

Rediscovering the purpose of the human lifecycle: The universal antidote to the anxiety, disruption, and despair of 21st Century modern life

- excerpts from *Optimal lifelong learning from experience, reflection, and 'inner wisdom': The four stages of the human lifecycle revisited* (2026)

In 'traditional societies' the various key and related stages of the human lifecycle were generally recognized, celebrated, and culturally reinforced by society. This was so in terms of how the psychology of '*the individual changing across time*' (i.e. personal growth achieved through interactive social as well as personal experience) was typically reconciled with '*social orders of adaptation and stability*'. All this was to ensure the collective survival of humanity (and its various communities and races) in the face of future uncertainty. These key stages (*early childhood, youth, mature adulthood* and *old age*) were also typically linked to four main related 'rites of passage': 'birth' into society as well as life, and the further transitions from puberty to adulthood, onward to adult maturity (best exemplified by the transitions of marriage and family), and finally the end of the human lifecycle (i.e. 'a meaningful death').

In modern societies the notion of the related lifelong learning functions and aspects linked to the human lifecycle have largely been forgotten. It may be argued that the result of this often life-denying as well as death-defying alienation of the individual lifecycle in recent times has been the 'global demoralization' of increasingly 'disconnected' societies as well as modern individuals. This has been further reflected also by a modern education system likewise also increasingly debilitated by tending to focus on mere 'surface knowledge' modes of rote learning, an exam-based curriculum and related conditions such as 'credentialism' (etc.). But the move towards national and international policies of 'lifelong learning' also represents an opportunity to begin to recover what has been lost. We might still remember poorly understood notions of 'deep learning' as the basis for all productive human 'knowledge-building'. This might literally be 're-membered' through reflection on life experience to also recognize that which remains engrained as a 'natural cycle' in both the individual and collective consciousness. Hence, the importance of framing from the start a '*lifecycle model of human learning*' that includes the still relevant four key stages of life that once were celebrated as well as fundamentally supported by 'traditional society'.

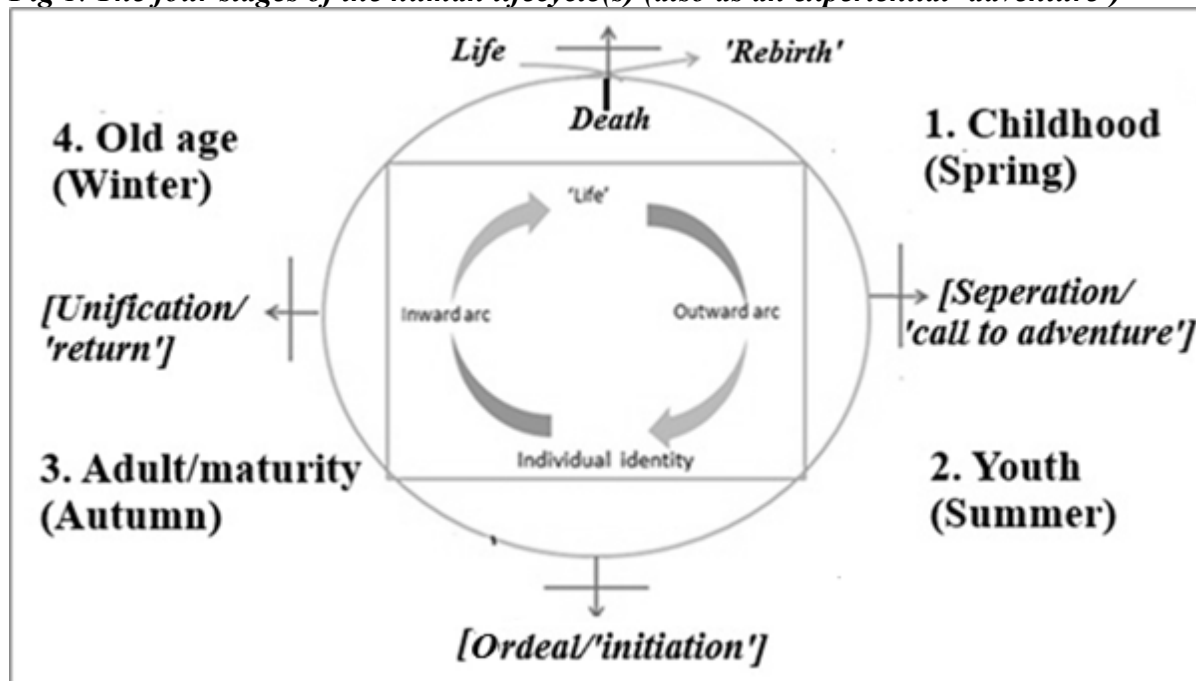
From the point of view of every individual lifecycle grounded in the informal learning of direct experience, learning is a lifelong process involving informal, formal and non-formal modes of learning (whether this might reasonably be also called 'education') generally corresponding to unstructured, semi-structured, and structured activities and processes. In other words, human experience goes beyond the behavioral reinforcement of a merely 'animal' stimulus response to experience to also constructively (or dialogically) involve both *cognitive* and *social* processes of learning transformation (and more). This frames learner development not just in infancy and youth but all throughout life. In this way (and condensing or confusing some of the steps) Kolb (1984) developed his well-known model of experiential learning to depict the optimal process of how active learners are able to better transform direct experience into forms of human knowledge.

