Theoretical triangulation of academic self-formation: Nine critical literature reviews and emerging questions

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and practice.

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Soyoung Lee has recently received a doctoral degree from the Department of Education at the University of Oxford. Soyoung's research project was fully funded by the University of Oxford, and her thesis, *Students' Academic Self-Formation in Local and International Higher Education* is now being processed to be published as a monograph. soyoung.lee@education.ox.ac.uk

Abstract

This paper presents conceptual research that gathers, evaluates, and synthesises existing theories or concepts pertaining to students' *academic self-formation* in higher education, as part of a doctoral project on that topic (Lee, 2021; 2023; 2024). The author conducted a series of critical literature reviews (Snyder, 2019) on different but related topics, resulting in nine conceptual essays bearing on aspects of academic self-formation. Each essay has four elements: (1) rationale for the focus on the concepts/theories; (2) what they tell us about the conditions, resources, and results of student self-formation; (3) how the self-formation approach reciprocally expands upon the selected concepts/theories; and (4) emerging questions or unresolved matters necessitating further exploration for a more thorough comprehension of academic self-formation. The essays presented in this paper contribute multiple and hybrid perspectives for theoretical reflection (Sayer, 1992) or theoretical triangulation (Denzin,

2012) of the phenomenon of academic self-formation. The paper extends the discussion in a previous CGHE working paper on the same topic (Lee, 2021).

Keywords: self-formation, student agency, academic knowledge, critical literature review

Introduction

As an emerging way of understanding higher education, *student self-formation* has introduced an alternative framework to current higher education policy and discourses (Marginson, 2023; Oldac, Yang, & Lee, 2023). Finding that the dominant human capital and neoliberal approaches neglect or otherwise limit the agentic capabilities of students, the self-formation idea puts students at the centre of higher education, highlighting their active and reflexive agency in navigating their university experiences to augment and fashion themselves as they desire. Although possessing strong potential to establish a more comprehensive, profound, and genuine understanding of higher education, the research programme of self-formation is still at an embryonic stage. In a pioneering effort to advance the early research programme of student self-formation, I carried out a doctoral study on the academic aspect of self-formation (Lee, 2021; 2023; 2024), which integrates both empirical investigation and conceptual research in developing a theory of academic self-formation. Most of the conceptual part of this study is contained in the present working paper.

This paper is a part of conceptual research that gathers, evaluates, and synthesises existing theories or concepts pertaining to student self-formation in higher education, particularly focusing on its academic aspect. This literature study establishes a connection between academic self-formation and pre-existing knowledge. According to Meredith (1993), the inclusion of conceptual research is an essential component in the process of constructing a theory and advancing a research programme. Conceptual research in this study critically assesses and expands upon previous scholarly contributions by choosing the critical literature review methodology from the range of available approaches for performing a literature review.

Critical literature review

Critical literature review helps to "assess, critique, and synthesise the literature on a research topic in a way that enables new theoretical frameworks and perspectives to emerge" (Snyder, 2019, p. 335). This means that the purpose of this conceptual research is not to summarise findings and synthesise arguments from the selected

literature, nor to browse all available evidence and theories relevant to the topic, in this case academic self-formation, as systematic literature reviews attempt to do (Davis, et al., 2014).

Instead, writing critical literature reviews is akin to a process of constructing "multiple maps" (Midgley, 2017) to examine and explain the topic. This allowed me to avoid limiting myself to using a single existing theoretical framework. Rather I was able to draw on multiple theories and concepts in understanding the self-formation phenomenon, the starting point for developing hybrid perspectives. New theories often combine elements of existing theories. Denzin (2012) refers to this process as *theoretical triangulation*.

The conceptual reviews in this working paper entail reflexive interaction between various theories/concepts and the pre-established working hypotheses of academic self-formation listed below (see Lee, 2021):

- *Hypothesis 1.* Students are agents in higher education.
- *Hypothesis 2.* Students' agency practice is fostered and forestalled by contextual resources in higher education.
- *Hypothesis 3.* Students continuously transform themselves as they want possibly through multiplicity and hybridity in higher education.

This research has limited scope, like all research. it is essential to acknowledge that there are other ideas not included in the present analysis. Such theories and concepts, if explored, could provide valuable further insights into the realm of academic self-formation. Certain elements were intentionally excluded, while others may not have been included because I was not aware of them or perceived them as irrelevant. Nevertheless, such omissions are not regarded as an ultimate constraint. Rather, they may constitute opportunities and encouragement for other scholars to advance the topic collaboratively via future growth of the work.

The scope of conceptual exploration

The first step in conducting a critical literature review is to design the review by identifying and selecting relevant literature, depending on the purpose of the study. To

select the theories and concepts that can elaborate on what is self-formation, I pre-defined the scope of the conceptual exploration. To be included in this research, theories were evaluated if they satisfy the three conditions displayed in Table 1 In addition to the three conditions for selecting the theories, the working hypotheses about academic self-formation (see Lee, 2021) also guided the literature selection. For example, the initial search for the literature tried to identify theories relevant to reflexive agency (H1), resources that might enable or restrict agency (H2), and human formation as outcomes of such agency practices (H3).

Table 1 Three conditions for choosing theories to be included in the conceptual research

Condition	Definition	Example
1. **The theory is a grand theory**	It tries to theorise a phenomenon that is not limited to a certain group of people but can be applied across different contexts and cultures	Self-determination theory (SDT; Ryan & Deci, 2000) is about general human motivation applicable across human developmental stages
2. **The theory is tested and developed by empirical data**	It has developed and been developed by a line of research programme	SDT has been inductively and deductively formulated, elaborated, and confirmed by empirical evidence for over 40 years
3. **The theory is related to higher education**	It informs student experiences in higher education directly or indirectly either by selecting university students as distinctive research participants or identifying higher education as an important factor of the researched phenomenon	SDT has been used to research student experiences in higher education

Due to time constraints and the limited resources of this study conducted by a sole researcher, it was critical to be efficient in engaging with the literature. Thus, the review mostly focused on the three types of texts for each theory. They were namely (1) an early proposition of the theory, which is often the most influential and most cited text; (2) a theoretical paper that illustrates the most recent version of the theory; and (3) the latest systematic or literature review of the empirical findings building on the theory, if applicable. Having these criteria was helpful in incorporating both historical and recent

developments of the selected literature and the theoretical and empirical discussions in the review.

The conceptual research was guided by emerging themes with a gradually narrowing-down focus. I did not preordain a list of theories/concepts to review but worked with an emerging focus, which involved successive decisions regarding the direction of the research and the inclusion/exclusion of theories.

A series of conceptual essays

Multiple critical literature reviews were undertaken as part of the conceptual research of academic self-formation. The purpose of the essays presented in this paper is to prepare multiple and hybrid perspectives for analysing links and inconsistencies between various concepts/theories that refer to the phenomenon of academic self-formation. Further findings from such "theoretical reflection" (Sayer, 1992, p. 80) or theoretical triangulation (Denzin, 2012) are subject to a future publication that will integrate the findings from the essays.

The critical literature review was conducted on nine different but related topics (see Table 2), resulting in nine conceptual essays. Each essay addresses four aspects: (1) the rationale behind selecting the concepts/theories; (2) how they elaborate on the conditions, resources, and outcomes of self-formation; (3) how the self-formation approach, in turn, elaborates the chosen concepts/theories; and (4) emerging questions or unexplained issues that require further investigation for a more comprehensive understanding of academic self-formation.

Table 1 List of the conceptual essays

Essays	Topics of conceptual research and examples of selected theories
Essay 1	College student development (e.g. student involvement theory; Astin, 1984)
Essay 2	Theories of agency (e.g. temporality of agentic orientations; Emirbayer & Mische, 1998)
Essay 3	Psychological theories that imply reflexive agency (e.g. attribution theories; Weiner, 2012)

Essay 4	How do people engage in internal conversation about the self? (e.g. self-determination theory; Ryan & Deci, 2000)
Essay 5	How do people engage in internal conversation in the face of mobility? (e.g. theories of cross-cultural adaptation; Berry, 2005)
Essay 6	Student agency in academic learning in higher education (e.g. self-regulated learning; Pintrich, 2004)
Essay 7	Reflexivity in learning as a cognitive process (e.g. cognitive load theory; Sweller, 2011)
Essay 8	How do students engage with academic knowledge? (e.g. students' accounts of knowledge; Ashwin, et al. 2022)
Essay 9	What kind of power does knowledge have for student self-formation? (e.g. powerful knowledge; Young, 2007)

The first critical literature review on the topic of student development in higher education (*Essay 1*) reveals that different theories commonly identified certain characteristics of student formation: increasing complexity, self-consciousness, self-regulation, and social identity (Pascarella & Terenzini, 2005). While this may indicate that higher education can improve students' self-forming capacities, the theories of student development do not sufficiently acknowledge student agency, as can be seen in their emphases on the determining roles of institutions and teachers.

Moving on to theories that explicitly focus on human agency *Essay 2* shows that reflexivity is foregrounded by various social theories of human agency. In particular, psychological theories provide empirical evidence of personal agency, elaborating on how people engage in reflexive, internal conversation (*Essay 3*). Further research on concepts related to reflexive agency, particularly in various self-phenomena, (*Essay 4*) discovers that the self is both the object and subject of reflexivity, interacting with sociocultural environments.

Essay 5 delves into the role of mobility, one of the sociocultural factors that influence students' reflexive agency, highlighting the common emphasis on the encounter with a new environment as a transformative resource for student formation. However, previous theories on the impact of mobility tend to focus on finding categories or stages of transformation in transition, assuming a homogeneous process of student formation.

In *Essays 6* and *7*, I narrow down the focus and explore theories about students' academic experiences. A theory of student learning in higher education and general cognitive learning theories are reviewed, respectively, yielding empirical insights into how agency functions in the process of general learning. However, neither scholarship provides much information about students' self-formation through their engagement with knowledge. Thus, I first examined the literature on students' relationship with their disciplines (*Essay 8*) and then moved on to theories of knowledge (*Essay 9*). These two essays that specifically concentrate on knowledge provide tentative approaches that can be employed, evaluated, and elaborated for future empirical investigations.

By presenting each conceptual essay, the working paper can help establish the flow of the series of conceptual discussions, how the essays are linked to and built on one another, and the historical development of different research programmes.

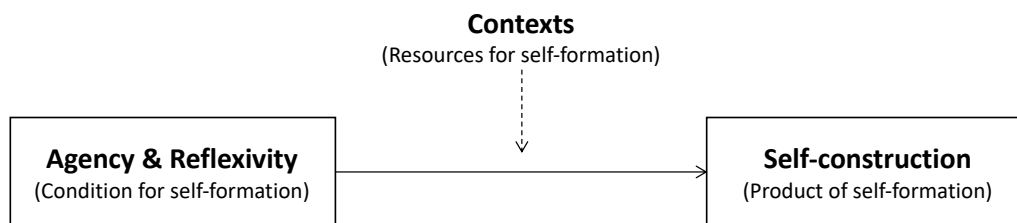# Essay 1. Theories of college student development

Student self-formation provides an alternative understanding of what is higher education for and what students do in it. However, the self-formation phenomenon is not confined to the higher education setting only. It is rather a nature of human behaviour across different venues, spanning people's various life scenes. The concept of self-formation shares many features with other theories and concepts about human development. Still, higher education is distinguished from many other domains for self-formation, as demonstrated by the extensive literature on student development in higher education. As one of the strengths of the self-formation idea is that it centres on who students are and what they do in revisiting the definition of higher education, a rational starting point for the conceptional exploration of self-formation is critically examining the various models of college student development.

Due to the extensive volume of research, I will only analyse: (1) influential and enduring theories in the field of higher education research, (2) with a focus on general students, not on a specific group of students (e.g. African-American Identity model; Cross, 1995), (3) which have been established and revised by empirical investigations. The search for theories that fit these inclusion criteria was aided by two text materials that reviewed a number of student development models. While Pascarella and Terenzini's (2005) book, *How College Affects Students*, is praised as the most comprehensive review of research on student change in higher education, a more recent review work, *Student Development in College: Theory, Research and Practice* (Patton et al., 2016), is another highly cited review of student development research (Feldman & Newcomb, 2020). Theories introduced in these two books were mostly overlapped, although grouped in slightly different categories.

1.1. Theories of student development in higher education

The three elements of self-formation that emerged in the previous chapters are self-reflexivity, contextual resources, and self-construction (Lee, 2021). Previous theories on college student development have implicitly or explicitly supported each element's

distinctive role, suggesting the self-forming nature of student development in higher education.

Contexts
(Resources for self-formation)

Agency & Reflexivity		Self-construction
(Condition for self-formation)	→	(Product of self-formation)

Figure 1.1 Three elements of self-formation

1.1.1. Self-reflexivity for student development

The previous developmental theories of college students share a commonality of the culminating stage of self-determination, which is closely related to self-reflexivity. Repeatedly demonstrated by multiple theories, student change as a result of college experience is a developmental journey from impulsiveness to self-control, dependence to autonomy, and externally- to internally-determined identity, all indicating increased sense of self and self-reflexivity (Pascarella & Terenzini, 2005). For example, based on his own research with college students between 1959 and 1965, Chickering's (1969) theorised the seven vectors of student development, which underscored that one of the tasks facing college students is to grow self-awareness in the conditioning context (e.g. historical events, sociocultural status, family and ethnic background). This importance of self-reflexivity among college students is also identified by Marcia's (1966; 1980) theory of identity development in higher education. He proposed that the conscious exploration of the sense of self by differentiation from and integration with others precedes successful identity achievement of college students. As can be seen from these two models, the concept of self-consciousness as a part of student development emerged as early as the 1960s. After their introduction to the literature, Marcia's model has extended over 40 years (Kroger & Marcia, 2011), while Chickering's theory has also been applied by the large volume of research and student affairs practitioners until recently (e.g. Cullaty, 2011).

Unlike these early theories that have identified self-reflexivity as a partial task for identity development, the more recent work of Baxter Magolda (1992; 2009) places self-reflexivity at the centre as an ideal outcome of higher education. Drawn upon decades-long longitudinal research with college students, Baxter Magolda (2009) found evidence that her participants' development was centred on achieving self-authorship, "the internal capacity to define one's beliefs, identity and social relations" (p. 269). The development of self-authorship evolves from relying on external sources of information for defining self and making decisions, to relying more on internally generated information. Self-authorship revolves around students' questions about how they know, who they are, and how they relate with others. This threefold construct of self-authorship might indicate that students consciously reflect on their academic learning and knowledge while deliberating on their intrapersonal and interpersonal development.

1.1.2. Contextual resources for student development in higher education

The mediating contextual resources, another inseparable element of the self-formation framework, is also concurred by college experience theories. In particular, models of the combined impact of personal and environmental factors on student development offer some meaningful insights related to the resources for self-formation.

Person-Environment (P-E) interaction theories study beyond the direct influence of environment on college students towards how it affects student behaviours through its interaction with individual characteristics (Strange & Banning, 2001). The most straightforward example of P-E theories is Holland's (1997) vocational choice theory. It suggests that students make career decisions according to their personality types and the optimal working environment that fits their personality. The focus on the person-environment relation indicates that student development in higher education is enabled or hindered by relevant personal or contextual resources as the self-formation approach argues. Ecology models, drawing on Bronfenbrenner's (2005) ecological systems theory, list individual differences and multifaceted contexts affecting holistic student development in higher education (Renn & Arnold, 2003). From this ecological perspective, student self-formation can only be fully understood by considering the

conditioning effect of multi-dimensional contextual resources such as teachers and classmates (*Mesosystem*), curriculum, pedagogies and academic knowledge (*Exosystem*), and educational/learning cultures (*Macrosystem*).

Whereas ecological developmental models are more focused on various environmental resources in P-E interaction, Astin's (1984) involvement theory moves closer to the students' side. For Astin, student development is determined by the quality of students' involvement with the resources given by institutions. Without undermining the institutional environment's critical role in offering academic and social chances to become involved with, the theory of involvement stresses students' lead role in enabling their formation by engaging with the given chances. Although the emphasis on students' active role resembles the emphasis on student agency in self-formation, the involvement theory has been criticised for lacking theoretical elements such as variables that are presumed to influence involvement or construct of the variables. Nevertheless, as one of the first and most durable and influential models of college impact, it still provides an effective conceptual and analytic underpinning for research (Pascarella & Terenzini, 2005).

1.1.3. Multiplicity and hybridity in student development

Multiplicity and hybridity are hypothesised in this study as potential strategies for self-construction, an interim outcome of self-formation in higher education. Student development depicted in different models shrares a tendency to increase complexity and integration as a manifestation of individual growth (Pascarella & Terenzini, 2005; Patton et al., 2016). Distinctive examples are cognitive-structural theories that conceptualise the change in the "structures which the students explicitly or implicitly impute to the world, especially those structures in which they construe the nature and origins of knowledge, of value, and of responsibility" (Perry, 1999, p.1). Scholars agree that the cognitive or epistemological structure of students evolves from a simple to a more complex state, as the way of construing knowledge grows from dualism (yes or no) through multiplicity (multiple perspectives recognised) to relativism (establishing own ideas by analytical assessing validity of different views) (Hofer & Pintrich, 2012; King & Kitchener, 1994; Baxter Magolda, 1992; Perry, 1999). This proves that college

students' cognitive structure is increasingly characterised by multiplicity, while gradually recognising and acknowledging differences between their own and other people's perspectives that are hybridised at later stages as students reflectively judge different perspectives and finally establish their own, subjective understanding.

The link between three variables in self-formation and existing models on college student development was examined throughout this essay. While self-reflexivity and contextual resources have long been identified as influencing factors of student development by identity development models and P-E Interaction models, respectively, multiple/hybrid self-construction has been extensively observed in cognitive-structural theories. Although this section provided each self-formation element with meaningful information for further conceptualisation, a detailed account of each model and its research programme is lacking. However, the purpose of the current conceptual research is not to describe different theories and long lines of research that are relevant to self-formation, but to browse the commonalities between different theories on the same phenomenon, college student experience.

1.2. Counterexamples of self-formation

If there are only agreements between the existing perspectives on college student experience and self-formation as higher education, the emergence of self-formation discourse would be no more than repetition and rewording of ideas. In this section, I will point out some of the marked disagreements between the college experience models and the self-formation approaches. They are namely (1) the pattern of student formation and (2) the nature of person-environment interaction.

Self-forming students are hypothesised to be strong agents who shape their own journey in higher education according to their unique personal projects. In contrast, the student development models often suggest a linear and unidirectional process (Pascarella & Terenzini, 2005). The overall student development in college is commonly theorised to be directed towards a higher, better, and more desirable status: from dualistic to relative knowledge (Perry, 1999), from identity-diffusion to identity-achievement (Marcia, 1980), from lower to higher involvement/integration (Astin, 1984;

Tinto, 1987), from external to internal control of the self (Baxter Magolda, 2009). Although this tendency can be understood as an enhancing self-forming capacity, underlying this linear, one-directional student development is the assumption that students are shaped in a certain way directed by institutions rather than by students' agentic will and action. Therefore, individuals' personal projects that guide their self-formation are not necessarily recognised in the previous student development theories.

