7 offers a basic four-fold template designed for this purpose. It could be used as a reminder that learning is not confined to either the 'Head' (mainstream universities) or the 'Hand' (art schools). Clustering these four concerns together also affords the inclusion of more performative or healing-based arts.

DOMAIN	LOCATION	IMPORTANT FOR:
Head	Brain	Oral or written knowledge e.g. critical thinking, reasoning
Hand	Limbs	Manual dexterity, performing, tacit knowing, making, acting
Heart	Endocrine system	Emotional intelligence, sensing, feeling
Humour	All of the above	Social skills, learning to fail, opportunity finding, fun

Fig. 7. Four sites of human learning and knowledge.

30). RELEVATION

Bohm (1980) revived the old term 'relevation' to demonstrate that 'relevance' is a co-creative act whereby entities 'relevelate' one another. In his non-Newtonian model, cause and effect are distended and information is 'enfolded' into what

he called the 'implicate order'. It proposes that thoughts are events that implicate us in a larger context, rather than the other way around. When something is 'relevant' it becomes visible within that frame of thought. "To lift a certain content into attention again, for a particular context, as indicated by thought and language" (Bohm, 1995, p. 35). This derives from the old Latin word 'levate' which means to 'rise, or to lift up'...although the Sanskrit root of the word also describes 'lightness' in the 'illuminatory' sense of the word, as well as the 'weighty' sense. In Bohm's terms, it then becomes 'explicate' (i.e. visible, available, or meaningful) for us at a particular time and place.

31). RESEARCHING

(See 'finding'). Academic research includes the gathering of data, citing trustworthy publications and setting up experiments that will provide evidence to validate or falsify a given hypothesis or assertion. We may therefore find it helpful and legitimate to use AI systems as an adjunct to 'research' as defined here (Wood, 2026), whilst keeping in mind their dangers and current shortcomings.

32). SECOND ORDER SYSTEMS THEORY

Effective co-creative processes call for sensitivity to a co-participant's mood or state of mind. This is similar to the process of reversing an articulated lorry because the driver must coordinate rules of steering that change throughout the process. This is because cab and trailer both contribute to the steering process but do not coordinate themselves. Basic cybernetic theory explains how simple regulators use negative feedback loops to 'steer', or self-regulate stability (e.g. thermostat and heater). Second order systems theory explains the need for additional (i.e. 'meta-level') feedback loops to coordinate the regulators.

33). SYMPOIESIS

'Sympoiesis' is an extension of the term 'autopoiesis' with the prefix 'sym', meaning 'with'. It emerged as part of a practical framework for monitoring and calibrating co-creative collaboration (van Nieuwenhuijze & Wood, 2006). Our rudimentary system monitors factors including self-respect, team-consciousness and altruism. Here are some of the questions we used to evaluate sympoiesis within a co-creative act:

CRITERIA	QUESTIONS FOR THE COLLABORATORS
Attributability	Can you still discern evidence of your individual contribution?
Transcendence	Is the work better than what you might have achieved separately?
Emergence	Did it have qualities that surprised you in a positive way?
Applicability	Could it be applied beyond its original purpose (e.g. by others)?

Fig. 8. Four factors that denote sympoiesis.

34). UBUNTU

(See 'autopoiesis', 'body-mind dualism', 'choral singing', 'second-order systems theory', 'sympoiesis'). Figure 8 maps four different modes of human agency in a way that contrasts levels of complexity. Level 1 (i.e. 'me') is the simplest. It alludes to Descartes' concept of 'cogito ergo sum' that was deduce from hallucinating himself as an ego in radical isolation. This reductionist idea informed the self-regulatory paradigm of cybernetics. Subsequent levels (2, 3 and 4) are increasingly complex. Level 2 ('us') draws upon Jean Luc-Nancy's caricature of consumers whose sense of 'Ubuntu' has been reduced to what he calls 'being together at the spectacle' (Nancy, 2000). In this mode we are more 'aggregative' than coherent. Level 3 has transitioned from a plurality of self-regulators to a state of collective (self)coordination. Heidegger's more complex notions of 'beingness' (e.g. 'Dasein') take us towards Level 4 with the more social and practical concept of 'present-to-handness' (Heidegger, 2010) which enables humans to acquire 'lived experience' and to co-create at a level that cannot be quantified. At Level 4 ('we') the African word 'Ubuntu' (c.f. Lutz, 2009) is sometimes translated to mean 'I am what I am because of who we all are'. It embraces the co-creative but also implies compassion and empathy.

It resonates with Chinese terms 'guanxi' (關係) and 'wu wei' (無爲), Korean words, such as 'jeong' (정), all of which can describe interpersonal ties that are informal and tightly-bound.

	KEY ATTRIBUTE	HOW WE MIGHT REGARD IT	COMPLEXITY
we	sympoietic	collective self-coordinated action	4 ↑ HIGH
I	autopoietic	regulating your individual identity	3
us	aggregative	a plurality of self-managing egos	2
me	disembodied	solipsistic hypothetical existence	1 ↓ LOW

Fig. 9. Aspects of individual and collective agency.

ENDNOTE

At present the unfettered pursuit of extractive business models (e.g. oil, banking, AI) is forcing the world towards an existential metacrisis. Over the last 10K years humans scaled up organisations to surpass the Dunbar number (Hill & Dunbar, 2003). As we do not have the cognitive capacity to deal with so many potential face-to-face relationships we invented summative reasoning. We also chose vertical modes of accountability instead of personal responsibility. In the process we forgot that synergies always have more value than aggregated assets. Sadly, if claims cannot be quantified they often get discounted. Ironically, this doesn't add up.

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