Our own adaptation of Kolb's model is described in terms of four common stages of 'experiential learning' – *the foundation of direct or immediate experience, emergent awareness, continuing action learning or reflective practice, and the integrated transformation of experience into knowledge*. The typical micro cycle for transforming direct human experience involves four key stages which also similarly correspond to the macro cycle of '*four basic stages of the human lifecycle*'. This is further exemplified by the four corresponding '*pivotal life crises*' negotiated across the lifecycle (i.e. for babies a basic trust or not of the world), for adolescents similarly trying

to achieve a sufficient sense of individual autonomy in the world, and for mature adults an ‘integrity vs. despair’ dilemma, and also for ageing seniors. As we further discuss, the main lifecycle challenge for ageing seniors is to attain some meaningful culminating sense of ‘life completion’

A related integrated model of *lifelong education* (based on a related model of *optimal lifelong learning*) is needed to support a related *educational* antidote to the residual notions that ‘after school or college’ people work, retire, and then wait to die bored, depressed and with a growing sense of meaninglessness or demoralization - or that in the post-industrial age young people increasingly are giving up on notions of finding sustainable work and traditional notions of family through marriage. In our related model of lifelong learning (i.e. as an antidote to ‘modern demoralization’ in society and education) we have further represented a comprehensive related model of ‘optimal lifelong learning’. This is one which encourages purposeful ‘optimized learning’ from experience throughout the (traditionally recognized) four basic stages of the human lifecycle – either directly from experience or indirectly from naïve, critical and dialogical modes of reflective knowledge building grounded in both direct and indirect human experience.

Fig 1. The four stages of the human lifecycle(s) (also as an experiential ‘adventure’)



The model outlined above represents an adaptation of Erik Erikson’s (1998) later ‘lifecycle completion’ re-conception of his own famous model of the eight psychosocial stages of ‘identity development’ which every individual might typically navigate in life. Erikson’s revised model was posthumously presented by his wife to indicate an additional ninth stage (or rather a re-formulated eighth stage) corresponding to Tornstam’s (2005) end-of-life stage of *gerotranscendence*. But our interpretation of Erikson’s final model is not just of some additional stage but rather a re-framing of the whole lifecycle and its basic meaning and purpose. In any case, the ‘lifecycle completed’ was recognized at the end by Erikson as a stage held to involve renewed elements of acceptance, satisfaction, and even celebration of life along with a ‘wiser’ review of impending death as part of any natural cycle process.

Such an adaptation of Erikson's model is consistent with Carl Jung's model of *childhood, youth, maturity* and *old age* as the four key life stages. Both models are adaptations of Freud's central focus on the human individual in terms of 'egoic identity'. In Jung's case he came to see this as just part of the larger lifecycle as ultimately a process of 'self-realization'. This process, which he called 'individuation', has four key stages either at any time in life or overall: 1. *confronting the Shadow* (repressed or negative aspects of oneself), 2. *achieving better psychological Balance* after engaging with the 'anima/animus' (the 'inner feminine vs. masculine' tension), 3. *transcending the Persona* (the social masks we wear), and 4. *progress in the direction of 'Self-realization'* (a sense of completeness of not just 'the self' but the lifecycle).¹ In this way, it further resembles Campbell's 'monomyth' notion of the exemplary life journey in terms of integrated stories about a process of answering a 'call to adventure' or responding to some predicament in terms of further key stages of *separation, ordeal* and *unification*. This convergent framework provides a useful basis for further recognizing four key complementary tensions at work in the eight distinct 'pillars' of lifelong education

'Lifelong education' framed in terms of four complementary tensions

The four key complementary tensions at work in what (in the next essay) we depict as the eight distinct 'pillars' of lifelong education have a general connection to the four distinct stages of lifelong learning. This is to the extent that they also productively exemplify four key aspects as well as stages of any natural system as a cycle of transformation. The *foundation stage* depicts how individual as well as social development ever takes place as a dynamic interplay between domains of both tacit and explicit knowledge. The *emergent stage* of lifelong learning depicts the propensity for 'deep learning'. This is the basic strategy or rather intuition of a self-directed, autonomous and independent 'active learner' in a related 'dialogical' relation to the corresponding notion of a mentor, coach or even counselor as the most effective teacher paradigm in lifelong education.

That is, rather than just transmitting content to passive learners, lifelong education teachers or guides are (or should be) supportive facilitators of various reflective as well as practical modes of learning across the four generic stages of the experiential learning process – the micro recapitulation of the macro level cycle of learning as lifelong human development. The third stage here makes a complementary distinction between continuing *professional (or social role) development* and various aspect of *personal interest* modes of *continuing education* rather linked to not only personal interest or a human growth rationale and to the use of free leisure time for 'learning to learn again' (e.g. Crick, Stringher & Ren, 2014). Finally, the fourth and final stage of the lifecycle focuses on lifelong education as a process of coming to terms with human mortality, impending death, and living as also a lifelong quest to learn the 'meaning of life'.