The prevalent unidirectionality in student development theories is linked to the second point that pit them against the self-formation approach: the reactive nature of person-environment interaction. Although some theories advocated that contextual factors affect individuals not unconditionally but through interaction between student and environment (e.g. Strange & Banning, 2001), they are still premised on the passive student figure whose behaviour is merely a response to external stimuli. Concluding their comprehensive review, Pascarella and Terenzini (2005) underlined that what grows students in college is exposure to "diversity, opportunities to explore, peer and adult models to emulate or reject and experiences that challenge currently held values, attitudes and beliefs" (p.61). This remark is in line with self-formation that foregrounds mobility as its substantial trigger (Marginson, 2014). However, self-forming students not only react agentially to the environmental stimuli but also generate it for self-led transformative learning. In contrast to this proactive nature of person-environment interaction in self-formation, the sole emphasis on passive reaction to environment as a source of student development is traditional assumption underlying the college experience research (Astin, 1984; Renn & Arnold, 2003; Schlossberg, 1981; Tinto, 1987).

While the previous section identified the central variables of self-formation (i.e. multiplicity/hybridity, self-reflexivity, and contextual resources) in various college experience theories, this section revealed that the foundational assumptions underlying these common variables are incongruent in student development models and the self-formation approach. The conclusion drawn from this essay is that theories of college student experience are expansive in explaining student formation but not so much in understanding student self-formation due to the lack of discussion about agency.

Essay 2. Human agency in social theories

This essay contributes to the conceptual elaboration of agency in relation to student development in higher education. Five major sociological conceptualisations of agency are introduced in terms of their implications for forming the current discourses around students in higher education. The selected concepts are namely Archer's (2012) reflexive agency, Emirbayer and Mische's (1998) temporal orientation of agency, Biesta and Tedder's (2007) ecological perspective of agency and learning, Ahearn's (2001) socioculturally mediated agency, and Klemenčič's (2015; 2023) student agency in higher education.

2.1. Archer's reflexive agency

A trilogy of a British sociologist Margaret Archer's (2003; 2007; 2012) introduces a realist social theory that imagines the reflexive interaction among structure, culture, and agency at the centre of the formation of society. *Reflexivity* is a central concept in Archer's theory, which she defines as "the regular exercise of the mental ability, shared by all normal people, to consider themselves in relation to their (social) contexts and vice versa" (Archer, 2007, p. 4). Throughout the three books, Archer proposes that "reflexivity is not a homogeneous phenomenon but is exercised through distinctive modes" (Archer, 2012, p. 12).

Archer acknowledges the autonomous and independent causal power of structure and agency, with reflexivity playing a pivotal role between them as an irreducible enabler and constrainer of their autonomy. This is contrasting to the structuralist view, such as Giddens' (1979, 1984) idea of agency that includes the unconsciousness in addition to its reflexivity. While Archer interprets the structure-agency relation as independent (divided into two: dualism), Giddens regards it as interdependent with structure internalised by agents (combining two: duality) (Akram, 2012; King, 2010). It is notable that in higher education research, previous adaptation models are closer to the structuration theory as adaptation models generally perceived successful learning trajectories of international students as a process of accepting the host country's

contexts. In contrast, the self-formation perspective shares a significant focus with Archer's focus on the reflexive agency.

Archer's model is useful to expound the function of agency and reflexivity in the self-formation process. Archer's realist social theory presumes that agents consciously make sense of themselves. When agents face natural, practical and social orders given in structure, they consciously deliberate their course of action by taking these factors into consideration. This indicates reflexivity between structure and agency, which negotiates, prioritises, and develops *personal projects*—courses of action intended to realise individual concerns. Reflexive agency is a two-way process between the projects and situations, incorporating "subjects' evaluations of their situations in the light of their personal concerns" and "their (re-)evaluation of their projects in the light of their situations" (Archer, 2008, p. 1). Although some criticise reflexivity for advocating "hyper-deliberation" without considering unconsciousness in agency practice (Akram, 2012; Fleetwood, 2008; King, 2010), its emphasis on consciousness fits the intention of self-formation researchers.

What reflexivity enables is basically self-formation—or "gain[ing] and maintain[ing] some governance over our own lives" (Archer, 2012, p. 15). By participating in a process of evaluating our social context based on our concerns and adapting these concerns based on our situation, we engage in a reflexive internal conversation to:

> "marry our concerns to a way of life that allows their realization, a way of
> life about which we can be wholehearted, investing ourselves in it with
> each personifying its requirements in our own and unique manner (p. 15)".

Conducting large-scale interviews about reflexivity, Archer found that people do not engage in internal conversation in a homogeneous way, but there are different modes of reflexivity which each individual predominantly adopt. When people resort to *communicative reflexivity*, their internal conversation requires confirmation from others to be completed and to lead to actual action. Meanwhile, internal conversation based on *autonomous reflexivity* is contained by the self and directly linked to action. A more critical version of autonomous reflexivity is when individuals consciously deliberate on previous inner conversation and also critically evaluate the effectiveness of their

previous action in society, which is called *meta-reflexivity*. Lastly, sometimes we as humans find it difficult to link internal conversation to effective, intentional courses of action. Such *fractured reflexivity* is accompanied by increasing distress and disorientation in the process of enacting personal decisions.

Researching student self-formation in higher education should consider how individuals uniquely exercise their reflexive agency. Presuming a fixed form of agency directs the research focus only to the level of agency (greater/weaker), whereas acknowledging varying modes of reflexive agency enables examination of student agency in terms of its content. Archer argues that human reflexivity is not determined solely psychologically. Instead, the structural and cultural conditions of subjects' social backgrounds were found to influence the predominance of certain modes of reflexivity. In this vein, student self-formation is not a solely psychological process, but closely associated with social relations taking place in higher education.

As the final step for her trilogy on reflexivity, Archer (2012) puts forward the idea of *relational reflexivity* as an alternative way to conceptualise socialisation. She argues that "dramatic fall in social integration" and "relative absence of authoritative sources of normativity" cause difficulties in internalising given orders, throwing the tasks of selection and shaping a life upon young people. A more appropriate understanding of socialisation in the current society should acknowledge that reflexivity is redoubled in its importance, whilst relations still strongly influence the socialisation process. Relational reflexivity enables agents to make choices according to their personal projects, in the proliferation of options and opportunities, which manifest gaining "governance over the future trajectory of their own lives". In this sense, socialisation is the process of self-formation, "an active selection about what is and is not important for a subject, from the array of experiences that have come their way".

University is also "better viewed as introduction bureaux rather than an induction agency". Emphasising relational reflexivity as a new theory of socialisation, she argues that "the fact that attending university and gaining a degree gives them better life chances than the rest of their age cohort does nothing whatsoever to show them how to live their lives" – "only their reflexive deliberations can do this".

In short, the reflexive and the relational are in conjunction. Reflexivity determines "which relations are relevant" through discernment. In turn, relationships accompany and surround concerns. Such emphasis on reflexivity and relationality are echoed by Emirbayer and Mische's (1998) idea of human agency.

2.2. Emirbayer and Miche's temporal orientation of agency

In their seminal work on conceptualising the chordal triad of agency, Emirbayer and Miche (1998) review the history and social theories of human agency. They begin by criticising previous definitions of agency for being elusive and valuing no systematic analyses of agency. One-sided perspectives either equate agency to vague voluntarism or subject it to structure and limites the space for agency. On the one hand, structuralists such as Bourdieu and Giddens render human agency as "habitual, repetitive, and taken for granted", by selectively attending to "the role of habitus" and "routinised practices" (p. 963). Notwithstanding that they "failed to distinguish agency as an analytical category in its own right", they are undeniably dominant in contemporary sociology (p. 963). On the other, agency is understood as goal-seeking behaviours or rational judgement. Although they all constitute critical dimensions of agency, this approach often misses "the dynamic *interplay* among these dimensions and of how this interplay varies within different structural contexts of action" (p. 963).

Emirbayer and Mische find the root of the current either-or understanding of agency in the Enlightenment debate over truest expression of human freedom as rationality versus morality (e.g. Locke, 1978; Lukes, 1973). There have been previous attempts to overcome the bifurcation between rational/utilitarian and nonrational/normative dimensions of action (e.g. Alexander, 1988; Coleman, 1986; Parsons, 1963). However, Emirbayer and Miche (1998) argues that previous conceptions of agency leave the "black box" untouched regarding what agency actually does. Their idea of agency is more directly influenced by American pragmatism and Social Psychology, particularly Mead's social psychology of how "reflective consciousness" develops through "multiple temporally evolving relational contexts" (p. 969).

Emirbayer and Miche aim to reconceptualise human agency "as a temporally embedded process of social engagement". They believe that agency is (a) "informed by the past", (b) "oriented toward the future", and (c) exercised "toward the present". In this view, agency is a capacity to "imagine alternative possibilities" and "contextualise past habits and future projects". The rationale behind foregrounding temporality is, first, agents are embedded within many temporalities at once. Second, agents present "variable and changing orientations within the flow of time". And third, "changing temporal orientations enables changing relationship to structure". Finally, researching the changes in agentic orientation can reveal "varying degrees of manoeuvrability, inventiveness, and reflective choice shown by social actors in relation to the constraining and enabling contexts of action" (p. 964). Underlying basic assumptions here are that agency can mediate its relationships with structure, and in turn structure is sustained/altered through agency.

The constitutive elements of human agency are *iteration, projectivity* and *practical evaluation*, through which people conceive of their relationship to the past, future, and present. The perceived relationships determine people's actions because:

> "… changing conceptions of agentic possibility in relation to structural
> contexts profoundly influence how actors in different periods and places
> see their worlds as more or less responsive to human imagination,
> purpose, and effort." (Emirbayer & Miche, 1998, p. 973)

Although Archer and Emirbayer and Mische do not directly interact with each other's conceptions of agency, they share the same assumption about the internal conversation as a unit of analysing agency of the human self. Whilst Archer investigates reflexive agency by tracing internal dialogues, Emirbayer and Mische conceive human self-agency as "an internal conversation possessing analytic autonomy vis-à-vis transpersonal interactions" (p. 973). Thus, both analyses of human agency are premised on the dialogic and relational structure of the self.

2.3. Biesta and Tedder: agency and learning

Largely influenced by Emirbayer's and Miche's theory of agency, Biesta and Tedder (2007), focusing on adult education, tries to conceptualise the relationship between agency and learning. The temporality and relation of agency with context, time and history, according to Biesta and Tedder, implies that "agency does not come from nowhere … it is not purely voluntaristic, but builds upon past achievements, understandings, and patterns of action" (p. 136).

In their ecological approach, agency is not individual power that is freely utilised in any situation. Instead, agency is "achieved in and through engagement with particular temporal-relational contexts for action" (p. 136). This is why, Biesta and Tedder argue, the quality of engagement, not the quality of the actors themselves, should be the focus when it comes to agency. Such engagement requires ecological understanding, which reveals how agency is achieved in interaction with a particular context. The relational nature of agency makes "actors always act *by means of* an environment rather than simply in an environment" (p. 137).

The ecological approach to agency helps explaining the changing agency over time, as a result of "the interplay of individual efforts, available resources and contextual and structural factors" (p. 137). Despite the impact of economic, social, and cultural resources (or structure) on the actions of individuals, "there is no mere structural influence which determines directly the individual's reaction" (Alheit & Dausien, 2000, p. 410, cited by Biesta & Tedder, 2007). The process of achieving agency, resulted from particular combinations of such resources and their agentic orientations, is only possible when people actively engage with them.

The achievement of agency through learning enables self-formation, as implied in their definition of agency as "the ability to exert control over and give direction to one's life" (p. 135). In particular, agency allows people to take control over their responses to structure. If we can change "the composition of our agentic orientations", it would mean that we can engage "more effectively or satisfactorily with events in our life" (p. 138). In order to be able to control our agentic orientations, we need to learn about them.

Learning for Biesta and Tedder refers to discovering the controlling effect of old patterns and habits that sometimes hamper people from acting in present. Another important learning is to know how to change one's agentic orientation. Through such learning for agency achievement, people can gain more control and direction to their own lives, thereby engaging in self-formation more actively.

By conceptualising agency in relation to learning, Biesta and Tedder direct the discussion closer to the academic aspect of self-formation. However, 'adult learning' for them does not necessarily emphasise academic learning in higher education, which involves knowledge, disciplines, teaching, pedagogies, and curriculum. How the academic learning and engagement with knowledge would affect the development of agency would be an important question to be addressed, to reveal the distinctive and transformational role of higher education. Still, the ecological approach to agency recognises the critical role of contextual resources for achieving agency, such as economic, cultural, and social resources. In higher education, I argue that academic resources, particularly disciplinary knowledge, are critical in students' quest for achieving agency. In short, researching academic self-formation should consider both (1) how knowledge transforms students' agentic orientation and (2) how students interact with academic resources in higher education. A closer look into student agency in higher education building on Biesta and Tedder's idea of agency, is proposed by Klemenčič's (2015; 2023) discussion of agency.

2.4. Klemenčič's student agency in higher education

Influenced by Biesta and Tedder, Klemenčič (2015) further brings the concept of agency to discuss studentship in higher education. Her research focus introduces an agency theory to the scholarship of student engagement. A key feature of her theorisation of agency is its integrative approach that combines psychological and sociological concepts of human agency.

The rationale behind her engagement with both psychological and sociological theories of human agency resonate with Emirbayer and Miche's (1998) critics about the dichotomous conception of agency in the previous literature. This gap is referred

as "dualism" by Klemenčič (2015, p. 14). Whilst sociological perspectives focus on the external conditions for one's agency practice, psychologists tend to highlight individual capacities to take intentional and autonomous actions in society. Accordingly, agency is either always "juxtaposed to structure" as "no more than a synonym for action" in sociology (Scott & Marshall, 1998, p. 11, cited by Klemenčič, 2015), or taken for granted as unbounded to structural factors in psychology. In contrast, she proposes that student behaviours cannot be fully captured either by sociocultural conditions, or individual, psychological factors. She argues for moving away from the agenda of explaining how university environment affect student outcomes, whilst still acknowledging the extent to which certain conditions support students in exercising agency.

By drawing on Bandura's (1986) psychology of human agency and Emirbayer and Mische's (1998) sociological analysis of agency, she defines agency as:

> "a process of student actions and interactions during studentship, which encompasses variable notions of agentic orientation ("will"), the way students relate to past, present and future in making choices of action, and of agentic possibility ("power"), that is their perceived power to achieve intended outcomes in a particular context of action and interaction, but also to self-engagement of a critical reflexive kind" (Klemenčič, 2015, p. 16)

Agentic possibilities, on the one hand, refer to "effective opportunities" for "positive freedoms" through which students can "do and be what they have reason to value", or form themselves (Klemenčič, 2020, p. 94). On the other, *agentic orientations* are "predispositions" or "broad array of internalised routines, preconceptions, competences, schemas, and habits of mind", such as efficacy beliefs that manifest motivations to enact agency (p. 94). The former is "exogenously given, originated outside the individual", thus determined by structure/context that "bestow[s] more/less agentic opportunities" (e.g., chances to actively participate in learning). Whereas, the latter is internally generated response to external stimulus, which are activated when students are "purposefully choosing to participate in the learning processes" (p. 94).

Klemenčič's theorisation of student agency in student-centred learning (Klemenčič, 2017; 2020) is more relevant to academic self-formation than Biesta's dwelling on biographical learning. She suggests that researchers can study agency as self-regulated learning (Zimmerman, 1989, 1990) by investigating students' study strategies, their efficacy beliefs in their performance, and their commitment to academic goals (Klemenčič, 2017). Linking student agency to empirical research on student-centred learning enables drawing practical implications for enhancing student agency. To enhance students' agentic possibilities, Klemenčič calls for institutional culture that allows students to actively participate in learning processes. In terms of improving agentic orientations, she again emphasises institutional support to prompt students to set "their own learning goals, assert their learning needs and navigate institutional resources to pursue their learning goals" (Klemenčič, 2020, p. 105).

The focus on student engagement and self-regulated learning highlights agency in generic learning that applies across disciplines. One way to further the discussion of student agency in higher education is by incorporating the role of specific body of knowledge. A potential approach to elaborate the knowledge-agency relationship is by drawing on Ahearn's focus on mediating tools/languages in agency practice.

2.5. Ahearn's socioculturally mediated agency

Ahearn provides a linguistic and anthropologist perspective to agency. Although this view is not specifically related to higher education, academic self-formation involves academic communication and interaction in distinct academic cultures and languages. For Ahearn (2001) agency and language cannot be discussed separately because *language* is "a form of social action, a cultural resource, and a set of sociocultural practices" (Schieffelin, 1990, p. 16, cited by Ahearn, 2001). In this view, language is more than a conveyer carrying information, but is constructed by and emergent from social interactions. Where meanings are formed, so is social reality. Thus, "language does not merely reflect an already existing social reality; it also helps to create that reality" (p. 111). For anthropologists who understand language as social action, human agency is defined in a distinctive way.

For Ahearn (2001), it is important to admit that agency manifests in social action through language, and that it is shaped by sociocultural structure. She provides a provisional definition of agency: "the socioculturally mediated capacity to act" (p. 112). The definition stems from her engagement with humanitarian (e.g., history, anthropology, philosophy) discussions of agency, which led her to inquire if different agency emerges across different societies.

Ahearn points out two problems in defining agency. First, defining agency as a synonym of free will is problematic, although it is one of the most common tendencies. For instance, agency for action theorists requires mental state such as motivation, intention, rationality, and consciousness. What is missing in action theories is the underlying social base of agency – or the influence of sociocultural factors on human thoughts and actions. The second problem in defining agency is when it is equated to resistance. This is represented by Feminist theorists who sees agency only demonstrated when a person actively resists the patriarchy. The problem here is that agency is reduced to oppositional act, which is only one of many forms of agency, neglecting the fact that people exercise agency in other ways too.

Ahearn argues that discussions of agency should (1) encompass how agency is shaped by the norms, practices, institutions, and discourses and (2) capture the complexity and ambiguity of agency beyond the dichotomous frame of resistance/acceptance. Thus, having one form of agency cannot address the relationality and multiplicity of human actions.

Ahearn tries to address these two problems by defining agency in anthropological practice theories (Sahlins, 1981; Ortner, 1989), in which "actors are neither free agents nor completely socially determined products" but "loosely structured" (Ahearn, 2001, p. 120). The loose structure of agency can be illustrated by the grammatical example below:

> "Speakers of a given language are constrained to some degree by the grammatical structures of their particular language, but they are still capable of producing an infinite number of grammatically well-formed utterances within those constraints" (Ahearn, 2001, p. 120)

Agency is loosely structured by the mediating effect of sociocultural factors, particularly language. Ahearn's focus on language as social action that mediates agency, provides a useful insight to elaborate the role of knowledge in higher education. Knowledge can be conceptualised as a specific form of language as social action and culture, which is constructed in higher education.

Conclusion

Previous sociology theories attempt to resolve the similar problem of the one-dimensional approach to human agency. Most scholars discussed in this chapter similarly point to the division between psychological and sociological discussions of agency, which limits the thorough understanding of complex agency. They also commonly problematised a middle-ground approach that acknowledges the reciprocal interaction and coexistence of structure and agency (e.g. Giddens and Bourdieu), for missing the space for social transformation beyond the reproduction of *habitus*. Higher education research, according to its historical roots (see Marginson, 2019 for review), shows a similar pattern. Newman (1982) idea of higher education is about socialising students through knowledge—structure shaping agency. In contrast, Kantian university looks at how education enlightens human reasoning for social reformation—agency shaping structure (Kant, 2009). Kerr's (2001) universities engage with multiple functions, serving both state-nations and individual desires—agency and structure reciprocally co-shaping.