1.. The childhood foundation of tacit vs. explicit knowledge building

As seen in relation to how the learning of a 'mother tongue language' is a crucial key to the initial stage of human development with young children, there are distinct if interacting aspects of tacit

¹ In the same 1931 article 'The Stages of Life', Jung rather used the metaphor of life likened to the sun rising and falling each day (with high noon linked to the suggestions of a typical mid-life crisis) to describe two distinct stages of the lifecycle (the second stage referred to as 'the individuation process') – corresponding most relevantly to our own notion here of 'outward' and 'inward' arcs.

knowledge as also the basis for ‘tacit learning’. Polanyi (1966) has pointed out how the *tacit dimension* of human knowledge (i.e. “*knowing more than we can tell*”) typically involves (primary) cognitive patterns linking human biology and psychology as well as (secondary) social contexts and structures of habit and meaning. Through active dialogue with others and in terms of ‘individual past experience’ opened up by situated or context-dependent interaction with the external world, each unique human lifecycle also recapitulates social, cultural, and also more universal forms of tacit knowledge. This can of course be purposefully harnessed in informal, non-formal, and formal contexts of education as ‘deep learning’ in relation to also explicit forms of knowledge building and related modes of ‘surface learning’.

Although as basic functions of what in this book we refer to as ‘human lifecycle learning’, tacit knowledge is therefore particularly exemplified by examples of where lifelong learners participate and cooperate in particular forms of ‘social’ learning and knowledge work also understood in related terms such as communities of practice, organizational learning and particular ‘learning communities’. As suggested by Bandura’s (1997) model of *reciprocal determinism*, there is an interactive dimension to how individual learning and cognition can positively as well as also negatively influence wider social learning and group behavior. Likewise, Seimen’s (2005) *connectivist* model of distributed learning ‘nodes’ linked by new digital technologies is often viewed as a ‘post-constructivist’ model – but similarly is mainly useful for its external focus on social networks. As well as individuals, social groups from local communities through to large organizations also make use of related notions of both tacit and explicit knowledge.

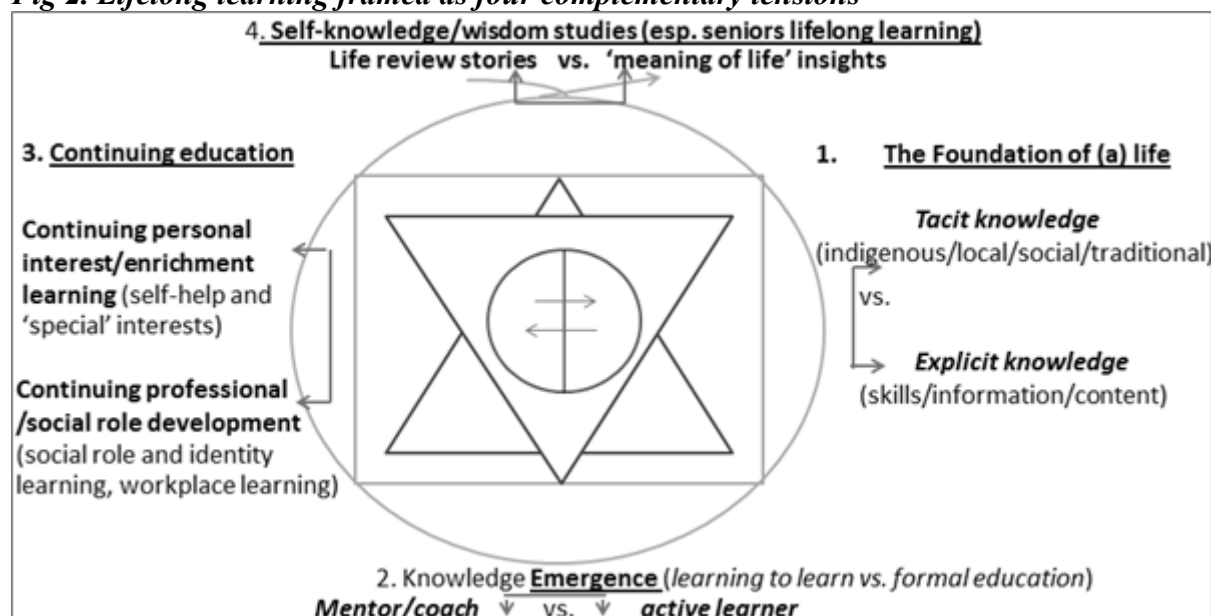
As Argyris & Schon (1978) recognized, the ‘*single loop learning*’ of groups or organizations corresponds to the *surface learning of individuals*. This is in contrast to how a rather ‘double loop’ engagement with and change in underlying structures or patterns of meaning also corresponds to the deep and transformative learning capacity of individuals to more effectively achieve understanding, transferable knowledge, and adaptive ‘reflective practice’. The various and convergent modes of *tacit knowledge* available to every lifelong learner also interact with different forms of *explicit knowledge* (e.g. the learning of content or mere skills reproduction) throughout the various stages of life. As the knowledge management models influenced by the work of Michael Polanyi suggest (e.g. Nonaka & von Krogh, 2009), direct experience is ultimately the key to how the explicit knowledge of information, skills and other related aspects of ‘content’ might be effectively transformed into tacitly understood and applied knowledge also within particular ‘organizations’. Conversely however, the *tacit knowledge* as well as *deep learning* foundations of lifelong learning remains the ultimate framework for (and context of) formal as well as informal and non-formal education – along with the greater process we refer to in the following pages as ‘human knowledge-building’.

Polanyi’s (1958, 1967) distinction between *tacit and explicit ‘knowledge-building’* corresponds not only to the distinction we make next essay between (similarly inter-related) *constructive and receptive modes of experiential learning* – but also to that between ‘understanding’ and ‘explanation’ made in the dialogical hermeneutics of Paul Ricoeur and others.² The dialogical interplay of (personal) understandings and (socially shared) explanations (also of ‘wholes’ and their ‘parts’) is the very basis for Ricoeur’s reconstruction of the hermeneutic circle in terms of the cyclical nature of all human acts of interpretation generating a ‘surplus of meaning’–

² As Polanyi himself pointed out in an essay “Meaning: Lost and regained” included in his 1962 book *Personal Knowledge: Towards a Post-Critical Philosophy*. As well as in some of Ricoeur’s earlier works, this framework was further outlined in his *Theory of Interpretation* (1976).

and their basic ‘metaphoric’ transformations also in the ‘*pre-figuration, configuration and ‘re-figuration’*’ of human experience.

Fig 2. Lifelong learning framed as four complementary tensions



In this way our use of the term ‘human knowledge-building’ has several significant related connections beyond our own location of this as ultimately the primary ‘constructive function of human lifecycle learning’ in its interplay with an inter-related ‘reception cycle’. One is Ricoeur’s hermeneutic trajectory of ‘optimal human knowledge-building’ proceeding from ‘*naïve understanding*’ (typified by insightful questions building on primary experience) to ‘*critical explanation*’ (informed by a related ‘*distanciation*’ process of thoughtful reflection) and on to *dialogical transformation* (either as a convergence of the first two stages or some related ‘self-other appropriation’). As we outline in later essays in this book, this framework of ‘*universal knowledge-building*’ reflects a recovered understanding of Socrates’ elenchus method of optimal human inquiry as a constructive as well a ‘deconstructive or negative’ process of building on the ‘wise ignorance’ gap between the related blindness of both ‘condescending arrogance’ and ‘close-minded ignorance’.

A perhaps ‘more accessible for most’ application of this framework is outlined further in Essay 11. Here it is a depiction of how ‘experiential learning’ is optimally reflected in the three basic pillars of a learner-centered paradigm of ‘optimal education and learning’ (*problem-based learning, inquiry-based learning, and project-based learning*). Just as the most effective problem-based learning proceeds in terms of some initial clarification of a relevant problem to solve and address, so too this is a related foundation of ‘inquiry-based optimal learning’ in terms of converting a relevant (and imaginatively-framed) problem into a focus question that might be answered or at least addressed as an interactive process of inquiry informed by ‘reflective thought’ linked to some practical or applied context. Either way, sustained problem-solving and relevant inquiry optimally proceeds in terms of a relevant goal of ‘project development’ framed also in terms of some particular outcomes-based focus and structure.

Later in this book we explore two extensions of this knowledge-building model. is a model of human decision-making. planning, and outcomes-based project development as a related

process of ‘policy-building’. This might be understood and applied by any young (or older) learner as well as professional within any relevant community, business/industry and governance as well as ‘academic’ development project (as well as related ‘policy analysis’). Finally, we outlined in the final two essays a particular notion of ‘21st knowledge building’ (as well as a related notion of a sustainable ‘*future global knowledge convergence*’) that goes beyond the growing demoralization and chaotic confusion of a post-modern or ‘liquid’ global society to recognize the pivotal role in human knowledge-building played in the past by ‘the human lifecycle’ in various modern social contexts as well as those of ‘traditional society’.

2. The emergent relation of the active learner vs. exemplary lifelong teacher as mentor or coach (in schooling and beyond)

The *tacit-explicit* knowledge connection helps explain why the key to ‘active learning’ and related models (such as cognitive or social constructivism and ‘the learner-centered paradigm’) either directly or indirectly remains human experience. The basic transmission or ‘spoon-feeding’ (exam-based curriculum, etc.) model which has dominated modern education in both schooling and beyond tends to project a practice of learning as literally the ‘spoon-feeding’ of content to be tested as merely a process of recall or imitation. This is a model of teachers and trainers transmitting information or skills to predominantly passive and unquestioning students who subsequently tend to acquire attitudes of indifference and a demoralizing lack of interest or intrinsic motivation for lifelong (and lifecycle) learning (e.g. Gatto, 1992). As indicated from the outset above by references to the work of John Dewey, David Kolb, and others such as Kurt Lewin, related notions of ‘action’ (i.e. related *activity-based experiential learning* models) have been regularly cited to encourage deep and not just surface learning.

In contrast to the ‘top-down teaching’ model, the primary process of learner experiential learning is complemented by the ‘lifelong teaching’ role to design and frame semi-structured learning activities and ‘environments’. This is epitomized by the generic or basic pillars of ‘activity-based learning’ (*problem-based learning, inquiry-based learning and project-based learning*), the use of ‘cognitive tools’ (e.g. Egan, 1997) and ‘situated learning and cognition’ as also a process of ‘social learning’ (e.g. Lave & Wenger, 1991). As well as such curriculum design strategies and related approaches to optimally framing effective ‘learning environments’, teaching to encourage links to the present ‘here and now’ experience of learning include notions of *the teachable moment, critical incidents, and just-in-time learning* (e.g. Simkins & Maier, 2010).