As a remedy of the limitation of previous definitions of agency and structure, Archer (2000) proposes a concept of reflexivity between separate agency and structure, Emirbayer and Mische (1998) bring temporality and relationality into agency, Klemenčič (2015) combines social cognitive and sociological theories of agency, and Ahearn (2001) imagines loosely structured agency.

These different approaches to address the division, which do not necessarily agree with each other, can provide multiple lenses and enriches the understanding of agency in self-formation. For example, Ahearn's (2001) loosely structured agency based on practice theories commits "central conflation" of agency and structure, which Archer

criticises. What Archer suggests instead is separating agency and structure as autonomous entities, by foregrounding the mediation between them. This enables capturing society irreducible to individuals, by acknowledging emergent properties of social agents, which is their reflexivity. In Archer's framework, the interplay of agency and structure is mediated through the creative and emergent power of reflexivity. Such mediating function of reflexivity is resonant with Ahearn's emphasis on cultural language as a mediator of agency. Taken together, since reflexivity manifests in agents' internal conversation, it can be suggested that the culture-bound language shapes reflexive agency.

Due to the emergent properties, overall higher education experiences cannot be reduced to individual experience. And in turn, individual experience cannot be equated to the meaning of higher education when including the emergent properties. This is why both psychology and sociology are needed to establish a fuller picture of student formation in higher education. I shall now look closer to the mediation between the two. This will be done by focusing on student agency for self-formation from the perspective of psychological theories.

Essay 3. Psychological theories implying agency

Different approaches agree that one of the manifestations of human agency is reflexive internal conversation, which is mediated by sociocultural factors. Archer (2012) pointes out *interiority, subjectivity,* and *causal efficacy* as characteristics of reflexivity. Such features are the focus of psychology. Student agency is mainly discussed as a measure of social formation that is nurtured by teachers and institutions, rather than in light of students' individual formation. It is an important task to find a way to conceptualise higher education that can penetrate from the individual self-formation to the social roles of universities, including knowledge formation underlying the mechanism. An important step to accomplish this task is to elaborate students' academic self-formation in higher education. This can be done firstly by complementing the sociological understanding of student agency with more individual, psychological approaches.

3.1. Three features of reflexive agency

3.1.1. Interiority

A relevant concept of reflexive internal conversation in psychology is cognitive processing behind human behaviours. Research on cognitive capacities was spawned as the field of psychology experienced a paradigm shift since 1970-80s, which was so marked that it was referred to as "cognitive revolution" (Gecas, 1982, p. 1). The movement from focusing on external stimulus to explain human behaviours towards mental abilities that process the determining influences of stimulus on responses is reminiscent of reflexive agency that is not directly determined by structure but shaped by critical internal deliberation.

The evolution of psychology can be explained by comparing the two dog experiments conducted by Ivan Pavlov (1927) and Martin Seligman and Maier (1967). The famous Pavlov's dog studies demonstrated the classical ideas that pairs specific stimuli (e.g. food) and specific response (e.g. salivation). With this input-output behavioural mechanism in mind, however, Seligman and his colleagues failed to teach dogs escape-avoidance behaviours (e.g. barrier jumping) following the stimulus (e.g.

electric shock) when the dogs were previously placed in an unescapable shock. Along with the gradual notice of the inner working process between stimulus and response, Seligman interpreted the failures of his experiments as learned helplessness. When dogs are put in an unescapable box with electric shock, they fail to learn how to avoid the situation and then give up trying and passively accept the pain even when the situation is now made controllable. Experiences of non-control, non-contingency, and non-competence, seem to lead the animals to learn passivity. If Seligman's interpretation is correct, exercising agency is determined more by inner understanding about one's agency than by actual, objective barriers in the given context. Similar phenomena were found among human participants and more critically theorised by Bandura's (1977) research on self-efficacy.

Social learning theory of Julian Rotter (1954) is one of the ancestor theories that had led the cognitivist tradition. Its central idea is that it is not the reward and punishment that determine human behaviours but human's interpretation about them. The famous Bobo doll experiments, conducted by Albert Bandura in early 1960s, demonstrated the functions of cognitive thinking. When groups of children were observed in terms of their violent behaviours towards a doll after they watched a person attacks the doll, the most significant variation was found after they saw what the person experienced (punished, rewarded or no consequences) as a result of aggressive act (Bandura, Ross & Ross, 1961; 1963). The fact that children's behaviours were affected by observing, not by directly experiencing, the punishment/reward was interpreted as evidence of cognitive abilities. This point is the cornerstone idea of reflexive agency because the controlling power for the human action is given to the inner self, not to the external stimulus. More specifically, children were seen to possess the abilities to search causal relations between events (action and event) and to regulate their own actions accordingly to create the desirable results. This implies reflexivity based on causal search.

Causal search manifests reflexivity, particularly a retrospective kind (Emirbayer & Mische, 1998). It involves evaluating the relations between agency and structure embedded in the past events. However, when causes are identified, a guide for future actions can also be prescribed and effective control of the future events may be

possible (Weiner, 2012). Human action and affection are shaped not by the actual events occurred in the past but by one's attribution of the causes and expectancy of the results. In psychology, attribution refers to looking for answers for why questions (e.g. why did I fail the exam?) about the past success and failure (Graham, 1991). By engaging in this cognitive activity, humans try to "penetrate ourselves and our surroundings" (Weiner, 1985, p. 548) and learn about effective management of the self and environments. Thus, attribution is a form of inner dialogue that aims to practice agency on the self within a given context.

The popularity (particularly in 1970-80s) and longevity of attribution research had enabled the decades of empirical and theoretical validation of attribution as reflexive agency (Graham, 1991; Weiner, 2012). A typical example of attribution in educational settings is comparing the two most dominant perceived causes, ability and effort. Students who attribute their academic success/failure to their abilities would perceive less agency in controlling their performance in the future than those who focus on their efforts. One's ability is often seen as determined by nature, hence incontrollable, effort is normally regarded "subject to volitional control – an individual can increase or decrease effort expenditure" (Weiner, 1985, p. 550). In the similar vein, Carol Dweck's (2000) research compares academic achievement of students with different beliefs about their own ability, either as fixed or controllable. Dweck's endeavours to train students to believe that their ability is subject to medication and enhancement resonate Biesta and Tedder's focus on education for agency development.

In this section, I introduced multiple research strands in psychology that represent the rise of cognitivism and decline of behaviourism. These research programmes indicate the importance of the inner cognitive working between stimulus and responses, which liberates humans from the controlling of environment and empowers them to control the external force on the self. If the external stimulus is equivalent to structure and responses to human actions, the inner cognitive system can imply reflexive agency that evaluates the agency-structure contingency and coordinates the course of action. However, one can question if replacing the unconscious input-output model by an input-throughput-output model can really suggest reflexive agency because it is still premised on the linear computational system that simply "cranks out solutions

according to preordained rules" (Bandura, 2001, p. 2). The following section discusses how human cognitive abilities not only process but also produce environment.

3.1.2. Causal efficacy

Beyond the cognitive processing of the external stimulus, psychologists have also turned to the reciprocity that acknowledges the possibilities of controlling the stimulus. The direction of reflexivity is now from the self to the environment.

Agency over the environment can be understood as 'competence' in psychology, the "capacity to interact effectively with its environment" (White, 1959, p. 297). This concept was put forward by Robert White (1959). His seminal work reviews both animal experiments and psychoanalyses that do not fit the orthodox, classical assumptions in psychology. The general belief by 1950 was that the driving force of behaviours is survival. By focusing on how humans satisfy necessary needs (e.g. hunger, sleep and sex) and reducing need deficits, human motivation and behaviour were understood as for restoring equilibrium and decreasing discrepancy. This classic approach to human functioning is visible in higher education research, for example, in the dominant portrayal of international students' experiences as coping with transitional challenges. However, a wave of experiments in 1950s found that animals take actions just to explore the novel environment; animals act not only to remain peaceful status but also often to intentionally break it. With a growing alternative interest in cognitive and subjective processes underlying human behaviours and motivation (e.g. Rotter, 1954, Atkinson, 1957), White (1959) interpreted findings about exploratory behaviours and novelty seeking as a motivation to practice agency over environment.

The competence idea had ignited further important works and become a bed rock for the contemporary theories of human motivation. The concepts and theories about controlling environment were collected and integrated by Ellen Skinner's (1996) extensive review. The review produced a comprehensive framework of the construct of control. In the framework, the phenomenon of exerting control over environment is analysed into three elements: agents, means, and ends of control. Skinner (1996) found that the extensive theories of control tend to differentiate the means-ends,

agents-ends, and agents-means relations. First, means-ends relations are literally the connection between particular causes and outcomes, which is shaped by one's perceptions about the likelihood of certain results followed by certain causes (e.g. actions, attributes, external power). Second, the agents-means relation is "the extent to which a potential means is available to a particular agent" (Skinner, 1996, p. 553). Third, the agent-ends relation refers to "the extent to which an agent can intentionally produce desired outcomes and prevent undesired ones" (p. 554). In short, causal efficacy is formed by knowledge about causal relation (which means will bring which ends), self-efficacy beliefs (whether I can perform the means), and efficacy beliefs about the environment (whether the ends can occur when the means are performed).

Bringing forward the reciprocity between agency and structure, the competence approach liberates humans from the task of resolving needs deficit and remaining equilibrium. Instead, it acknowledges that humans can more agentially interact with the environment. This extends agency from cognitive capacities that mediate the environment's work on the self, to behavioural capacities that enable the self's work on the environment. Thus, it can be suggested that student self-formation involves reflexively engaging with what university offers within the self and actively working on the environment through the outer self.

The discussion so far has illuminated agency by borrowing psychological theories. Reflexive agency was suggested as cognitive abilities to interpret the environmental factors and behaviours to engage in reciprocal interplays with the environment. This reflexivity for the work between the self and environment, however, does not necessarily include the work of the self on the self. Nevertheless, the self seems to be at the centre of these psychological phenomena, both processing and producing contextual impacts. Such self-centring reflexivity is explained in the next section.

3.1.3. Subjectivity

The work of the self on the self involves both subjective and objective aspects of the self-relevant phenomena. Interests in self as a centre of psychology can be traced back to as early as William James (1890). His seminal work is represented by the early 'I' and 'Me' dialectics, the subjective and objective self. More self research has focused

on the latter me-self, or empirical self (James, 1890), assuming that I-self is less empirical but a more of a question for philosophy. The interest in the subjective, active I-self is most prominent in humanistic psychology that assumes "the self as the central core of the person" (Buhler, 1971, p. 380). The pathologic approach that dominated psychology after World War II focused on healing, survival, and endurance under adversarial conditions. Conversely, humanistic psychologists inquire "how normal people flourish under more benign conditions" (Seligman & Csikszentmihalyi, 2000, p. 5). Such paradigm shift is gradual and persistent since 1950s (e.g. Abraham Maslow and Carl Rogers) but more prominent in 1990s as much it was expressed as "renaissance" (Clay, 2002; Robbins, 2008). Many scholars have researched and placed the self as the centre of psychological phenomena.

> "No longer do the dominant theories view the individual as a passive vessel responding to stimuli; rather, individuals are now seen as decision makers, with choices, preferences, and the possibility of becoming masterful, efficacious, or in malignant circumstances, helpless and hopeless. … The common denominator underlying all the approaches represented here is a perspective on human beings as self-organising, self-directed, adaptive entities" (Seligman & Csikszentmihalyi, 2000, p. 8).

The renaissance of humanistic psychology is similar to what the self-formation framework tries to do in the higher education literature; challenging the non-agentic assumptions about students.

Among many other theories that adopted such self-determining assumption about humans, Self-Determination Theory (Ryan & Deci, 2000) and Self-efficacy concept (Bandura, 1997) are the two most influential research strands. The famous self-efficacy research conceptually and empirically examines the mechanism of human agency, Bandura (1989) suggests that "none is more central or pervasive than people's belief about their capabilities to exercise control over events that affect their lives" (p. 1175). Thus, self-efficacy belief is "the foundation of human agency"

(Bandura, 2001, p. 10). How agency works can be explained by a formal theoretical definition of self-efficacy:

> "Perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments. … Such beliefs influence the course of action people choose to pursue, how much effort they put forth in given endeavours, how long they will persevere in the face of obstacles and failures, their resilience to adversity, whether their thought patterns are self-hindering or self-aiding, how much stress and depression they experience in coping with taxing environmental demands, and the level of accomplishments they realize" (Bandura, 1977, p. 3).

For Bandura, personal agency is determined by one's belief about oneself, which navigates the regulation of the present self and achievement of the future self. Subjectivity is central in the mechanism underlying agency practice. What is significant about the self-efficacy concept that it has been built on and built a decades-long empirical research programme that has demonstrated the critical impact of self-efficacy on human lives across the cultures, life scenes and developmental stages.

Human beings are assumed to be agentic creature in self-determination theory (SDT; Deci & Ryan, 2000). The main focus of SDT is the human nature of growth propensities that make people desire to extend themselves by exploring, developing their capacities and actively seeking out novelty and challenges in environments. Based on both inductive theorisation and accumulated empirical findings, SDT highlights the innate tendency of self-development. For SDT researchers, a quintessential manifestation of agency is a particular type of motivation, intrinsic motivation. It makes people behave not as a result of external stimulus but because of the internally generated interest. Much empirical research has shown that more self-determined individuals tend to behave toward "greater capacities for self-regulation and integrity" (Ryan & Deci, 2017, p. 90). In short, becoming more agentic involves achieving more subjectivity and autonomy by cognitively altering the external forces into self-oriented motivations and actions.

3.2. Development of reflexive agency

3.2.1. Varying extent of human agency in psychology

Psychologists acknowledge the varying extent and forms of individual agency. Causal efficacy is determined by the different dimensions of a cause that a person attributes his/her past experiences to. Comparing ability and effort as two most common perceived cause of the previous academic achievement, they are found to bear different causal efficacy because they are distinctive in locus of control, stability, and controllability (see Table 3.1, Weiner, 1985; Graham, 1991). The perceived control efficacy indicates more or less agency. People who believe that they have internal locus of control in determining past achievement that is perceived as unstable and controllable (e.g. effort) are regarded more agentic than those who attribute an event to an external, stable, and uncontrollable force (e.g. ability).

Table 3.1 Comparison of ability and effort as a cause

Causal dimensions	Causes	
	Ability	Effort
Locus	External	Internal
Stability	Stable	Unstable
Controllability	Uncontrollable	Controllable

One of the factors that form interiority in reflexive agency is the locus of control. The idea of Locus of Control (Rotter, 1966) is based on the hypothesis that individuals are different in "the degree to which they are likely to attribute personal control to reward in the same situation" (p. 1). This indicates varying extent of agency in perceiving an event as a result of their own actions or attributes demonstrate a belief in internal control. Whereas those who find an event as independent of the self but controlled by factors outside of themselves (e.g. luck, chance, fate, or authority) show a belief in external control. Consistent findings reveal that people who have a stronger belief of internal control are more active in identifying information for managing their future behaviour and taking actions to manage their environmental conditions (Rotter, 1966).

The high or low self-efficacy also implies the fluctuation of agency, whilst in SDT, intrinsically generated motivation is seen as more agentic than externally regulated motivations.

To summarise, attributing past events to more unstable and controllable causes, having more belief about internal control, engaging with more self-efficacious behaviours, and adopting more self-determined motivations indicate greater human agency in psychology. This is in line with Archer's (2012) three features of reflexivity (causal efficacy, internality, and subjectivity) because stronger agency manifests finding effective causal relations, internal source of the control, and self-centred actions and motivations.

3.2.2. Two perspectives of agency development

Then what makes a person more agentic than the other in the same situation? Researchers adopt two approaches to addressing this question. One is enablement and the other is development of agency. The former regards higher degree of agency as resuming the innate agency that is repressed by certain contextual factors. The latter sees it as enhanced agentic capacities.

The enablement approach treats agency as human inborn nature. People innately possess agency, but their agency fluctuates according to the contextual affordances. Researchers who advocate this perspective focus on reducing detrimental barriers in the environment. For instance, control theories interpreted animals' active, explorative behaviours that precede rewards or punishments as their natural desire to control the environment. Meanwhile, it is not the environment but the self that inborn agency focuses on, for humanistic psychologists who sees the fundamental motivation of human beings is self-betterment, self-actualisation, and self-direction (Maslow & Rogers, 1979).

In the development perspective, agency is regarded as a capacity that can be trained, learned, and developed. Improving agency is the ultimate aim of education for self-efficacy researchers. For instance, intervention studies to design training programmes to nurture students' agentic capacities (e.g. Seligman et al., 2009) assume that agency

is not only simply conserved in appropriate environment but also can be enhanced through education. This aligns with Biesta and Tedder's (2007) argument that agency is not possessed freely but should be acquired, for example through biographical learning.

The malleable nature and varying degrees of human agency illuminate the opportunities to develop student agency in higher education. Individual differences in the level of agency have been interpreted as either (1) varying affordances of the environment in terms of allowing free space for agency; or (2) varying agentic capacities that are acquired by learning and education. Integrating both perspectives, students can be assumed to possess inborn agentic nature that can be both developed by learning agentic capacities conditioned by contextual factors. The following section discusses how the learning and conditioning processes in the agency-structure interaction are premised on reflexive agency.

4.3.3. Sociocultural construction of agency

For student agency, academic contexts (e.g. pedagogies, curriculum) and personal resources (e.g. background knowledge, efficacy) affect the degree of perceived control throughout the learning process (see Fryer, 2017 for review). A series of cross-cultural comparison of children's average perceived agency found significant differences across sociocultural settings in America, Germany, and Russia (Little et al, 1995; Oettingen et al., 1994; Stetsenko et al., 1995). The influences of sociocultural factors on shaping individual agency have already pointed out by Ahearn's (2001) who points out to language as a prime example of the mediators of agency.

Similar focus on the social and language as a means for agency development is found in Vygotsky's (1934/2012) discussion of social language as a ground of human thought development. His main argument is that a child's thought development is contingent on his mastery of "the social means of thought, that is language" (Vygotsky, 2012, p. 100). The function of language is extended from means of social interaction to internal conversation. Internal conversation for Vygotsky (1934/2012) is "product of the transformation of a speech that earlier had served the goals of communication into individualised verbal thought" (p. Ii). It is not the issue of socialisation but that of

individualisation of the social for Vygotsky ("he believed that the outward, interpsychological relations become the inner, intrapsychological mental functions", p. Ii). "[T]he speech structures mastered by the child become the basic structures of his thinking" (p. 100). Inner dialogue is a mental interplay between "culturally sanctioned symbolic systems" and "private language and imagery" (p. Ii). Thus, human thought development takes place through language", more specifically, language for inner and external communication.