Such approaches are consistent with and reinforce Vygotsky’s advice that teachers (and also parents and others) can assist younger and less proficient or experienced by making ‘strategic interventions’, providing a ‘focus of dialogue’, and also creating ‘optimal learning contexts’ he called ‘zones of proximal development’. Thus, it is clear that the exemplary lifelong education model of the teacher is as a mentor, coach or guide encouraging and supporting the internal process of deep learning by ‘active learners’. As Brown, Collins & Duguid (1989) outlined in terms of their model of six key modes of ‘cognitive apprenticeship’, *modeling, coaching and scaffolding* are constructive methods of teaching which give way to the deep learning modes of *articulation, reflection and exploration* which can be encouraged by a teacher, coach or mentor but ultimately are ‘performed’ by learners with growing autonomy and independence. In this way, lifelong education in general is the secondary process of providing supportive frameworks which frame the primary experiential process of active ‘deep learning’.

3. Professional development vs. ‘personal interest’ rationales for adult and continuing education (etc.)

As Schon (1983) also advised, all ‘professional development’ is ultimately and basically a process of learning by *reflecting in* and/or *on* experience as ‘action’, as ‘practicum’, and as a process of ‘thinking on your feet’. This involves an experiential learning gap or ‘abyss’ we prefer to call a ‘*threshold of change*’ (and also refer to as the *temporary vs. perpetual threshold of confusion, frustration, and uncertainty*) (e.g. Richards, 2015). It also involves what Senge (2010) called the *fifth discipline* – the capacity as well as strategy and discipline of ‘systems thinking’ to foster aspiration, develop reflective dialogue, and understand complexity in terms of integrating related disciplines related to personal mastery, underlying models or expectations, a ‘*vision of possibility*’ (as we also put it) and engaging in dialogue with others. Mention was also made earlier about how workplace learning, adult education, continuing education, post-compulsory education and also online or distance education options for all kinds of workers and not just ‘professionals’ have proliferated under the guise of lifelong learning policies in Europe and around the world (e.g. Oleson, 2009). This is in addition to how the *traditional apprenticeship model* whilst still an option of vocational education has become one of a range of workplace options as well as distinct from the growing tendency for usually unpaid ‘internships’ which often have little educational or learning relevance (e.g. Perlin, 2012).

For several reasons, we have preferred here the concept of *continuing education* as a generic container for the range of related terms. One is that the qualifying term ‘continuing’ more appropriately applies to a lifecycle perspective than the main alternative *adult education* as well as related terms such as *further* and *post compulsory* education and training (i.e. with education also the generic container of training). Continuing education thus also includes a range of ad hoc, short-term and part-time as well as more strategic, regular or formalized modes of ‘professional development’ within many businesses, government agencies, and community organizations, and also further or ongoing vocational and especially workplace training of different kinds as well.

From an institutional perspective, the primary distinction lies in those *continuing education* courses which include the extension of formal qualifications on one hand, and on the other a secondary distinction applied to the plethora of extension or not-for-credit courses extending to non-formal education contexts (community colleges, universities of the third age, study circles, and so on) focused rather on what might be generically called *personal interest lifelong learning* education (e.g. Rogers, 2005). This not only includes notions of personal enrichment, development or ‘growth’ (including programs, courses, or workshops in self-help or self-improvement) but also training or ‘hobby courses’ in leisure or recreational and a range of aesthetic and cultural activities. Thus, as exemplified by the kind of courses conducted by many *University of Third Age* centers (see Essay 5), such options also apply to post-retirement or post-work and seniors, or ‘third age’ lifelong learning. Following the suggestion of Gross (1991), not only museums, libraries and oral knowledge social networks may be regarded as the *invisible universities* of lifelong learning but increasingly the information resources of the internet and related social media communication digital networks.

4. Culminating life review stories vs. ‘meaning of life’ insights (later-life learning)

As discussed further in Essay 4, the function of ‘life reviews’ (i.e. the ‘taking stock’ of one’s life) is an important lifelong learning focus all through the different key stages of the human lifecycle.

This is in the sense that everyone might benefit from time to time from reflective and mindful self-awareness beyond the present to include the past and also the future (Hyland, 2011). As the painter Gauguin famously suggested, this includes ever relevant questions of ‘*Where do we come from? Who or what are we? and (most importantly) Where are we going?*’. However, it has a special application for *later life learning* such that we might more accurately refer to a *culminating life review* as an important key to achieving some aspects of gerotranscendence or how, as Joan Erikson put it, “*self-knowledge as the true wisdom*” (Erikson, 1996, p. 116). The particular or exemplary concept of a structured life review is a particular model using the Erikson development framework to interpret and apply Butler’s (1963) model of therapeutic reminiscence as a key to life review (Haight & Haight, 2007).