In higher education, the function of language is equivalent to disciplinary knowledge that socially communicates thoughts, ideas, discourses through distinctive texts or vocabularies, as a means of communication. Reflexivity or internal conversation drifts from external dialogue with the world through knowledge. Academic knowledge provides a distinctive, specialised language that students individualise—*not internalise*—to transform their thoughts. This indicates that different disciplines might shape different reflexivity. For example, temporal orientation of agency (Emirbayer & Mische, 1998) and attributional languages (Weiner, 2012) could be different across disciplines. If natural scientists primarily aim to reveal the truth in nature, without necessarily changing or influencing on it, engineering scientists are more focused on how to apply the technology and knowledge to practically improve human lives. History students might develop distinct approaches in their exploration of the past, accompanied by a unique attributional perspective. Controllability of the data and the degree of subjectivity projected in field knowledge might depend on disciplinary cultures. Different types of controllability are allowed for laboratory experiments and developing social theories; researchers can exert more control over a laboratory condition than over a social phenomenon in a natural setting but developing social theories do not require an unpredictable length of a wait for the experiment results. Knowledge is a language through which students communicate with the world in an academic way, which mediates the development of student agency and self-formation.

In summary, the selected research programmes and theories were reviewed to elaborate what student agency is in student self-formation. Researchers in different fields commonly acknowledge the reciprocal interaction between agency and structure through reflexive capacities of human agents. To promote or enable such agentic

capacities, the role of sociocultural factors is frequently highlighted. One of the distinctive mediators of student agency in higher education is academic knowledge. Further discussions about the role of knowledge in relation to student agency would enable more detailed and clear understandings of academic self-formation.

Conclusion

The dualistic structure-agency paring in the theories of agency is also found in psychology as environment-self or stimulus-response relations. Reflexive internal conversation was provided with a more microscopic, detailed perspective by psychology of how individuals engage with their environment.

First, the emergence of cognitivism as an alternative of behaviourism in understanding stimulus-response relations highlights the internal processing of external information. Cognitive capabilities equip humans with internal abilities to interpret the external regulations. Second, psychologists also acknowledge the causal power of individual agents on the environment by using means including actions. The reciprocal interplay between the self and environment is now established by control research. Third, the centring self in both cognitive and behavioural aspects of reflexivity was scrutinised by self-theories. The evident subjectivity in these theories elucidate the work of the self on the self, in addition to the working between the self and environment.

Although the three points about reflexive agency in psychology were inductively and exploratively identified in the critical review process, it was aligned well with Archer's (2012) listing of three characteristics of reflexivity: internality, causal efficacy, and subjectivity. Psychological perspectives can extend previous theories of agency in terms of individual differences in agency.

Essay 4. Reflexive agency in self phenomena

The advent of the self-formation approach in higher education research is comparable to the emergence of agentic explanations of human formation in psychology. The discussion in this section illuminates what theories in which traditions are valuable to extend the idea of self-formation. For example, the rationales behind the departure from behaviourism and pathologic psychology are expected to highlight human agency. Two example theories are introduced in the following sections: social cognitive theory (Bandura, 1986; 2001) and self-determination theory (Ryan & Deci, 2000).

These theories satisfy the selection criteria established for the present critical review. First, they are grand theories that explain a pervasive and universal phenomenon that is not limited to a specific group of people. The functions of human behaviour and motivation, the respective focus of the sociocognitive and self-determination theories, are observed across cultures and developmental periods, just as self-formation is assumed to occur not only in higher education but also in different life scenes. Second, the theories are developed through and supported by empirical research, not only laboratory experiments but also applied research, throughout decades since its initial studies. This is in line with the assumption that self-formation is an empirically researchable phenomenon. Third, researchers have recognised the special links between higher education and students' agentic behaviours and motivation by adopting the sociocognitive and self-determination perspectives (Van Dinther, et al., 2011; Black & Deci, 2000; Kusurkar et al., 2013; Levesque et al., 2004; Sheldon & Kasser, 2008). Thus, both theories share its main assumptions with self-formation and meets the selection criteria to be included in the current critical review.

4.1. An agentic theory of human behaviour

4.1.1. The sociocognitive theory

Bandura's (1977, 1986) sociocognitive theory is referred to as "an agentic theory of human behaviour" (Bandura, 2018, p. 130). The theory highlights both consciousness and proactiveness of human functioning. Bandura argues that "to understand fully the

interactive relation between behaviour and environment, the analysis must … include cognitive determinants operating in the triadic interlocking system" (Ibid, p. 27). This statement implies the agential self-influence on the surrounding structure. He adds that people are "agents of experience rather than simply undergoers of experiences" (Bandura, 2001, p. 4), pointing to the constructive nature of human experience.

Four core features of human agency in the sociocognitive theory are intentionality, forethought, self-regulation, and self-reflectiveness. These features are highly related to the self-formation idea. *Intentionality* refers to the capacity to initiate actions with specific objectives, which can be adapted, modified, enhanced, or even re-evaluated in response to fresh information while carrying out an intention. Students' participation in higher education is an intentional choice and action, rather than a result of forced or unconscious flow. *Forethought* is enacted when establish personal objectives, foresee the probable results of potential actions, and choose or devise a course of action that is expected to yield favourable outcomes. It is a particularly important manifestation of superior cognitive capacity that frees people from constrained learning solely as a result of direct consequences of their own actions but allows learning through observations. Also, people adopt personal criteria during forethought to regulate their own behaviours and evaluate their outcomes, which might not always agree with the external standards. In the similar vein, students adopt personal projects, desired self as a guide to navigate their university experiences.

In order to achieve the represented goal, agents employ *self-regulation,* the capacity to formulate suitable courses of action and to inspire and oversee their implementation. Among the features of human agency, the most distinctive characteristic is reflective self-consciousness (Bandura, 1986). By using *self-reflectiveness*, people assess and adjust their own thoughts, monitor their concepts, act upon them, predict outcomes based on them, evaluate the effectiveness of their ideas through their outcomes, and modify them accordingly. This self-reflectiveness is most closely related to self-formation that is premised on reflexivity. Thus, as students' action, performance and choice in higher education are based on intentionality, forethought, self-regulation and self-reflectiveness, student agency is a prerequisite for higher education.

Both sociocognitive theory and self-formation provides an agency-focused perspective to respective research fields that have widely neglected agential capacity of human actors. On the one hand, Bandura's theory focuses on the psychological mechanisms of the self-system through which environmental factors operate to produce behavioural effects (Bandura, 2001). On the other, self-formation calls for student agency as a pivotal factor that determines the function of higher education. With the same focus on agential capacity, the two approaches explain different phenomena; the sociocognitive theory places agency at the centre of general human behaviour, while self-formation puts student agency at the heart of higher education. The psychology of human agency can operate as a window to gain understanding of what higher education is by elaborating on why students behave (participate in, learn, perform in higher education) as they do in higher education. In addition, "a long haul (of sociocognitive theory building) in which essential components are added incrementally" (Bandura, 2018, p. 13) can address the lack of empirical support for self-formation.

4.1.2. Self-efficacy mechanism in human agency

An indispensable element in sociocognitive theory is *self-efficacy*. According to Bandura, within the mechanism of human agency, "none is more central or pervasive than people's belief about their capabilities to exercise control over events that affect their lives" (Bandura, 1989, p. 1175). Since the ability to exercise agency depends on people's conception that enables or hinders it, self-efficacy is "the foundation of human agency" (Bandura, 2001, p. 10). The "self-efficacy mechanism in human agency" (Bandura, 1982) has been empirically researched for decades (Schunk & Pajares, 2009). The self-efficacy is distinctively associated with self-reflexivity because it is

> "not fixed but, in the self-appraisal of efficacy … different sources of efficacy information must be cognitively processed, weighed, and integrated through self-reflective thought" (Bandura, 1989, p. 1178).

The link between efficacy beliefs and reflexivity as well as its link with agency practice point to how empirical findings in the huge body of self-efficacy research are helpful to inform self-formation researchers.

Efficacy beliefs are related to agency freedom, Sen's (2000) distinctive notion of human freedom as agency practice and self-influence. While freedom is often discussed with constraints and enablers exerted upon it, the constraints are sometimes cognitively based, such as ruminative thought pattern and lack of confidence. In this case, "freedom is expanded by instilling affirmative self-beliefs and altering self-impeding internal standards" (Bandura, 1986, p. 41), or put it otherwise, by developing self-efficacy. This is because self-efficacy beliefs influence how people feel, think, motivate themselves and behave.

How efficacy operates in human functioning is through cognitive, motivational, affective and selection processes (Bandura, 1993). In terms of cognitive process, self-efficacy beliefs influence the development of one's "thought patterns that may be self-aiding or self-hindering" (Bandura, 1989, p. 1175). Self-aiding thought patterns of highly efficacious people include visualising successful outcomes that lead to positive guides for actions. This shows how "a high sense of efficacy fosters cognitive constructions of effective actions and cognitive reiteration of efficacious courses of action strengthens self-perceptions of efficacy" (p. 1176).

Self-efficacy also conditions people's affectional reaction towards their experiences, for instance, the level of stress and depression they might feel in situations perceived as threatening or in taking risk-taking actions. Moreover, the level of motivation is also affected by personal efficacy beliefs that determine how much effort one would exert in and how long to persevere in difficult situations. Beyond personal thought patterns, people's behavioural tendencies vary with the extent of self-efficacy, causing practical differences in people's lives. For examples, individuals who perceive themselves as more efficacious tend to consider a broader range of career options and take more proactive approaches to prepare themselves adequately for the various professional possibilities (Bandura, 1989).

In the sociocognitive theory, the pivotal aim of education is to help students become more self-efficacious people.

"A major goal of formal education should be to equip students with the intellectual tools, self-beliefs and self-regulatory capabilities to educate themselves throughout their lifetime" (Bandura, 1993, p. 20).

This is in line with self-formation researchers who argue for higher education as a venue in which students can practice and develop their agency in the process of self-formation.

4.2. An agentic theory of human motivation

4.2.1. Motivation as a manifestation of human agency

Agency is hypothesised to be a necessary condition for self-formation. The central role of student agency in higher education is agreed by SDT. In SDT, all human beings, including college students, are inherently "agentic and inspired, striving to learn; extend themselves; master new skills and apply their talents responsibly" (Deci & Ryan, 2000, p. 69). The main focus of SDT is the human nature of growth propensities that make people desire to extend themselves by exploring, developing their capacities and actively seeking out novelty and challenges in environments. For SDT researchers, a quintessential manifestation of such agential tendencies is a particular type of motivation, *intrinsic motivation*, that makes people behave not as a result of external stimulus but because the activity they are engaged is interesting and enjoyable. According to much empirical evidence, intrinsically motivated individuals exhibit greater self-regulation and integrity in their behaviours and their growth-oriented propensity is pervasive and spontaneous (Ryan & Deci, 2017).

Regarding intrinsic motivation as a sign of human agency, some might question whether being driven by a fixed inborn quality (e.g., innate growth-tendencies) is another form of subjugation and cannot be seen as agential capacity. This point could be refuted by pointing out that SDT's acknowledgement of people's intrinsic motivation liberates humans from the necessity of external cues that were believed to be a prerequisite for instigating human behaviours, thereby gives a space for agency to play its role. In fact, individuals intentionally and actively "seek and engage challenges in their environments" in their attempts to realise their desirable self (Deci & Ryan,

2002, p. 8). Such propensities can provide a theoretical support for self-formation's suggestion about agency: student-agents are energised not only to *reduce* but also *produce* discrepancy (Bandura, 2018), as can be seen in mobile students who "choose mobility to alter their space of possible" (Marginson, 2014, p. 10) or shift their habitus in Bourdieu's (1977) term. Meanwhile, the difficulty-coping and discrepancy-reducing approaches (e.g., theories of transition/adaptation of international students) or the over-emphasis on economic and neoliberal aspects of higher education (e.g., human capital approaches) leaves out students' intrinsic growth-oriented tendencies that signal active agency.

The innate growth-propensities lead individuals to *actualisation* and *integration* of the self. The actualisation is development towards greater capabilities and potentialities that extend the self, whist the integration is toward "synthesis, organisation, or relative unity of both knowledge and personality", which helps individuals to experience "a coherent sense of self" or integrity (Deci & Ryan, 2002, p. 4). Such integrative tendencies to align 'what they learn' with 'who they are' are clearly related to the reflexive aspect of human agency. In self-formation, student-agents are believed to exercise self-reflexivity, the ability to monitor, regulate and reflect on the self, while trying to achieve the desired forms of the self. This hypothesis can be extended by recognising the synthesising propensities in human motivation; learning new knowledge stimulates people to practice self-reflexivity and to integrate the self with the new information.

In sum, the hypothesis about students as active agents in self-formation is confirmed by SDT's emphasis on inherent growth-tendencies. Self-formation researchers can investigate students' agency by looking into their intrinsic motivation. Such agential form of motivation seems to enact students' self-reflexivity as they experience incongruence in the self as a result of learning, interaction, or mobility.

4.2.2. Influences of contextual resources on self-determination

In addition to student agency, social structure or environmental condition is also an important element in conceptualising self-formation. The second working hypothesis, thus, is established around the contextual factors that nurture or impede the self-

formation process. This hypothesis can be effectively examined by SDT that also recognises environmental influences on human motivations.

Similar to self-formation, SDT points out the protagonist as well as antagonistic influences on people's inherent developmental tendencies (Ryan & Deci, 2000). Unlike the development of self-formation based on summative theorisation, SDT inductively theorises the impact of social conditions building on accumulated empirical findings. Thus, SDT provides evidence for the hypothesis of self-formation, confirming that student-agents will flourish in higher education "if circumstances permit" (Ryan & Deci, 2000, p. 70).

Mainly adopting experimental methods that manipulate social settings, SDT researchers extensively investigate under which conditions people's natural, active and constructive tendencies remain undisturbed and strong (Deci, 1975; Deci et al., 1994; Nix et al., 1999). This methodological approach implies two points. First, contextual factors in SDT are regarded as conditioning, not determining, meaning that they do not mould or stamp in certain behaviours in people but only make a way for or in the way of their intrinsically motivated behaviours. Second, optimal human functioning of agentic, self-motivated and constructive individuals cannot be taken for granted. In fact, intrinsic motivation is not the only type of human motivation in SDT; it also recognises passive, indolent and apathetic individuals who can be easily and abundantly observed in our day lives. In an endeavour to explain why people develop different types of motivation, SDT turns to social conditions.

Based on studies of international students, three contextual resources for self-formation were proposed by its initial theorisation (Marginson, 2014): mobility, intercultural interaction and communicative proficiency. How these factors influence student agency in higher education can be elaborated by referring to one of the SDT's mini theories concerning the basic psychological needs. While trying to offer a satisfactory explanation for unexpected findings such as intrinsic motivation undermined by tangible rewards (Deci et al., 1999), SDT researchers reveal that social environments enable intrinsic motivation by allowing people to experience a feeling of *competence*, *relatedness* and *autonomy*, which are proposed as human basic

psychological needs (Ryan & Deci, 2000). When intrinsic motivation is a prototypical indication of human agency, agency practice might be facilitated by providing agents with opportunities to experience self-efficacy, to engage in socially valued tasks and to find the locus of causality in themselves. In other words, higher education can promote student self-formation by providing a formal context for students' capability building, networking and self-empowerment.

As for the above-mentioned resources for self-formation, their links with the basic psychological needs requires clarification. If mobility, interaction and language capitals do support self-formation, it is spontaneous to assume that they would have done so by helping students to feel competent about themselves, related to others, and autonomous in their being and doing. Nevertheless, the reality is not that simple. For example, mobility often deprives students of the sense of relatedness that they had in their home countries as well as the feeling of competence by placing the students in unfamiliar, unknown contexts. What self-formation envisages instead is that mobility stimulates self-consciousness and consequential redefinition of the self. Elaborated by SDT, such self-forming processes energised by various resources are only possible when the given social conditions are supportive of students' basic psychological needs. Intercultural interaction, for instance, should allow students to feel confident, belonged and free, if it is to enable agency practice and be used as resources for self-formation. Otherwise, students' agential capacity to utilise such resources might be hampered by the environment that has detrimental impacts on students' wellness, growth and learning.

There is another point to clarify about the agency-structure relationship in order to re-establish the hypothesis about contextual resources for self-formation. For the purpose of the present research, agency and structure were assumed to be separate and independent, influencing each other through reflexivity, as suggested by Archer. In SDT, however, agency is viewed restricted within structure that can influence but cannot be influenced by agency. As can be seen from the statement, "whether or not people are explicitly conscious of needs as goal objects, the healthy human psyche … gravitates toward situations that provide them" (Deci & Ryan, 2002, p. 8), SDT includes unconsciousness in agency practice by using the concept of *needs* (Di

Domenico & Ryan, 2017). Although inherently active humans are seen to proactively initiate engagement with the environments, it is not the focus of SDT to understand how the social conditions can be shaped by the individual agents, no matter how self-determined they are, which implies agency limited in structure. This standpoint is reminiscent of critics about hyper-consciousness in Archer's perspective.

To conclude: SDT's proposition about the impact of social contexts on agential, intrinsic motivation through satisfying or reducing people's basic psychological needs offers an explanation for how self-formation is restricted or fostered by various contextual resources. The hypothesis can be extended to suggest that a needs-supportive setting enables the function of self-formation resources. Thus, having more language proficiency, engaging with more intercultural relationships, and experiencing mobility can better catalyse self-formation in an environment where students feel more efficacious, self-regulated and included. Although the function of psychological needs can be unconscious, conscious reflexivity plays a necessary role in how various resources stimulate the self-formation processes.

4.2.3. Multiplicity and hybridity: pathways for self-determination

The final hypothesis of self-formation to be discussed in this essay is about the outcome of the self-formation processes, which proposes that students transform themselves as they want possibly by using strategies of multiplicity and hybridity. In SDT, becoming more self-determined involves achieving greater autonomy in action by transforming external regulations into intrinsically motivated, self-regulated behaviours. This transformative process in SDT can illuminate how students achieve the desired outcome of their self-formation processes.

When a student's behaviour is intrinsically motivated, it is easy to state that the action is self-determined. Students who choose to further their studies, solely driven by their curiosity and interests, would find higher education experience itself rewarding. In this case, the students' motivations are self-generated, and the resultant behaviours are also navigated by themselves. Intrinsic motivation, however, is not the only way of engaging in self-formation. Many students enter a university for external rewards such as employability or upward social mobility that are not directly related to but separate

from higher education experience itself. Such extrinsic motivation was the focus of operant theorists (e.g., Skinner, 2002) whose arguments frequently dismissed agency and self-determining capacities in humans. Although most psychological and sociological approaches divide intrinsic and extrinsic types of motivation, both SDT and self-formation integrate them into one framework. Self-formation is an umbrella concept that encompasses various personal projects in higher education, while SDT envisages a continuum that incorporates different types of motivation with varying degrees of self-determination (see Figure 4.1). In both approaches, extrinsically motivated personal projects are neither neglected nor viewed as non-agential. Higher education from human capital perspectives, for instance, can also be construed as autonomous self-formation.
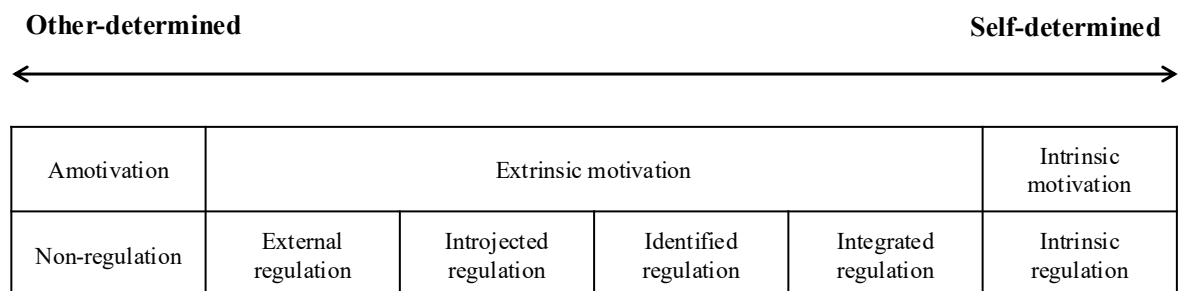
Other-determined   **Self-determined**

⟵———————————————————————————⟶

Amotivation	Extrinsic motivation				Intrinsic motivation
Non-regulation	External regulation	Introjected regulation	Identified regulation	Integrated regulation	Intrinsic regulation

Figure 4.1 The continuum of human motivation (Source: Ryan & Deci, 2000, p. 72)

In the continuum of human motivation, SDT recognises that some extrinsic motivation is still autonomous and self-determined if individuals internalise or integrate them. *Internalisation* refers to "taking in a value or regulation" into the self, whilst *integration* refers to the "further transformation of that regulation into their own so that, subsequently, it will emanate from their sense of self" (Ryan & Deci, 2000, p. 71).

When extrinsic motivation is hardly internalised, it is perceived as *external regulation*, by which people are only motivated when relevant rewards are significantly salient to them. A slightly more internalised motivation is when the behaviour is driven by self-worth (e.g., self- and other-approval, pride, esteem, guilt and anxiety). Such *introjection* is characterised by its partially internal but still controlling in nature. In contrast, when the importance of the externally forced activity is accepted by the self (*identified regulation*) or fully aligned with other needs and values of the self (*integrated*

regulation), people are whole heartedly behind the activity with little internal conflict. Thus, more internalised and integrated extrinsic motivation is more autonomous and indicates more agency.

The process of internalising and integrating regulations and consequently forming more self-determined motivation is highly associated with multiplicity and hybridity as strategies for self-formation. On the one hand, internalisation or accepting external values into the self is relevant to multiplicity through which multiple values, cultures and knowledge are faced, processed, and learnt by the self. Integration or transforming regulations into the self, on the other, is reminiscent of hybridity through which the new self emerges from the multiplied selves. In the SDT research programme, the hypothesis about multiplicity/hybridity as self-forming strategies can not only be supported by much empirical evidence but also elaborated further. The process of internalising and integrating extrinsic motivation requires reflexive deliberation between personal values and the external regulations. This is because regulations should be "evaluated and brought into congruence with one's other values and needs" in order to be internalised into the multiplied self or integrated into the hybridised self (Deci & Ryan, 2000, p. 72).

Conclusion

Intrinsically self-navigating individuals are not the most prototypical image of college students in the literature. The self-formation framework argues against the dominant conceptions of students in higher education research as objects who are passively responding to and determined by social contexts. The emergence of human agency within the development of psychology points to a need for paradigm shift in higher education research and the role of self-formation in such transition. The primary agenda of the sociocognitive and self-determination theories is to advocate for human agency manifested in self-efficacy and intrinsic motivation, moving away from earlier behaviourist, cognitivist and post-modernist approaches (Ryan & Deci, 2002).

Throughout the essay, I have examined the two theories according to their potential to extend the hypotheses of self-formation. First, students are indeed strong agents

as demonstrated by the explanatory power of self-efficacy in human behaviours. Students' intrinsic motivation also evidences the inborn nature to proactively pursue growth, learning and integrity. Second, the impact of contextual resources on students' self-formation is supported in the triadic (behavioural, personal, and contextual) construct of social cognitive theory. However, it is on a condition that the contexts satisfy their basic psychological needs, according to SDT. Finally, students are proved to employ multiplicity and hybridity as strategies for self-formation, at least in the process of transforming their motivation.

Essay 5. Mobility impact on self-formation

Mobility is hypothesised to be one of the key resources that foster self-formation in higher education (Marginson, 2014). This essay discusses mobility impacts on self-formation by working with theories of cross-cultural adaptation, acculturation, and transition. Elaborating on the hypothesis of mobility as a resource for academic self-formation, the essay draws out implications about the other hypotheses of student agency and multiplicity/hybridity.

A series of conceptual essays so far has shown that mobility can trigger student formation, create discrepancies, heighten self-reflexivity, and mediate active self-environment relationships. In student development theories, mobility into a college environment is a trigger that initiates certain mechanisms of student development (Pascarella & Terenzini, 2005). Such a catalytic effect of mobility can be because it creates a disequilibrium that plays a role of extrinsic motivation for human formation, according to motivational, behavioural and cognitive psychologists (Bandura, 2018; Ryan & Deci, 2000). Social theories emphasise agents' interaction with contexts in theorising agency (Archer, 2012; Biesta & Tedder, 2007; Emirbayer & Mische, 1998), which implies the critical impact of contextual changes through mobility on agency practice. For Vygotskian advocates, the regulatory power of structure is subjected to the self (Vygotsky, 1997), which renders mobility as a process of self-formation. These useful implications about mobility drawn from multiple theories can be made richer and more detailed by engaging with theories of mobility itself.

5.1. Mobility as a manifestation of agency

Cross-cultural research focuses on the phenomenon of mobility and the resultant human formation. As a number of models in the literature share some key features, a general, integrated model of cross-cultural adaptation can be established as illustrated in Figure 5.1. The first phase of the framework is *mobility*, which results in different cultures "com[ing] into first-hand contact with subsequent changes in the original pattern" in the subjects or cultures who are in contact (Redfield et al., 1936, p. 149). Such mobility includes not only intercultural encounters but also various alterations in

one's roles, relationships, routines, or assumptions (e.g., marriage, starting college, bereavement) (Schlossberg, 1981). Foregrounding mobility as a beginning of the whole adaptation process indicates its triggering influences on student formation. The sociocultural, geographical, and academic mobility experienced in higher education is seen as critical for students to initiate the process of transformation within the self and environment.
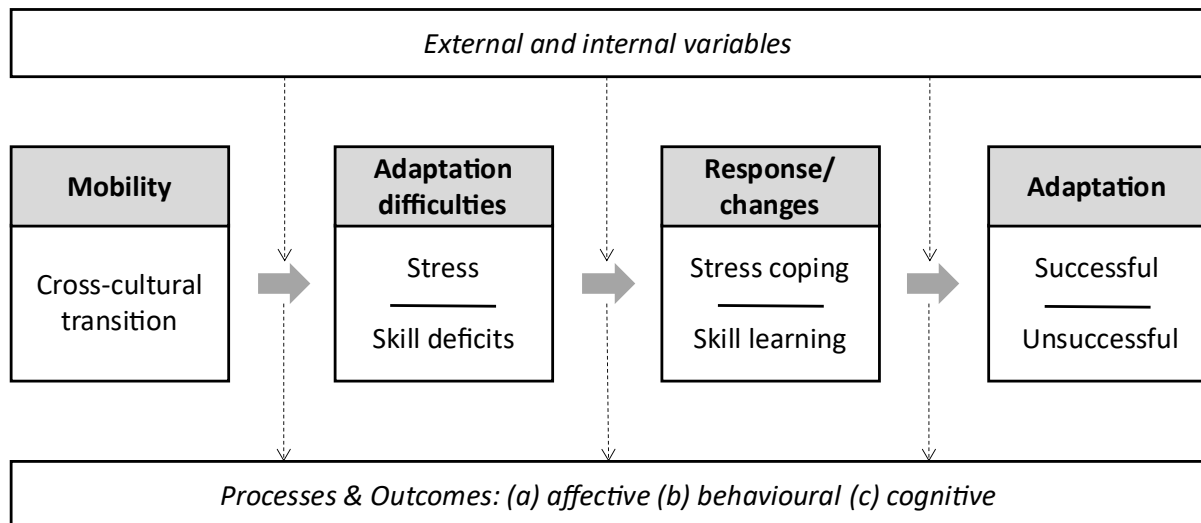

Figure 5.1. The general model of cross-cultural adaptation (adapted from Zhou et al., 2008; Berry, 2005; Kim, 2001; Ward et al., 2020)

Understanding mobility as a catalyst for human formation was echoed by self-determination theory (Ryan & Deci, 2000) and social cognitive theory (Bandura, 2018). Mobility, for these psychological approaches, is a manifestation of strong agency as it shows one's innate tendency to intentionally pursue novelty and disequilibrium. However, human consciousness and intentionality underlying transitional experiences are not necessarily acknowledged in the previous research. For instance, transition theories (Schlossberg, 1981) are often adopted by research on international student mobility (e.g. Schartner & Young, 2019). The transition research originated from adult development studies tends to regard mobility as a given part of living (e.g., aging, graduation, retirement) rather than as a resource that is earned and actively sought after. Mobility in traditional adaptation research was not always voluntary as experiences of indigenous people and refugees were also included (Sam & Berry,

2006). This implies that human formation through cross-cultural adaptation was assumed largely dependent on external power, which deprives people of agency.

From the self-formation perspective, however, the starting point of student development is their personal projects that precede the mobility phase. Empirical investigations show that mobility is an outcome of international students' reflexive and self-determined choices (e.g., Chirkov, et al., 2007; Zhou, 2015). Mobility manifests agency. Self-formation, therefore, can extend the theories of cross-cultural adaptation by looking at agency before/behind international mobility (e.g. Inouye, Lee, & Oldac, 2022; Tran & Vu, 2018).

5.2. Mobility triggering self-reflexivity

The second stage of adaptation illustrated in Figure 5.1 is regarding facing difficulties. Cultural relocation and exposure to a new environment, followed by mobility, are theorised to generate cultural, transitional, and personal "shock" (e.g., Bennett, 1977; Furnham & Bochner, 1986; Zaharna, 1989), acculturative and adaptive "stress" (e.g., Berry, 2005; Kim, 2000), or even "moments of crisis" (Kim, 2017, p. 5).

Emphasising problems and negativity caused by mobility, despite its potential for "authentic growth and development" (Adler, 1975, p. 14), is attributable to the origins of cross-cultural research. The major two origins of this research programme are: the migration literature and clinical psychology (Zhou et al., 2008). On the one hand, the early research on immigrants centred on the "the psychological and social strain … in response to their cultural *uprooting* and *dislocation*" (Kim, 2012; italics added, p. 230). On the other, clinical and medical approaches concentrated on treating the potential mental problems such as depression, anxiety, fatigue in the transition phase (e.g., Brown, Bhrolchain, & Harris, 1975; Holmes & Rahe, 1967). The dominant assumption about the problematic and stressful mobility is exemplified by U-shaped (Oberg, 1960) or W-shaped (Gullahorn & Gullahorn, 1963) adaptation models that underscore the negative impact of mobility on well-being as an essential part of successful transition (Figure 5.2).
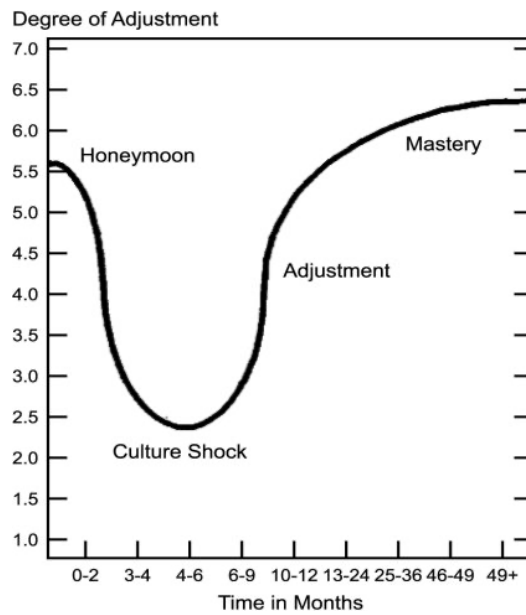
Figure 5.2 U-shaped adaptation model (Source: Black & Mendenhall, 1991, p. 227)

The indication of stress followed by mobility suggests that mobility produces irregularities in self-formation by forestalling or accelerating the process. Researchers have consistently shown that mobility generates problems to be treated, struggles to be supported, difficulties to be coped with, and despairs to be recovered. Kim calls such a mechanism as 'draw-back-to-leap', in which adaptative stress is firstly responded to with a 'draw back' but also gives energy to reconstruct oneself and 'leap forward' (see Figure 5.3).
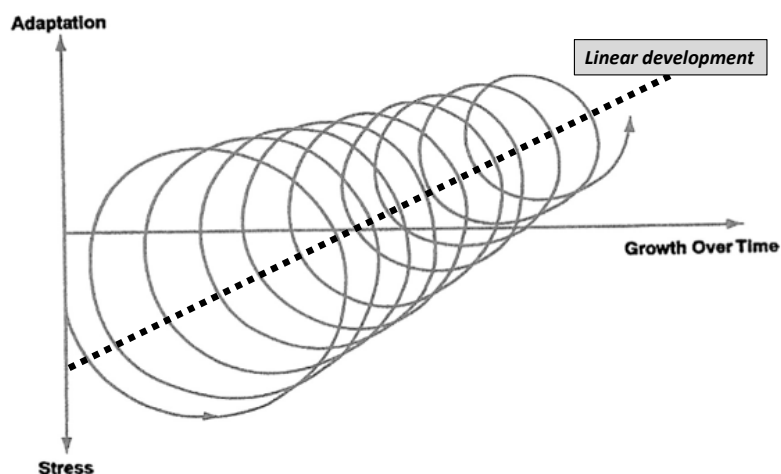

Figure 5.3 Illustration of "draw-back-to-take-leap" for cross-cultural adaptation (Source: Kim, 2000, p. 59)

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The stress and shock accompanying mobility are indicative of effort-making and heightened self-reflexivity during the work on the self, which take mental energy. If mobility involves using the regulatory power of environmental changes on the self (Vygotsky, 1997), adaptation will involve working on the self. Taking a leap towards the desired self takes effort, energy, and time, which can be stressful. Heightened self-reflexivity might be accompanied by negative feelings because it sometimes magnifies the gap between the current self and the desired self, and this is why self-formation should not be confused with well-being. As such, the negative psychological effects of mobility can be reinterpreted as a signal of accelerated self-formation. This potentially agentic process cannot be simplified in the frame of culture shock, which reduces the self-forming aspect of student experiences into stress-coping.

5.3. Outcomes of mobility

The adaptation difficulties phase is followed by active responses or changes. Whilst the mobility-stress link reminds the stimulus-response mechanism with limited human agency, the coping phase allows a space for people to agentially come up with strategies to regain the equilibrium and resolve the stressful situations. Some researchers focus on learning and acquiring appropriate cultural skills rather than coping with problems (Furnham & Bochner, 1986). In this culture-learning approach, culture shock is simply the stimulus for learning cultural knowledge. Acquiring appropriate cultural skills is seen necessary for people to participate in social interactions in the new environment. Either for coping or culture-learning, human agency is required. Thus, one can argue that mobility fosters agency practice in the adaptation process.

However, the holistic and complex self-formation phenomenon can only be partially examined when equated to coping and cultural learning because of the assumptions underlying adaptation theories: mobile people are seen as either victims of culture shock or deficient of appropriate skills. Accordingly, the ideal human formation by cross-cultural adaptation is: (a) achieving mental well-being by overcoming the stressful transition phase; (b) assimilation to the host culture by mastering the new

cultural codes. These could be parts of but are not exhaustive of the product of self-formation.

As seen in the last phase of the framework (Figure 5.1), the ultimate goal of cross-cultural adaptation is to achieve "the "fit" between an individual cultural stranger's internal conditions and the conditions of the host environment" (Kim, 2017, p. 3). Assimilation is implied to be the successful and desirable goal of cross-cultural adaptation. However, student development through acquiring cultural skills required to be a part of the host country's local community does neither consider students' personal projects nor their life trajectories.

Criticising the unidimensional adaptation from one culture to the other, Berry (1997) proposes a multidimensional idea of adaptation (see Figure 5.4). He distinguishes four types of outcomes of adaptation (integration, assimilation, separation, and marginalisation) according to one's attitudes toward to the two dimensions: maintaining ethnic culture and/or accepting new culture. In this model, student formation is no longer unidimensional, linear assimilation because multiplicity and hybridity are acknowledged as in self-formation. However, student formation in this model cannot transcend the cultural bound; the either-or is merely replaced by the one-of-the-four human formation.

Accepting the new foreign culture

		High	Low
Maintaining home traditional culture	High	Integration	Separation
	Low	Assimilation	Marginalisation

Figure 5.4 Multidimensional acculturative strategies (Adapted from Berry, 1997, p. 10)

The discussion tended to limitedly focus more on how previous studies fall short of examining self-formation rather than identifying opportunities. Self-formation provides an alternative, more open and agentic perspective to conceptualise the process and outcome of mobility. An encounter with a new culture involves processing a vast amount of new information in a compressed timeline. This will stimulate re-appraisal of the self with emerging new standards for self-reflexivity. Self-reflexive questions are triggered by tensions after mobility, whilst the response to the question is determined by the students' reflexive agency. For instance, an international student from South Korea might question his/her efforts to be humble in a new academic culture that she perceives to place more value on confidence and self-expression than on humility. As a response, the student individuates the multiple cultural behaviours as resources for their self-formation in the new environment. The process of self-formation through mobility is different from the linear trajectory toward adaptation as a pre-determined goal (see the dotted line in Figure 5.3). As students navigate a novel context in light of their personal projects, mobility can stimulate but cannot determine the self-formation process.

Conclusion

The roles of mobility in self-formation are to: (1) manifest agency; (2) produce discrepancy and enhance self-reflexivity through the lens of different cultures; (3) trigger agency practice for the work on the self; and (4) enable students to use the transformative power of adaptation for their self-formation. Would these roles of mobility drawn from cross-cultural research be only applicable to international students' self-formation? Cross-cultural adaptation is a part of broader concepts such as transition (Schlossberg, 1981) or boundary crossing (Akkerman & Bakker, 2011), which encompass not only international mobility, but any "transactions and interactions across different sides" (p. 133). As a form of mobility that incorporates a range of aspects (social, cultural, geographical, and linguistic mobility), theories of cross-cultural adaptation serve as an informative avenue.

Essay 6. Student agency for learning in higher education

The Student Approaches to Learning (SAL) tradition investigates the why and how students engage in academic learning in higher education. From the perspective of cognitive psychology, SAL research attempts to explain the qualitative differences in students' general learning processes (Biggs, 1987; Entwistle, 1991; Marton & Saljo, 1976). I first introduce SAL in terms of its fit for the conceptual research of self-formation. Then, I discuss the empirical and conceptual implications of SAL about the conditions, resources, and products of higher education as academic self-formation.

6.1. Theories of student approaches to learning

Student Approaches to Learning research has made a significant contribution on the current knowledge about student learning in higher education (Richardson, 2015). As a highly influential framework to investigate learning experiences of university students, it can provide a useful view on the academic aspect of student self-formation. SAL's extensive research programme since 1970s is particularly helpful to learn about empirical forms of agency, contextual resources, and self-construction, the core elements of self-formation.