A related model is that of Birren & Cochran’s (2001) *guided autobiography* which similarly aims to encourage ageing seniors to recall and share ‘life stories’ to enhance physical and mental health as well as personal enrichment. However, as Haber (2006) has pointed out in clarifying a distinction of between a *life review as therapy* and *life review as lifelong learning* (a distinction thus basic to the distinction also between lifelong learning and various psychological models of personal development and growth or optimal cognitive performance), “*life review conducted for educational purposes can teach or inform others, pass on knowledge and experience to a new generation, or enhance understanding of one’s own life*’ (p. 155). This is of course often a very fine distinction.

The original popularizer of the life review concept Butler (1963) did also apply an alternately therapeutic and educational view of *the process of reminiscence* or the remembering of past life events. The key function of life reviews then is to achieve a ‘*balanced self-evaluation*’ in human lifecycle learning (usually by correcting or balancing unfair negative self-images or unbalanced bad memories). Such a function recalls the generic challenge and purpose of reflective evaluation *in* and *on* experience and the experiential or action learning cycle to strike a ‘constructive evaluation’ balance.

In relation to the constructive purposes of life reviews, the *basic story of the overall human lifecycle* is whether or to what extent a person has ‘held it together’ as they navigated the interplay of innate purposes and life ambitions in relation to specific and often changing situations. In this way, also, we have a comparatively universal basis for appreciating or self-evaluating and judging (a) that a *noble failure* can be greatly superior to merely ‘playing it safe’ or trying to be ‘risk-free’ in life, and (b) that an ‘inner process’ achievement of sustained integrity may ultimately be more meaningful than any superficial identity or mere record of external and apparent achievement.

The related eight pillars of lifelong education

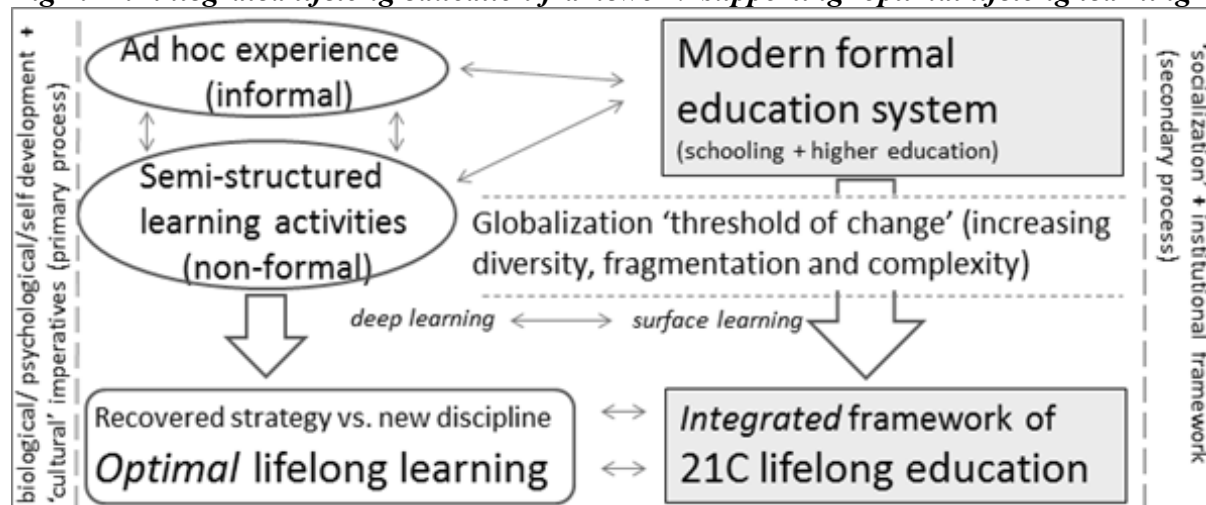
Such a model of lifecycle education and learning might be depicted in terms of the related notion of the *eight pillars of lifelong education*. It’s perhaps no accident that a key factor in the growing ‘*demoralization of modern society*’ has arguably been the similarly fearful as well as related ‘*demoralization of modern education*’. This is because the common factor has been the disconnection of the human lifecycle (and its four key stages) from the direct experiential foundations of education and learning ‘*accreditation*’ as well as related concepts of ‘individual identity’ formation – and also the socio-cultural contexts of ‘the modern individual’. And so, in recent decades, notions of *educational demoralization* have emerged in similar fashion to the related term ‘higher education credentialist creep’. As indicated above, *credentialist creep* (or ‘credentialism’) similarly refers to the increasing devaluation over time of academic credentials

increasingly needed for the various ‘professional jobs’ that were traditionally grounded in ‘apprenticeships’ (and related forms of learning from experience in ‘the workplace’).

Another symptom of educational demoralization has been the similarly growing problem also of *teacher burn-out* in higher education as well as in schools that is typically accelerated by government education policies of ‘punitive teacher accountability’ aligned with those of curriculum narrowing, pervasive student testing, and increasing use of ‘educational technologies’, etc. In other words, it has not just been learners or students who have suffered from the larger problem. Indeed, in a recent insightful *EdSurge* article David Stieber (Feb 14, 2022) usefully pointed out that “*America’s teachers aren’t burned out. We are demoralized*”. The wider problem of ‘demoralization within modern society’ thus includes related notions often referred to as either professional or personal ‘burn out’.