The SAL tradition and its research programme satisfy the selection criteria to be included in the present critical review. First, SAL is a concept about a pervasive and universal phenomenon, which is student learning. The two general approaches to learning, deep and surface approaches, were observed across cultures. The identification of different approaches to learning were similarly found by separated studies in Sweden (Marton & Saljo, 1976), Australia (Biggs, 1987) and the UK (Entwistle & Ramsden, 1983), and were widely applied by studies on Asian students (e.g., Kember & Watkins, 2010; Rao & Chan, 2010; Zhu, Valcke, & Schellens, 2008). Second, SAL has developed its extensive research programme throughout forty-five years since its initial studies (Marton & Saljo, 1976), which supports the assumption that self-formation is an empirically researchable phenomenon. Third, the SAL research acknowledges the distinctiveness of higher education by focusing almost exclusively on student learning in higher education. Although SAL is assumed to be

universal across the level of study, relatively little attention has been given to learning of students in schools due to their limited "awareness and control over one's general learning processes" (Biggs, 1987, p. 8). As can be seen, the SAL research shares its main assumptions with those of self-formation, thereby meets the criterial for selecting literature for the current critical review.

In this essay, SAL theories will be scrutinised in terms of the working hypotheses of academic self-formation. Although there are multiple conceptual roots of SAL (, they have minimal differences but shares many general points. The different SAL frameworks generally (1) identify the deep/surface dichotomy in approaches to learning, (2) acknowledge the impact of academic environment on student learning, and (3) assumes the development of learning approaches. I will discuss each of these points to elaborate the line of hypotheses about the condition, resources, and outcome of self-formation.

6.2. Different forms of agency in approaches to learning

The beginning of the SAL tradition can be traced back to a simple query about the qualitative differences in learning, moving beyond the quantitative learning outcomes (e.g., memory, examinations results) (Richardson, 2015). In a series of explorative studies, Marton and Saljo (1976) discovered two distinctive ways of going about studying academic materials among university students: the deep and surface approaches to learning. Repetitively supported by similar findings of other initial SAL scholars, the two approaches to learning were theorised to encompass different learning motives (why I learn) and processing strategies (how I learn).

Students who adopt a deep approach are seen to "take an active role and see learning as something that they themselves do", whereas those who employ a surface approach are known to "take a passive role and see learning as something that just happens to them" (Richardson, 2005, p. 675). This contrasting description implies the relatively agentic nature of the deep approach. In fact, the intrinsic motivation for learning and compatible learning strategies, which characterise deep learning, manifest active agency. For example, deep learning involves the pursuit of new

knowledge to "actualise interest and competence in particular academic subjects" (Biggs, 1987, p. 11). Such internally generated motivation behind student learning is regarded as an empirical form of human agency according to self-determination theory (Ryan & Deci, 2000). Meanwhile, deep learning strategies such as (a) relating new information to previous knowledge, (b) critically examining the given information, and (d) self-monitoring of the learning processes (Entwistle & McCune, 2004) all highlight reflexivity as a necessary capacity. As such, both intrinsic motivation and reflexive behaviours as parts of the deep approach appear to confirm that students in higher education, at least those who adopt the deep approach, are active agents throughout learning processes.

Whilst the deep approach is equated to successful and desirable learning in higher education, the surface approach has long been linked to low quality learning (Asikainen & Gijbels, 2017). The extrinsic learning motives and reproductive processing strategies in surface learning are not as straightforwardly indicative of agency as deep learning. By rejecting the "deep/surface dichotomy" (Case & Marshall, 2009, p. 11) in the SAL tradition, the self-formation framework unravels the self-forming nature of students' surface approaches to learning. Just as students' different personal projects are incorporated into the comprehensive concept of higher education as self-formation (Marginson, 2014), student learning that is mainly energised by external sources (e.g., achieving rewards like high grades or for avoiding punishments) can also be a part of agentic self-formation.

On the other, study strategies for surface learning such as unstructured knowledge development, memorising facts, and reliance on external regulation during learning processes could also be conscious agency practice to strategically use whatever approach deemed necessary in the given context, aiming toward high achievements (Entwistle & Ramsden, 1983/2015; Biggs, 1987). Such tendency was interpreted by Biggs (1993) as students' attempts to decrease the disequilibrium between themselves and the context that is perceived to require surface learning strategies. Researchers firstly explained the strategic behaviours as a third approach to learning, but later empirically found that it is a form of deep learning with heightened self-reflexivity (Biggs, Kember, & Leung, 2001; Entwistle, McCune, & Hounsell, 2002).

The SAL literature has been praised to draw the attention of researchers from the teachers or institutions to the learners (Case, 2013). In this sense, the SAL and self-formation perspectives share their focus on students' agentic role. For example, in attempts to explain why students adopt different approaches to learning in the same learning environment, SAL brings forward students' own perception and conception as mediators of contextual influence on student learning (see Figure 6.1). Students are not passive objects but a subject who actively deliberate on the learning context.
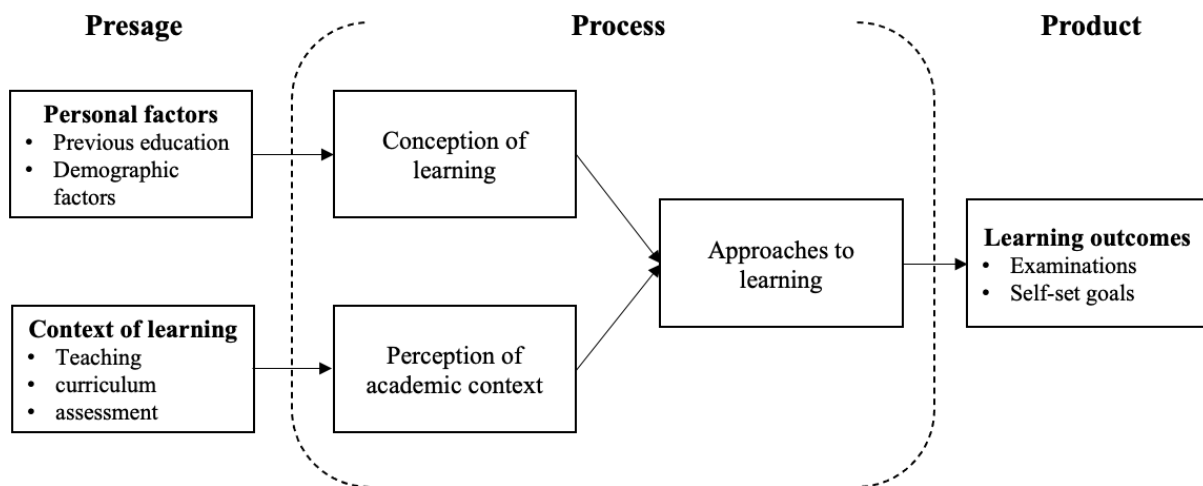

Figure 6.1 General model of student learning in context (modified from Biggs, 1993; Ramsden, 2003; Richardson, 2005)

However, critics arise against agency over social impacts, calling for further and boarder engagement with the social, contextual factors in SAL models (Case, 2013; Malcolm & Zukas, 2001). While student agency was explored in students' deep/surface approaches to learning in this section, the following section will examine various contextual factors as an empirical form of structure in self-formation.

6.3. Contextual resources for self-formation in academic learning

Students' approach to learning depends on the interaction between the self and learning contexts, therefore not fixed but changeable. Based on findings about the heavily researched contextual variables in the SAL model (Case & Marshall, 2009), the role of contextual resources for self-formation will be discussed in this section.

In the integrated model of SAL illustrated in Figure 6.1, the previous learning context is distinguished from the current learning environment, which implies academic transition from one context to the other. This mobility is followed by students' perception of the previous and current academic settings, influenced by students' own conception of learning (Ramsden, 2003; Richardson, 2005). Such a cognitive process accelerated by environmental changes is expected to be more prominent among international students, given the frequently observed cultural differences in conceptions and practices of learning (e.g., Bowden, Abhayawansa, & Manzin, 2015; Li, 2012). Previous studies on mobile students' approaches to learning, however, have mainly studied how their approaches are different from those of their domestic counterparts, rather than how the experiences of mobility itself influences their learning processes.

SAL researchers also explored what resources are related to which approaches to learning in their attempts to induce more deep approaches. Examples of academic contextual factors that are found to be positively linked to deep learning are: more problem-based than lecture-based curriculum (Dolmans et al., 2016), more open-ended than multiple-choice assessment (Thomas & Bain, 1984), and more independent than externally regulated learning (Eley, 1992). What these curricular and pedagogical features have in common is that they encourage interaction with—not induction of—the given academic knowledge.

Such interaction with academic knowledge seems to be influenced not only by pedagogies but also by various disciplinary features. Although relatively little attention is given to approaches in disciplinary contexts (Case & Marshall, 2009), a few studies identify distinctive approaches among students in humanities (Art design; Drew et al., 2002) and science (Biology; McCune & Hounsell, 2005). This suggests that the interaction with different disciplinary knowledge that carries unique value, voices and languages might provide distinct resources that shape student agency, given that student approaches to learning is an empirical form of agency during learning.

The above discussions demonstrate that the hypothesised impact of the resources in self-formation can be empirically researched in the academic setting surrounding

students. Also, two potentially meaningful focus for both SAL and self-formation researchers emerged: the cross-cultural mobility and disciplinary knowledge.

6.4. Self-construction as learning outcome in higher education

According to the previous discussion about the SAL model, students are active agents in their learning processes. In higher education, student agents reflect on knowledge, pedagogies and curricula surrounding them as various resources for academic self-formation. The final section of this essay will inquire into the results of student learning in higher education from the SAL perspective and how they relate to the multiple/hybrid and continuous product of academic self-formation.

A desirable product of higher education in SAL is deep approaches to learning. It is almost normative to expect higher education to produce learners who adopt more deep approaches to learning that involves more meaningful and critical learning instead of just repeating knowledge (However, a systematic review on longitudinal SAL studies (Asikainen & Gijbels, 2017) reveals that higher education is often irrelevant with becoming a deep learner or even negatively related to deep learning but positively associated with surface approaches to learning, although a few studies found reduced surface learning during higher education. The mixed results can be interpreted as observable manifestations of multiplicity and hybridity of self-formation.

However, self-construction as an outcome of higher education is rejected in SAL researchers' dominant methodological choice. In particular, the almost exclusive way of investigating student learning by (1) using inventories (2) on a group-level (3) in pre- and post-test designs cannot capture the multiplicity, hybridity, and continuity of the outcome. Inventories such as Study Processes Questionnaire (Biggs, 1987) or Approaches to Studying Inventories (Entwistle & McCune, 2004) can only produce quantitative data about student learning. Based on a fixed set of questionnaires, student formation is evaluated as a linear development in fixed standards, dismissing its potential multiplicity. Meanwhile, large-scale survey research can only research group-level formation of the students and ignores individual differences in higher education. Investigation at group level often look for a pattern rather than multiplicity

and expects uniformity rather than hybridity. Similarly, the pre- and post-test design simply compares the beginning and end-point figures, assuming that there is one desirable destination to reach, as in adaptation theories.

For self-formation researchers, higher education as a place for inducing deep approaches might imply uniform, one-directional, and linear student development. For instance, findings of the longitudinal studies reviewed in Asikainen and Gijbels's (2017) paper are simply presented as the increase/decrease of deep/surface approaches, with symbols like "Surface – Deep +". The dichotomous, either-or approach in SAL is too narrow to encompass the transformative power of higher education as self-formation.

However, it should be noted that students' approaches to learning are not what originally theorised as outcome of higher education in SAL. First, as displayed in the integrated model of SAL (Figure 6.1), the end-product of student learning in higher education is the objective (e.g., GPA, employability) and subjective outcomes (e.g., self-set goals, self-concept), not the formation of deep learning approaches. Thus, a learning approach is not who the student is (the self), but what a student employs (the tool), according to the initial SAL theorists (Marton & Saljo, 1976; Biggs, 1978). For instance, Biggs (1993) avers that a learner cannot be defined by the approaches, stating that "there is no such thing as a deep learner; all one can identify is a student who is using an approach to learning in a particular context" (Case & Marshall, 2009, p. 15). Different approaches to learning are different forms of agency practice as explained earlier in this paper.

Based on the above points, previous research efforts to induce the development of deep learning can be reinterpreted as attempts to foster student agency, the capacity for self-formation. The three products of student learning in higher education can be identified in SAL: objective development of students, subjective self-construction, and self-forming capacity. It might be meaningful to take into account all three outcomes in conceptualising higher education as self-formation.

Essay 7. Reflexivity in learning as a cognitive process

In the previous essay, I explored the lines of inquiries about self-formation in the literature of Student Approaches to Learning (SAL) theories. The critical review of SAL tradition introduced a perspective of cognitive psychology into self-formation, but its implications were largely confined to the deep/surface dichotomy. The present essay aims to engage further with cognitive psychology, beyond the idea of deep-surface approach, but with the same focus on academic learning in self-formation.

7.1. Theories of learning in cognitive psychology

I chose to review two research programmes that investigate human cognitive systems in learning processes: Cognitive Load Theory (CLT; Sweller, 2011) and Executive Functions (EF) research (e.g., Miyake et al., 2000). The CLT and EFs theories are discussed together in this essay because they share key concepts and can complement each other in explaining what academic self-formation is.

Executive functions (EFs) research focuses on cognitive processes underlying goal-directed human behaviours that are orchestrated by neuro-activity of a brain part called the prefrontal cortex (Best & Miller, 2010). In compelling theories, EFs are generally defined as "control mechanisms that modulate the operation of various cognitive subprocesses and thereby regulate the dynamics of human cognition" (Miyake, 2000, p. 50). CLT similarly focuses on the human cognitive system, but with a specific aim to devise cognitively effective and efficient instructional design (Paas, Renkl & Sweller, 2004; Sweller, 1994) It proposes that there are two forms of human memory, long-term memory and working memory. The former is where information is stored in the form of schemas, whilst the latter is in charge of processing new information that requires certain amount of mental resource, or *cognitive load*.

Both CLT and EFs theories share the assumptions of the self-formation framework that is assumed to be (1) universal, (2) empirically researchable, and (3) distinctive in higher education. First, the impacts of EFs are researched across lifespan and different aspects of human life (e.g., mental health, school success, quality of life, job success, family relationships; Diamond, 2013). CLT, by contrast, has established its

research programme within educational and training contexts. Although, its model of human cognitive architecture derived from evolutionary psychology (Sweller, 2022) that can apply to all human beings under the influence of biological evolution principles. Second, since CLT was initially put forward in the early 1980s, the theory has been modified and elaborated with empirical data generated from randomised, controlled trials (Sweller, 2022). Meanwhile, EFs theories also have their historical roots in empirical evidence specifically from neuropsychological studies of patients with frontal lobe damage. Based on the observation of the patients' severe deficits in their self-control or and regulation, EFs were theorised with the aid of neuroscience techniques that assess the neural response underlying EF (Best & Miller, 2010). The third assumption of self-formation, the distinctiveness of higher education, is not evident in either CLT or EFs, but combining them can provide implications about students in higher education. CLT is a theory specifically for education and training, but it does not differentiate higher education from other forms of education. However, what EFs focus on such as "setting goals; self-monitoring; inhabiting inappropriate responses; and engaging in well-planned, flexible, future-oriented behaviour" (Garner, 2009, p. 407) might be more easily observed among university students who choose their own pathways.

When integrated, CLT and EFs appear to agree with all the three assumptions underpinning the self-formation framework. Thus, CLT and EFs are judged to be appropriate to offer useful information about academic self-formation in higher education from the perspective of cognitive psychology.

7.2. Reflexive agency in cognitive psychology

In self-formation, students are hypothesised to be strong agents. Student agency is sub-hypothesised to manifest in students' adoption of personal projects, their proactive relationship with their given environments, and their engagement in reflexive, internal conversation about the self (Lee, 2021). This section revisits these sub-hypotheses by drawing on CLT and EFs.

The EFs refer to "goal-directed neurocognitive processes", theorised to be activated by individuals' self-set goals, which then enable people to regulate themselves (Garner, 2009, p. 407). Adopting personal projects require EFs that enable people to envision things they cannot see and when they make choice and control over who they are and what they do (Diamond, 2013). Meanwhile, as the primal focus of CLT research is "to help learners to accumulate the large stores of … knowledge and skills in long-term memory for later use" (Kirschner et al., 2018, p. 217), individual students' personal projects are less discussed. Nevertheless, some CLT researchers suggest that students' personal interest offsets the influence of limited working memory capacity on learning outcome, allowing more mental resources, which explains highly motivated students' greater persistence and effort-investment than uninterested learners (Schnotz et al., 2009). If cognitive functions and resources are dependent on personal projects, students' learning in higher education, which requires both effective cognitive functions and sufficient cognitive resources, would also be based on students' own projects.

The relationship between self and environment in the selected theories can be elaborated by their shared key concept: *working memory*. Working memory in CLT refers to a mental space where cognitive load is imposed on when novel information is processed in it to construct knowledge in long-term memory. As a resource for EFs, working memory's role in human cognition is to support holding, monitoring, and coding incoming information and then updating old, no longer appropriate information with newer, more relevant information. Whereas long-term memory stores information from past experiences and functions as a conditioning factor for the present self, the reflexive power of working memory allows a space for agency freedom.

I argue that working memory is a cognitive form of reflexivity that enables humans to interact with the environment. Students can use working memory to decide how to react and how to behave "rather than being unthinking creatures of habits" (Diamond, 2013, p. 137). Therefore, these theories can articulate how students transform themselves by reflexively interacting with the environment by virtue of their cognitive ability called working memory.

Learners can consciously monitor their cognitive activities in terms of the mental efforts required for carrying out a learning task. The most commonly used measure of cognitive load is the mental effort ratings introduced by Paas (1992), which consists of a single item asking participants to indicate how much effort they devoted to a certain task on a scale. Similarly, EFs are premised on reflexive agency in human nature: the main functions of the EFs enable learners to inhibit oneself from distraction to stay focused, to shift one's own focus between multiple learning tasks, and finally to revise oneself in the process of updating working memory (Miyake et al., 2000; Diamond, 2013; Best & Miller, 2010), which all involve monitoring and regulating the self. Some researchers, thus, have addressed EFs in discussions of self-regulated or metacognitive learning (e.g., Garner, 2009). It seems that cognitive functioning is dependent on reflexive agency. If this inference is correct, higher education experience would involve applying reflexivity in managing mental resources for academic learning and regulating oneself throughout the learning processes.

7.3. Resources for cognitive self-formation

As both CLT and EFs are basically theories of 'how information is processed', they provide more implications for this section about how externally given resources are processed during students' self-formation.

In Essay 5, mobility was foregrounded as a key resource for self-formation. Mobility often brings novelty or new information in human cognitive processes. Facing novel information stimulates cognitive activities according to CLT and EFs. According to CLT, novel information should be processed by using working memory in order to be reorganised and transferred into long-term memory (Sweller, 1994). Drawing upon evolutionary psychology, CLT researchers assume that humans have evolved to have this information processing system to survive in an inevitably variable environment (Van Merrienboer & Sweller, 2005). EFs are found to be activated when learning something new or engaging in selection and conflict resolution, which are often produced by mobility (Bialystok, 2011). The more transitional, novel experiences one is exposed to, the more active working memory and EFs are required. For these cognitive functions are premised on reflexive agency, it can be inferred that mobility in

higher education triggers student agency and reflexivity by facilitating human cognitive systems.

However, the excessive extent of unexpected novelty seems to hinder academic learning in terms of the cognitive effectiveness and efficiency. Working memory is theorised to have limited capacity in terms of the amount of new information it can organise at the same time. CLT researchers distinguishes *intrinsic cognitive load* that is related to the inherent complexity of the given information (e.g., difficulty of the task itself) from *extraneous cognitive load* caused by additional information units that are unrelated to the learning task (e.g., the way in which the information is delivered). CLT focuses on reducing the extraneous load and to optimise the introduction of the intrinsic load by changing the instructional techniques (According to this view, novelty or changes that are not necessarily related to the learning content (e.g., language, learning culture, pedagogic differences for international students) might cause excessive extraneous cognitive load and limit students' engagement with the learning content itself.

Two contrasting effects of mobility were identified in this section. Novel information brought by mobility can sometimes act as constraints for students' immersion in knowledge. However, it can also trigger the activation of reflexive and agential cognitive processes. Combining these two perspectives provides a shifted paradigm for the adaptation difficulties that are frequently observed among international students. Cultural, social, and academic mobility facing international students takes up their mental resources and probably impedes their performance, which is not necessarily experienced by their domestic counterparts. However, mobile students might act more agentially, reflexively, and in a more self-forming way with their heightened cognitive activities than local students do.

Provided that immersion in disciplinary knowledge plays a significant role in academic self-formation, self-formation through academic learning can be either optimised or interfered by the extraneous cognitive load embedded in a certain learning task.

7.4. Product of cognitive self-formation in academic learning

Although one's cognitive structure cannot be conceived of as the whole 'self' in academic self-formation, the outcome of knowledge processing in higher education might provide partial but useful insights concerning multiplicity or hybridity, the product of academic self-formation. CLT research implies that the desirable result of cognitively efficient and effective learning is expertise in a specific domain. Building expertise is a process of combining simple ideas in working memory with more complex ones in long-term memory, which is multiple and hybrid construction of knowledge (Van Merrienboer & Sweller, 2005). In other words, "expertising" the self involves multiplying and hybridising the long-term memory of the self via knowledge acquisition. CLT suggests two manners in which human acquire new knowledge: "we can obtain information directly from another human by instruction or we can generate new information by a process of problem solving" (Merrienboer & Sweller, 2005, p. 154). The first way of acquiring information by borrowing from others is more pertinent to multiplicity, while the second way of generating knowledge by oneself by randomly mutating possible existing information elements is more similar to hybridity that involves generating new knowledge.

In order to link the multiplicity/hybridity in knowledge construction to the multiple/hybrid self-formation, it should be firstly answered if transformation of long-term memory is academic self-formation, at least partially. This question can be addressed by exploring (1) how long-term memory affects people and (2) whether multiple/hybrid construction of knowledge is agentic. For the first issue, by neuroimaging human brains, EFs researchers visualised the unseen cognitive impact of long-term memory on the self. They revealed that experts were found to recruit EFs less (as signalled by brain activity in prefrontal cortex) than novice when performing certain skills (e.g. Chein & Schneider 2005). This shows that one needs to consciously and agentially make efforts to learn a knowledge set and once the new information is integrated into the long-term memory, it becomes the "second nature" of the self that does not require mental resources (Diamond, 2013, p. 153). Expertise is not determined by predisposed working memory capacity, but it is determined by the complex knowledge stored in long-term memory that should be actively acquired by the self. These

accounts all point to the self-forming role of long-term memory and strong agency involved in multiple/hybrid knowledge construction.

Multilingualism, for example, was found to lead "to changes in the configuration of the executive control network" and "more efficient performance on executive control tasks" (Bialystok, 2011, p. 232). This in turn suggests that multiplicity in language is conditioned by high-functioning EFs and transformability of the brain structure. Indeed, EFs theories provide the cognitive foundations that make multiple or hybrid self-formation possible. The three frequently postulated executive functions (shifting, updating, and inhibition) enable humans to process multiple information simultaneously and hybridise new knowledge. For instance, to deal with multiple tasks at the same time, one should be able to disengage with an irrelevant task and then to actively engage with a relevant task as well as to revise working memory in a more appropriate way (Miyake et al., 2000, p. 57). EFs development, therefore, "consists of both progressive and regressive changes … [that] may influence how the neural response changes over time" (Best & Miller, 2010, p. 1642). Such progressive and regressive cognitive system seems to enable the multiplicity and hybridity as products of academic self-formation; some parts of the multiplied self are activated while the other parts of the self are inhibited, during which a new version of the self is hybridised. Without such cognitive capacities, self-formation would be fixed, stagnant reproduction of the same old self.

Conclusion

Student development theories generally investigate how college affects student formation (Pascarella & Terenzini, 2005). The lack of student agency in these theories led me to explore psychological theories that explain human behaviour (including student self-formation) based on human agency. While socio-cognitive theory (Bandura, 1997) helps unravel agentic causality of human behaviour in relation to social structure, self-determination theory (Ryan & Deci, 2000) elaborates agency embedded human motivation that is inherently agential but restrained or fostered by the environmental impact. Building upon the concept of agency entrenched in human behaviour and motivation, I narrowed down my focus to student agency for academic

learning. Conceptual investigation of student learning in higher education with the lens of SAL research proved the potential of cognitive psychology in elaborating academic self-formation, but only to the extent that the deep/surface dichotomy allows. Remaining my focus on student learning and cognitive psychology, I turned to theories of the human cognitive system in this essay with the hope of articulating how academic self-formation is orchestrated by knowledge learning or cognitive information processing.

The current essay showed that cognitive systems such as working memory or EFs are agential in nature and built to support human agency. The implications emerged about resources for, and products of self-formation all included knowledge as a critical factor. However, similar to SAL tradition, both CLT and EFs delve into 'how' knowledge is processed without discussing 'what' this knowledge is. Academic self-formation is not a theory of the micro-psychological process of students' experiences in higher education but aims to conceptualise higher education at a broader, social, and macro-level. And it is different forms of knowledge that make higher education transformational and meaningful not only on cognitive or psychological but also on social, political, and economic level (Marginson, 2014; 2023; Ashwin, 2014). Therefore, the next essay will explore engagement with knowledge and academic self-formation based on sociological perspectives.

Essay 8. Self-formation through engagement with knowledge

The previous essay illustrated the critical role of information in academic self-formation on the cognitive level. However, cognitive psychology focuses on how to teach and learn more efficiently and effectively, thereby limiting to grasp of the transformational impact of disciplinary knowledge beyond the quantity/quality of the acquired knowledge. By including the discussion of knowledge, the current paper will now turn to what knowledge means in higher education to elaborate on what academic self-formation is.

8.1. Research on knowledge and student agency

Although there is a lack of one grand, overarching theory to conceptualise the impact of academic knowledge on student formation, there is a research programme that has investigated the changing relations between student and disciplinary knowledge in higher education. This line of research has been led by researchers in the UK (Paul Ashwin) and South Africa (Jenny Case and Jane McArthur), who collaborate to build the research programme on knowledge, curriculum, and student agency.

Around the topic, each scholar has slightly different intersts and has conducted separate research projects as well. Ashwin's research centres on the value of knowledge in higher education and argues for more focus on "the relations between knowledge, curriculum, teaching and learning, assessment and the understandings that student develop through their engagement with higher education programmes" (Ashwin, 2014, p. 123). Case's (2013) work, represented by her book Researching Student Learning in Higher Education, is centred on the argument: "the engagement with complex and specialised knowledge is a key to the development of graduateness" (Case & Marshall, 2016, p. 820). Meanwhile, with a focus on assessment in higher education, McArthur (2021) establishes her research around the nature of knowledge and social justice in higher education with students as active participants in knowledge engagement. These scholars similarly build their research on sociological theories (i.e., Archer, 2012; Bernstein, 2000; Sen, 2000).

The research programme shares with academic self-formation its core assumptions about the researched phenomenon being universal, empirically researchable, and distinctive in higher education. First, engagement with knowledge is assumed to be universal as implicated by the multiple studies conducted across various contexts (e.g., types of institutions, disciplines, and countries). The adoption of sociological theories also implies that knowledge engagement and individual formation are not confined to a specific group of people but applied to broader members of society. Secondly, the literature has been established on abundant empirical data, mostly collected as students' own accounts, which shows that student formation through immersion in academic knowledge is an empirically researchable phenomenon. Finally, the distinctiveness of higher education is straightforward in this research strand. The sociological theories that are central to the reviewed works distinguish university-level knowledge from others. Although knowledge can be acquired in other forms of educational institutions, higher education is central to gaining access to 'powerful' knowledge according to Bernstein's (2000) distinction between everyday knowledge and specialised knowledge (Young, 2007). Similarly in Sen's (2000) capability approach, basic knowledge such as literacy is seen insufficient for human development and capability building that require university-level education (Nussbaum, 2000).

Thus, the research programme on knowledge in higher education is built on the same assumptions of self-formation, thereby being expected to provide useful insights for articulating what academic self-formation is. In the following sections, I will introduce how the conditions, resources and product of academic self-formation can elaborate on and be elaborated on by previous findings about: the transformative relations between knowledge and students (Ashwin, 2014, 2020; Ashwin, Abbas, & McLean, 2014; Ashwin, Abbas, & McLean, 2016; McLean, Abbas, & Ashwin, 2017), student agency and engagement with knowledge in universities (Case, 2013, 2015; Case & Marshall, 2016; Case, Marshall, McKenna, & Disaapele, 2018), and social justice within student formation through disciplinary knowledge (McArthur, 2020, 2021).

8.2. The relationship between knowledge and student agency

In Sen's (2000) philosophy, human agency centres on the task for individuals "to identify what matters to them and to be able to live a life in accordance with what they value" (Case et al., 2018, p. 127). Such capabilities to recognise and realise personal projects can be enhanced through specialised, complex knowledge (Sen, 2000; Nussbaum, 2000). Based on empirical data obtained from longitudinal research on Engineering students in a South African university, Case et al. (2018) show that immersion in knowledge enabled students to achieve higher employability and economic development, which provided them with more choices to live a life aligned with their personal projects. The authors emphasise what students value for themselves, rejecting education as "medicine" used by teachers to bring about certain outcomes within students (p. 646).

Student agency during knowledge engagement is not always recognised. Pointing out the distinctive social and cultural characteristics of disciplines (e.g., Becher & Trowler, 2001; Biglan, 1973), students are often portrayed as newcomers who have to be integrated into the disciplinary culture in order to be accepted into the community (Ylijoki, 2000). This socialisation viewpoint places its primal focus on the culture of each discipline as a ruler for evaluating individual behaviours and determining the social identity of the members, which is contrasting to the idea of personal projects in which reference for achievement is produced by the self. It also pictures students as problematic rather than agentic, who have to be committed to the 'project' of disciplines, otherwise will be "lost, drifting in an identity crisis" (p. 341). It seems that student agents are merely acculturating novices who reproduce the academic tribe.

Meanwhile, previous research that foregrounds students' own perspectives and accounts suggests that students develop a particular way of understanding the self and world through engagement with knowledge (Ashwin et al., 2014; Baillie, Bowden, & Meyer, 2013; Bowden & Marton, 2003). By tracing students' accounts of sociology over the course of an undergraduate programme, Ashwin et al. (2014) find that students' accounts of knowledge develop from "an undifferentiated whole which is defined by the students' interest", "pre-defined parts which are separate from the

student", to "a relational whole which includes the students", to "a partial relational whole which includes the student" (p. 225). This finding was corroborated by a more recent study on students' changing accounts of chemistry (Ashwin et al., 2022). Such a shift from an undifferentiated and separated relationship between students and knowledge, toward a more relational and inclusive link implies students' gradual immersion in knowledge, which makes students see the self and the world differently through the lens of disciplinary knowledge.

The development of more intricate and personal webs between the self, knowledge, and world necessitates students' reflexive deliberation on the disciplinary knowledge in light of the self, and vice versa. Ashwin et al. (2014) elaborate that knowledge engagement alone cannot drive transformational experiences in higher education, as opposed to what socialisation research envisages. The gradual immersion in knowledge requires not only the provision of opportunities to encounter disciplinary knowledge but also students' own active engagement with the given knowledge to employ it as a resource for academic self-formation. What makes disciplinary knowledge transformational and influential seems to be students' reflexive agency that mediates their personal projects and academic knowledge.

The reflexive and immersive engagement with knowledge seems to empower students to be able to transform themselves and society. Bernstein (2000) speculates that higher education is an official field for the distribution and acquisition of knowledge and power, which empowers individuals to reproduce or disturb social inequalities. For him, different forms of knowledge distribute different forms of human consciousness that shape "who we are, who we think we can become and what we think we can do" (McLean et al., 2013, p. 265). Similar to Archer's (2012) reflexivity, disciplinary consciousness processes the constraints and enablement between the inner self and the outer system. Its major role is to determine the capacity to recognise and realise an alternative inner self/outer world relationship (Bernstein, 2000). From this perspective, disciplinary knowledge distributes human consciousness, and human consciousness conditions the way through which students reflexively understand themselves and the world. This suggests that the development of students' reflexivity is shaped by academic knowledge.

However, such reflexive agency acquired during engagement with knowledge has mostly been discussed regarding how education can have morphogenetic impacts on the existing social orders, rather than how individuals seek for such impact by themselves. Exploring the interplay between structure and agency in higher education, Case and Marshall (2015) illustrate that students' success and failure in higher education are not attributed to the possession or lack of resources, but rather traced back to the reflexive interaction between structural and agential mechanisms that is mediated by higher education. Other researchers identify proactive agency transforming given structure, particularly by disrupting social inequalities (McLean, Abbas, & Ashwin, 2017) or bringing greater justice to society (McArthur, 2021). To elaborate on the phenomenon of academic self-formation, the disruptive power of academic knowledge should be seen as students' creative agency in re-establishing structure through their self-formation processes.

8.3. Knowledge as a key resource for academic self-formation

The previous section illuminates student agency during students' engagement with knowledge. Highlighting agency of knowers aligns with the social constructivist approach to knowledge, which conceptualises knowledge as 'knowing' of a specific knower because it is not just out there to be acquired as it is (Shay, 2008). However, this approach is often criticised for its overemphasis on *knowers* over *knowledge* itself. This section moves on to the characteristics of knowledge apart from the agency of student-knowers, as a resource for self-formation.

According to Maton's (2013) conceptualisation of knowledge, some knowledge has more epistemic structures, whilst others have more social structures. The former knowledge structure values "what I know" and "how I know what I know", whereas the latter structure foregrounds "who I am" and "what dispositions I possess" (Maton, 2013). According to this analysis, disciplines with knowledge structures of strong epistemic relations (e.g., STEM) might be less influenced by interactional, cultural, and contextual factors than knowledge structures with strong social relations (e.g., social science). Such distinctive features of disciplinary knowledge might mediate the students' engagement with knowledge.

If people are born within conditioning structure perceived as signs of possibilities and impossibilities (Archer, 2012; McLean et al., 2013), academic knowledge enables students to imagine "alternative possibilities" (Bernstein, 2000, p. 30). Students are stimulated to imagine an alternative future when they encounter the gap between everyday knowledge acquired in local contexts (horizontal discourse) and specialised knowledge acquired in formal education (vertical discourse): *the discursive gap* (Bernstein, 2000). The discursive gap is suggested to be a site for alternative realities that used to be unthinkable and impossible, which is similar to the site in which cross-cultural mobility places individuals. The concept can be easily applied to students' expanded horizons as a result of university education, which is what Bernstein (2000) calls "an experience of boundary crossing" (p. 38-39). McLean et al. (2013) support this proposition by identifying the experience of struggles between new, abstract disciplinary knowledge, and previously held mundane knowledge about everyday life during students' development of their specialised identities. This explains that students' engagement with disciplinary knowledge offers resources and capabilities for recognising new possibilities and the new self.

Disciplinary knowledge needs to be communicated in higher education for it is to be produced, transmitted, and transformed. Bernstein (2000) distinguished the three ways of communicating specialised knowledge in the form of pedagogies: the field of knowledge production, the field of knowledge transmission, and the field of knowledge reproduction. Throughout these different pedagogic devices, knowledge is transmitted from a research context to higher education curricula, to the understandings that students develop of this knowledge. According to Ashwin (2014):

> "Focusing on the relations between knowledge-as-research, knowledge-as-curriculum and knowledge-as-student-understanding offers a powerful way of gaining a sense of the transformative power of higher education because it brings into focus the ways, in which higher education transforms students' understanding and identities" (p. 13).

Highlighting students' role as agents in the formation of themselves, McArthur (2021) points out what students do in the process of knowledge transformation: "To move

towards greater social justice, students must understand these processes of transformation" between different modes of knowledge (p. 12). Only to the extent that they understand how knowledge is transformed by different stages of communication (production, recontextualisation, and reproduction), students can engage profoundly with transformative knowledge as a part of their self-formation process.

8.4. Product of self-formation through knowledge engagement

The main features of the product of self-formation are hypothesised to be multiplicity, hybridity, continuity, and irregularity (Lee, 2021). These points have been explored in previous essays through the lens of psychological theories, but what has not been examined yet is the product of self-formation that is specifically academic. Throughout this essay so far, immersion in knowledge has proved to be a critical activity within higher education for students' academic self-formation. Thus, the product of knowledge engagement can illuminate what the outcome of academic self-formation is.

As already explained, knowledge transforms in higher education, according to Bernstein's (2000) idea of a pedagogic device. Ashwin (2014) avers that such transformation of knowledge then transforms what students know and who they are by developing a "disciplinary identity" through the process of evaluation that offers criteria of specialised consciousness. McArthur (2021) further links the transformation of knowledge and students with greater justice in society. The three-level transformation of knowledge, students, and society is echoed by McLean et al.'s (2013) analysis of students' perceptions of sociological knowledge; students similarly constructed a specialised sociological identity that consists of individual, social and political levels. Their findings were summarised as:

> "Sociology-based social science knowledge has made students more confident and enlightened about themselves and others (individual enhancement); located them in a group of people who have specialised understanding about how individuals and society interact (social inclusion); and will be of use to their projected future selves – in or out of

employment – to improve the social world (political participation)"
(McLean et al., 2013, p. 276).

The authors remark that immersion in sociological knowledge shapes a particular disciplinary identity that can benefit not only individual students by expanding their horizons and placing them within a specialised community, but also society by having more members with more capabilities to build a better society. The multidimensionality in the formation of students in relation to knowledge manifests the hybridity/multiplicity of academic self-formation.

The idea of disciplinary identities, with individual, social, and political aspects, raises a question regarding the product of academic self-formation. Developing a disciplinary identity seems to predetermine what is a desirable student formation from the perspective of others, not of the student self. Accordingly, students are often pictured as the objects of transformation rather than the subjects of it, and the student formation was more attributed to higher education and knowledge, rather than to the students themselves.

Research on social justice as a product of higher education is an example of putting others' goals before the self's in student formation through engagement with knowledge. In McArthur's (2021) study on how students conceptualise their own achievement in relation to knowledge, she found that some students saw achievements as "having gained a piece of knowledge", whilst others see it as "the practical application of the knowledge learned" (p. 16). There were also a few who projected further and placed value in the "practical application of knowledge learned in the social sphere for the social good" (p. 16). Among these different beliefs about achievement, the author focuses on fostering the last one, arguing that using knowledge for social good is true personal fulfilment. Underlying this perspective, students are assumed to be "able to achieve individual wellbeing through their contribution to social wellbeing" (McArthur, 2021, p. 19).