Acknowledging how this is all really part of a ‘wider modern cultural malaise’, Ecclestone & Hayes (2009) have usefully described how the global education system (including various notions of lifelong as well formal education) thus increasingly represents an underlying *model of self* ‘diminished’ by the breakdown in human confidence in the links between experience and knowledge as well as learning: “*A diminished human subject finds exposure to uncertainty and adversity, including disappointment, despair and conflict simultaneously threatening to ‘the integrity of the self’ and inhibiting of it*” (p. xi). Such an extra-curricular and potentially lifelong new adaptation of the ‘passive learner’ syndrome in modern formal education requires an antidote. Thus, Ecclestone & Hayes point to how human resilience-building (not ‘victim mentality’ reinforcement) is or should be the main focus of better future lifelong education and learning models (Cf. also Ecclestone, 2004).

Fig 2. An ‘integrated lifelong education framework’ supporting ‘optimal lifelong learning’



The discussion of the last stage above is not just relevant because of the growing problem of ageing societies and related issues such as health-care provision. There are also related ‘lifelong education’ grounds for challenging ‘the modern script’ that children go to school so they can grow up to get a job (whilst possibly raising a family or not) to eventually retire and simply wait to die - and the associated negative self-fulfilling prophecy that older people simply and inevitably lose the capacity to learn as they age. More significantly the widespread dismissal and ignorance of the benefits of tacit as well as explicit knowledge grounded in lifelong experience represents a great untapped resource of knowledge and experience sorely needed by a world now in perpetual crisis

and by societies suffering increasing policy, decision-making and sustainability paralysis (Richards, 2012a). However, perhaps the most important reason is that a '*lifecycle completion framework*' for 'later life' (or Seniors') lifelong learning provides the crucial key for a new as well as recovered global perspective which recognizes that a lifecycle perspective is a solid foundation for an integrated model of future lifelong education.

Figure 2 projects a model providing two basic contrasts. One is between the *modern formal education system* (centered around schooling preparing learners or students for higher education) and a wider, emerging, and future *integrated framework of lifelong education* outlined and discussed further in a related paper as the 'eight pillars of lifelong education' (Richards, 2017). The second contrast is between this '21st Century' (or 21 C) lifelong education framework [as a 'secondary process'] and a related new or emerging paradigm of optimal lifelong learning which is 'the primary process' of both experience and development.

In contrast to how such a notion of *deep learning* is rather the exception and generally an 'add-on' to the *surface learning* tendencies of modern formal education, it is the recognized role of future lifelong education to frame, to support, and to encourage optimal learning, constructive knowledge building and reflective practice as performance across a range of formal as well as non-formal and informal learning contexts. The transition to a new paradigm has been given impetus by the strong forces of global change which extend from new requirements of complex problem-solving to imperatives of social and cultural diversity through to the 'fragmentation' of old and increasingly inadequate structures of knowledge and education – indeed a twentieth-first century *threshold of change*. Just as the hidden curriculum of lifelong education remains 'socialization' even in a fast-changing and globalized world, so too the hidden curriculum of lifelong learning also remains the biological, psychological, and self-knowledge imperatives of human lifecycle development.

In other words, as Rogers reminds us, education is not just ultimately 'assisted learning'. It also has a related *social function* which complements as well as interacts with the primary lifecycle as well as the *psychological process* of lifelong learning. In this way it is the recognized role of future lifelong education to frame, support and encourage 'optimal learning' (through constructive knowledge building and reflective practice, etc.) as confident, effective and 'fearless' performance across a range of formal as well as non-formal and informal and learning contexts. This is especially so in terms of how various notions of learning directly from experience at the 'micro' level are ultimately related to the experiential learning foundations also of human lifecycle development at the macro level. In other words, the '*quality of life*' (including human lived experience) is ultimately linked to the ability to learn by either directly or even indirectly harnessing the ever-immediate '*quality of experience*'.

Figure 2 additionally projects a possible model of future education providing two basic contrasts. One is between the modern formal education system (centered around schooling preparing learners or students for higher education) and a wider, emerging, and future *integrated framework of lifelong education* - see below. The second contrast is between this '21C' lifelong education framework (secondary process) and a related new or emerging paradigm of optimal lifelong learning which is the primary process of both experience and development. In contrast to how such a notion of deep learning is rather the exception and generally an 'add-on' to the surface learning tendencies of modern formal education, it is the recognized role of future lifelong education to frame, support and encourage optimal learning, constructive knowledge building and reflective practice as performance across a range of formal as well as non-formal and informal learning contexts. The transition to a new paradigm has been given impetus by the strong forces

of global change which extend from new requirements of complex problem-solving to imperatives of social and cultural diversity through to the ‘fragmentation’ of old and increasingly inadequate structures of knowledge and education – indeed a twentieth-first century *threshold of change*. Just as the hidden curriculum of lifelong education remains ‘socialization’ even in a fast-changing and globalized world, so too the hidden curriculum of lifelong learning also remains the biological, psychological, and self-knowledge imperatives of human lifecycle development. meaninglessness or disillusionment.

It might be reasonably argued that a new emerging plethora of variations and alternatives to the stable ‘one size fits all’ tendency of modern education have also been in the process of effectively changing that model. Formal notions of education as also a public good have been disappearing in recent decades as forces of commercialization and commodification take over or create new schools, colleges and universities, as workplace training and continuing professional development options are corporatized, as public as well as private universities internationalize as part of national policy (also serving as de facto immigration). So ‘*the modern formal education model*’ itself has been increasingly losing credibility and authority along with its relevance to the needs of society in general and young people in particular. Yet an ‘alternative framework’ (such as indicated below) has organically emerged to better fit with various notions of ‘lifelong education and learning’.

That framework can also be encapsulated by the emerging push to promote the importance of ‘generic skills’ (and the related notion of ‘soft skills’) in both schooling and higher education. This is often promoted as a recognition that universities around the world are increasingly failing industry and society by produced (‘unemployable’) graduates ‘without’ initiative, adaptability and a capacity for innovation – and unable to effectively think, communicate, solve problems or work with others collaboratively. This is ironic given how a significant proportion (if not most) university graduates have long found work after graduation in areas outside any narrow academic specialization (i.e. in terms of the ‘general skills and knowledge’ that they typically acquired as part of their degree before a complete takeover by ‘credentialism’) – especially ‘critical thinking’ and ‘digital literacy’ (e.g. Virtanen & Tynjala, 2018; Cirque & Kippels, 2023). This all just helps reinforce our point here that the emerging concept of (and related policy push for) ‘generic skills’ in formal education in recent times really refer to the ‘generic skills of optimal lifelong learning’ that might be encouraged to promote the innate capacities of human lifecycle development and learning.

The extended table below outlines a provisional model of how the model developed here might be rigorously, comprehensively and relevantly conceived as a framework for clarifying the future role and direction of lifelong education. This is in addition to the table’s facility to distinguish the primary, transformational and deep-level (and also higher order thinking or reflective practice) process of lifelong learning. It applies a 21C layer and perspective which can only just be touched upon here about how lifelong education is in the process of reframing the modern education system and its negative relationship to the domains of non-formal education and informal and experiential learning more widely. In this way the framework outlined helps also clarify related ‘optimal models of lifelong learning’.

Table 1. The 8 pillars of lifelong education and the 4 stages of human lifecycle learning³

Tacit knowledge – explicit knowledge axis [Foundational]

Central focus – informal (experiential and social) learning

Indigenous knowledge	Distance education resources
Culture/ tradition	Social learning (e.g. public awareness campaigns)
Language communities	Youth, education and employability policies
Organizational learning	Sustainable development
Team-work and cooperative learning	Macro stakeholder exchange (business/ industry, community, government, education/research)
Learning ‘communities of practice’	Knowledge management
Sufficiency/ resilience training/ community based learning centers	Global systems/networks of education, knowledge and information

Active learner – ‘Teaching’ as dialogue or relationship [Emergent]

Central focus – formal education/ disciplinary learning

Self-directed/flexible learning	Mentor
Learning to learn	Coach
Problems/inquiries/projects based learning	Educational designer
Experiential learning	Learning facilitator
Outcomes-based learning/GROW model	Educational leader/manager
Internships, traineeships, apprenticeships	Therapist/ counselor / life coach

[Continuing] professional /social development – personal interest and/or ‘knowledge enrichment’ education and learning]

Central focus – non-formal education opportunities

Adult (non-curricular) education	Special interest groups/courses
Workplace training	Hobby groups/courses
Executive courses/workshops	Online/social media knowledge communities
Participatory/customized education/postgraduate study	Self-help and personal growth/development seminars/books/ training (e.g. stress management)
Privatization, marketization, ‘credentialization’ of both non-formal and formal education	‘Invisible universities’ (libraries, museums, Web resources, and oral networks/ traditions, etc.)
Continuing professional education/ social development (employability)	Open universities/ virtual colleges, free mass distance education (MOOCs, etc.)

Lifecycle reviews and completion/‘meaning of life’ insights [sustainable Optimization]

Central focus – integrated (and esp. seniors) lifelong learning

Third into fourth age education (e.g. University of Third age) – ‘learning to learn again’	Fourth age learning – Keeping active, mentally stimulated, and ‘connected’
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³ The lists of this table are not conceived to be definitive or exclusive. They are a provisional, suggestive and exemplifying attempt to provide a more comprehensive framework. This is with particular relevance to the developmental or lifecycle links to the interplay of informal, non-formal and also formal (also unstructured, semi-structured and structured) modes of social as well as individual learning

Retirement/post-work transitions (leisure, adventure, finding new interests and staying socially connected)	Helping older people maintain their independence and quality of life at home (or with better aged and palliative care provision)
Health maintenance courses and programs (physical, social, and cognitive exercises)	Life reviews (family histories/albums, oral/ digital stories, active dreaming workshops, etc.)
New literacies for old folks in a fast-changing world (courses in financial/legal literacy, new ICTs, etc.)	Lifelong learning and plastic brain (neuroplasticity) – brain fitness PLUS learn new knowledge to the end
Customized interest groups/courses for Seniors	Meditation, ‘acceptance’/‘appreciation’, and ‘meaning-making’ training and courses
Wisdom/’meaning’/self-knowledge studies	Lifecycle completion