Although focusing on social justice as a product of student formation through knowledge empowers students as agents of changing society and expands the discussion of knowledge from the individual and cognitive level to include the social

sphere, it is not necessarily aligned with academic self-formation. In attempts to add social aspects to the economic sphere of individual achievement in higher education, McArthur's (2021) states that the "economic sphere should not be reduced to simply what employers want and the economic sphere cannot be disarticulated from the social … [because] personal fulfilment does not come in being a passive and compliant worker" (p. 20). The same logic can be adpted to argue for self-formation in addition to social formation as an outcome of knowledge engagement; student formation in the social justice approach is reduced to simply what society wants and deliberate students as a passive and compliant worker of society, whilst the personal fulfilment cannot be disarticulated from the agentic self. Thus, social justice through knowledge engagement can only be just when it is the outcome of students' academic self-formation.

The outcome of knowledge engagement in higher education appears to be the formation of multi-layered and hybrid disciplinary identities. However, this does not necessarily indicate the product of student self-formation because previous research focuses more on the work of knowledge on the self or the work of the self on society. Transformation of knowledge, students, and society can all be integrated as the product of higher education as academic self-formation.

Conclusion

Psychological theories about student learning in higher education mainly focus on how and why students learn or how much and how well students learn, often ignoring the discussion of what they learn in higher education. As an endeavour to address this gap, I have examined the role of knowledge in this essay based on the sociologists' perspective.

Academic knowledge permeates through the condition, resources, and product of self-formation. As knowledge enables student agency and agency enables knowledge engagement, as shown in this essay, knowledge would be another necessary condition for academic self-formation with agency. Various resources seem to collaborate with disciplinary knowledge to restrain or facilitate the process of academic

self-formation. I also found that the product of academic self-formation through knowledge engagement involves the transformation of knowledge, students, and society.

These findings expand the conceptualisation of academic self-formation, adding to the previous psychological discussions. While psychologists did not necessarily distinguish disciplinary knowledge from general information, sociologists reviewed in this essay specifically focus on field knowledge. This shows how knowledge is understood discrepantly in the two fields. Instead of regarding this as an incompatibility between the two disciplines and favouring one over the other, I will focus on the opportunity to integrate these separate discourses around the same topic. This approach will allow for the subsequent analysis of the conceptual data to offer a more comprehensive and hybrid elaboration of academic self-formation.

Essay 9. Power of knowledge for student self-formation

In the previous essay, I reviewed empirical research on the transformative power of academic knowledge in higher education. I presented how academic knowledge is embedded in the condition, resources, and products of student self-formation, which called for a deeper deliberation of what makes knowledge transformative. In order to avoid repeating how each hypothesis of self-formation is related to knowledge, this essay will take an explorative approach.
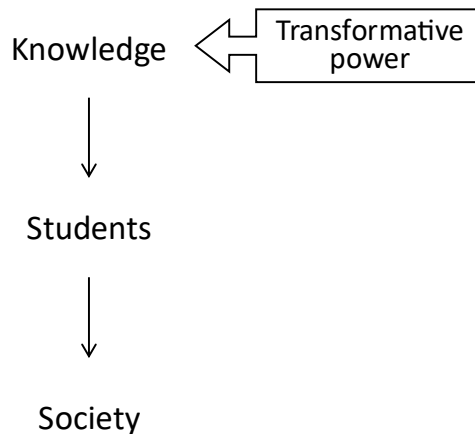
9.1. Students, knowledge, and society

The previous essay (Essay 8) reveals a shared belief underlying empirical research on student-knowledge relations in higher education. That is: academic knowledge has transformational power, and it determines student formation that is often aimed at social formation. These perspectives should be subjected to closer scrutiny if higher education is to be conceptualised as academic self-formation.

The prevalent understanding of knowledge as powerful and transformational seems to be derived from the power it holds for itself and the power it exerts on societies and individuals. There are three possible origins for the belief about the power of knowledge in student formation. First, this idea might be rooted in traditional educational thoughts such as Confucianism, Bildung and Newman's ideas that commonly see education as an induction into societies. Knowledge in this sense is pre-given values that hold society together. Second, knowledge is believed to be powerful based on credentialism that highlights the value of knowledge in its function in enhancing certain figures (e.g., employability, earning power, grades). Knowledge brings individuals capital, power, and status. Third, knowledge is theorised to be powerful inherently (Young, 2007; Bernstein, 2000). The power of knowledge is given.

In the previous essay, students, knowledge, and society emerge as three closely interrelated factors in the process of academic self-formation. Among these, knowledge is seen as the main power holder for student formation and following social construction as illustrated in Figure 9.1. For example, knowledge is what makes higher education transformational (Ashwin, 2014; 2020) or what makes students more

capable of transforming the self and society (Case et al., 2018; McArthur, 2020). Without neglecting the power of knowledge, however, it is not the focus of self-formation to explore the idea of knowledge as a determining subject of student formation. Given that students are individual agents, and society consists of collective agents, knowledge is not what practices agency, but what people practice agency with.

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               Transformative
Knowledge  <      power

   |
   v

 Students

   |
   v

 Society
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Figure 9.1 Knowledge as a power holder for student and social formation

The present essay aims to re-establish the hierarchical interrelation implied between knowledge, students, and society in an attempt to shift the focus toward the role of students in their development. This aim can be achieved by looking into the following questions: (1) What kind of power does knowledge bring about for student self-formation? (2) If not a subject of student formation, what then is the role of knowledge? (3) What does this role and power of knowledge say about higher education as academic self-formation? The first question is addressed by examining various theoretical accounts of knowledge and its power, centring on Young's powerful knowledge concept. For the second question, I draw on Vygotsky's sociocultural theory that places human formation in social contexts, which provides a rich understanding of the knowledge impact on students. The last question is explored by synthesising both Young's and Vygotsky's perspectives.

9.2. The transformative power of knowledge

While empirical research on knowledge and students in higher education affirms the transformative power of knowledge, theories of knowledge can explain what kind of power it holds. Prior to that, we need to clarify what knowledge refers to in academic self-formation.

9.2.1. What is knowledge in academic self-formation?

In higher education, students encounter different kinds of knowledge. Can the knowledge about where to find bathrooms on a university campus foster self-formation? How is this different from disciplinary knowledge?

There are various types of knowledge, as seen in Aristotle's ancient idea of five sorts of knowledge or Ryle's (2009) famous distinction between 'knowing how' and 'knowing that'. However, the one that is most relevant to self-formation is academic knowledge that is separated from non-academic, practical, common-sense, and everyday knowledge. Using different terms, researchers distinguish between specialised academic knowledge that can only be transmitted through education, and non-academic, common-sense knowledge that is automatically and naturally obtained in everyday practices. For example, Cognitive Load Theory (Sweller, 2011) separates 'primary knowledge' that humans are evolved to acquire automatically from 'secondary knowledge' that demands both education and mental efforts to be learnt. The mental effort or cognitive load as a manifestation of learning academic knowledge is similarly underscored by Vygotsky. For him, it is "reflexive awareness" that features academic, conceptual knowledge, when everyday concepts are used "while not being aware of doing so" (Young, 2007, p. 51).

In addition to its link with reflexive agency on the individual cognitive level, academic knowledge is also featured by its power to confer people agency over the social world. Durkheim regards scientific knowledge that is for the 'sacred' as more powerful than the everyday knowledge for the 'profane', because sacred knowledge has distinctive connecting capabilities. These capabilities allow (a) connecting people to create

communities with shared values, and also (b) connecting between causes and effects to explain once-unexplained external phenomena (Young, 2007).

Based on these accounts, academic knowledge in self-formation refers to knowledge that is taught in formal education, requires reflexive awareness to learn, is shared by communities, and provides scientific explanations for social or natural phenomena. All of these apply to the characteristics of disciplinary knowledge, a specific field/body of knowledge students choose to study at the university level.

9.2.2. Powerful knowledge: for students and society

The power of knowledge is discussed in various fields by political, economic, sociological, and curriculum theorists (Muller & Young, 2019). However, they seem to take for granted the power within knowledge, regardless of students' active engagement with the knowledge. From the political perspective, for instance, knowledge contains political power that enables some agents to dominate others (e.g., Castells, 2009; Lukes, 2004). In economic terms, knowledge is individual assets and investments that possess the power to secure some advantage over others (e.g., Bourdieu, 2018). For sociologists, knowledge is a collective goods and shared values that are powerful in forming societies and meeting the demands of the societies (e.g., Parsons, 1963). Curriculum theorists contrastingly emphasise the importance of students' reflexivity in the power of knowledge, which can be enhanced by the appropriate curriculum (e.g., Ryle, 2009; Schmidt, Wang, & McKnight, 2005). Nonetheless, knowledge is still viewed to serve political, social, economic, and teacher' projects, excluding students' personal projects. In these views, the power of knowledge is subjected to society, and students are reduced to mediator in the service of knowledge for social projects (Figure 9.2).
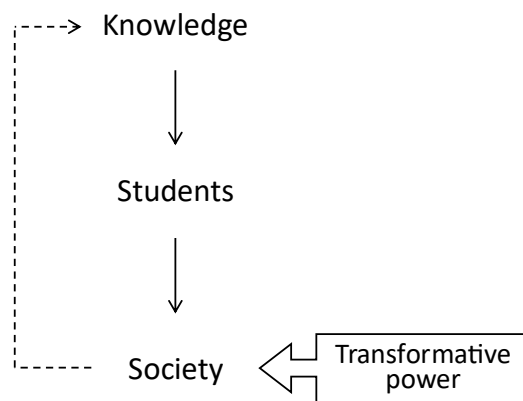
Figure 9.2 Knowledge in the service of social power by using student as a mediator

Undermining student engagement is rather intentional in the discussion of knowledge and its power. For example, the concept of *powerful knowledge* was put forward by Young (2007), with the very aim of shifting the focus of education from 'knowers' to 'knowledge'. It is a widely adopted concept in empirical research on the transformative role of knowledge in higher education. The main idea underlying powerful knowledge is that the power of knowledge on its own should be distinguished from knowledge of the powerful, "as a handmaiden to power" (Muller & Young, 2019, p. 197; Young & Muller, 2013). Although its distancing from the power of knowers might lead to misconstruing students as non-agential recipients of knowledge (Eaglestone, 2020), its emphasis on the independent power of knowledge enables the investigation of the dispositional power embedded in knowledge as a resource for self-formation, separated from the power of society in Figure 9.2.

The power embedded in knowledge, neither reliant on student engagement nor guided by society's projects, can be divided into two types of power: 'power to' and 'power over' (Lukes, 2004; Muller & Young, 2019). Drawing on Lukes (2004), Muller and Young (2019) distinguish knowledge that confers *Potentia* (power to), an agent's capability to do something, from *Potestas* (power over), the agent's dominative power over another agent.

"Potestas is always deformative, it withdraws, excludes or deprives, it places X in Y's power, constraining X's choices, securing X's compliance; Potentia is productive or creative, it extends horizons, it imagines new futures. … It involves the capacity to achieve something of value. In this sense, highly specialised knowledge as produced by universities confers a very specialised capacity to its holders. (p. 201)"

'Power to' is agential, aligned with Sen and Nussbaum's capabilities (Lukes, 2004). Such potency is accessible through academic, disciplinary knowledge because knowledge creates "a site for alternative possibilities … for the unthinkable, the site of the impossible ... the site of the yet to be thought" (Bernstein, 2000). In other words, disciplines are transformative and powerful because they can empower knowers to transcend the present circumstances by imagining and generating "unpredictable possibilities" (Muller & Young, 2019). The imaginative reflexivity and capabilities to act with it are cardinal in student formation through engagement with knowledge.

No matter how transformational and powerful knowledge is, it is students who do the learning. If the power embedded in knowledge is not exercised by anyone, could knowledge be still regarded powerful? Following the logic of critical realism, even if the power in knowledge is 'real', it would be neither 'actual' nor 'empirical' if it is not activated by the knowers (Sayer, 1999). Student self-formation in higher education is subjected to powerful students, as well as powerful knowledge. Similarly, in their concluding remarks, Muller and Young (2019) suggested *Potential* as another dimension of power in knowledge, emphasising that possessing power cannot be equated to exercising it. Then, what would be the relationship between student agency and powerful knowledge in student self-formation?

9.3. The role of knowledge in academic self-formation

The previous section elucidated what kind of power is conveyed to students via academic knowledge. This section elaborates how. I will first look into how students engage with knowledge to establish the relationship between students and powerful

knowledge. Then I move on to the role of knowledge as a mediator in academic self-formation.

9.3.1. Student engagement with knowledge: Social Realist perspective

From the student side, students' active role in academic self-formation through their engagement with knowledge has already been discussed in previous essays drawing on learning theories and cognitive psychology. Questions that could not be addressed by the work of psychology are regarding knowledge engagement beyond the cognitive and individual levels. Psychological theories are sometimes criticised for being "asocial" (role of society), and also for ignoring "what students learn" (role of knowledge) with their overemphasis on "how they learn" and "why they learn" (role of students) (Case & Marshall, 2009). Thus, a new perspective is needed to understand students' engagement with knowledge, which considers not only the role of students but also the roles of structure and knowledge in it.

From the knowledge side, the impact of students on knowledge is acknowledged to varying extents. On the one extreme, positivists do not accept students' subjective influences on knowledge and reduce the students to passive recipients of knowledge. On the other extreme, social constructivists view knowledge as exclusively context- and learner-dependent, letting the knowledge slip away in the knower-centred perspective (Shay, 2008; Young, 2007). Both are erroneous as knowledge is neither an unchanging fact that is universal across various contexts/individuals, nor an ephemeral and unsubstantial variable. Empirical studies have shown that even in the same discipline, individual students develop subjective accounts of their disciplines and varying relations with knowledge (Ashwin et al., 2014). Knowledge also has an objective nature as can be obviously seen in disciplinary differences such as the professions of graduates; a discipline "constitutes a distinctive way of thinking about the world", or a frame of the human mind in Gardner's (2008) term (p.16). Hence, a perspective that can include both the impacts of knowledge and individual/context is required to inform students' engagement with knowledge that is both objective and subjective.

The gap in the links between students, social contexts, and knowledge can be provided with a valuable perspective from a social realist approach to knowledge (Young, 2007). The relationship between knowledge and knowers is dialectic in the social realist view as it regards knowledge as both subjective and objective. In this view, the transformative power belongs to both knowers and knowledge. This approach is derived from Young's (2007) comparison between Vygotskian and Durkheimian accounts of knowledge. Whilst Durkheim sees knowledge as a historically shared fact that establishes a society and connects individuals as a group, knowledge for Vygotsky is used for social relations but transforms during the process of individual development following the social relations. Durkheim highlights the function of knowledge that provides structure for individuals. Vygotsky focuses more on agentic practices of individuals in knowledge engagement. Linking the former approach to curriculum and the latter to pedagogy, Young (2007) suggests that both views should be considered in theorising knowledge.

Acknowledging both structure-focused and agency-focused knowledge, the social realist approach (a) incorporates both objectivity and subjectivity in knowledge and (b) places knowledge in between structure and agency. These points lead to the revision of the knowledge-society-student relationship. In Figure 9.3, students are not subjected to the top-down process of student formation as in Figures 9.1 and 9.2. Students are neither a mediator in the service of knowledge for society, but now separated from social power during their engagement with knowledge. Knowledge is both autonomous and inter-related, having both objective and subjective power. In between students and the social world, knowledge affects and is affected by individual agency and social structure. This in-betweenness of knowledge can be further elaborated by Vygotsky's Sociocultural theory.

<p style="text-align:center">Students ⟷ Knowledge ⟷ Society</p>

Figure 9.3 Dialectic relationship of knowledge with students and society

9.3.2. Mediating role of knowledge in self-formation: Vygotsky's perspective

The mediating role of knowledge in self-formation can be extended by applying Vygotsky's perspective. For him, individual formation is through mediated social relations. In his Sociocultural theory, the mechanism of "forming the individual" is through their relations with the world, thereby "through others we become ourselves" (Vygotsky, 1997, p. 105). Similar to Archer's (2000) theory of agency suggests reflexivity moderating between agency and structure, Vygotsky imagines a mediated relationship between the self and others. The means of establishing such social contacts is mediating artefacts such as tools or signs (e.g., language, symbols, writing, maps…). Academic knowledge can be one of these artefacts, particularly when it is viewed as a shared language that connects people by Durkheim.

Mediation operates on both the internal and external levels by using different functions of artefacts; while people use a tool to work on the external stimulus, they use a sign to work on one's reaction to the given stimulus. Powerful knowledge mediates the self-world relations as a tool to act upon the world, and as a sign to interpret the world and the self. Thus, students' engagement with knowledge might follow this bimodal process: on the social/external level and on the cognitive/internal level. Vygotsky (1997) explains human development by assigning order to these internal and external processes. He advocates that every human functioning "was formerly a social relation of two people" (p. 105) before it becomes a part of individual, internal conversation. This transition from external social relation to internal psychological formation indicates that knowledge is initially an "external sign" for social relation, but gradually individuated by the students, then becomes "an internal operation" (Vygotsky, 1997, p. 117). This might provide a theoretical explanation for the previous empirical findings about students' gradually more relational and inclusive accounts of disciplinary knowledge throughout higher education (Ashwin et al., 2014; Ashwin et al., 2022).

From this socially nested view of engagement with knowledge, it is incomplete to study either the social aspect of it (e.g., how knowledge confers social, economic power to the students) or the cognitive part of it (e.g., how knowledge is cognitively processed by learners). Similarly, students' academic self-formation on social and individual

levels should be understood not as separated but integrated processes. For instance, students' pursuit of intellectual interest in law, building self- and world-view on the law knowledge, and their drive for securing a high-paying job through, and presenting themselves to others as lawyers, all contribute to a hybrid new self.

It should be noted that human development in Vygotsky's theory does not endorse a simple internalisation/socialisation process, but advocates the self-navigated, reflexive stages. The external becoming the internal is not a passive subjection of individuals to external stimulus, as it seems, but rather a self-reflexive "mastery of one's own behaviour" (Vygotsky, 1997, p. 87). It is stated that:

> "… mastery of one's own behaviour assumes not a change in basic laws that control these phenomena, but subjection to them. We know that the basic law of behaviour is the law of stimulus-response; for this reason, we cannot master our behaviour in any other way except through appropriate stimulation. The key to mastery of behaviour is mastery of stimuli. Thus, mastery of behaviour is a mediated process that is always accomplished through certain auxiliary stimuli." (p. 87)

Vygotsky envisions human development as active self-formation. The above statement can be summarised as: (1) there is power or stimuli and (2) individuals subject the power to themselves with the aid of tools, in order to (3) bring about their own behavioural and psychological changes by using signs. This process of self-mastery transforms artefacts as well: from "a means of acting on others" to "the means of acting on oneself" (Vygotsky, 1997, p. 105). Thus, what enables students to master the self, to form themselves, is the 'transforming' artefacts. The transforming artefacts secure the ongoing process of self-formation, in which the internalised artefacts in turn affect the next cycle of external mediation.

Major artefacts for mediated social relations in higher education would also be major resources for student self-formation. Academic knowledge is a major communicative tool for discipline-based social relations in higher education. Students might actively immerse themselves in a specific body of knowledge as an artefact for subjecting the power embedded in knowledge to themselves, so that they can transform themselves

by actively internalising what they learn at universities. In this sense, knowledge can be redefined as mediating artefact that students use to reposition themselves in the world as a way to form themselves (see Figure 9.4). Thus, knowledge is a necessary but not a sufficient condition for academic self-formation, because its transformative power is not activated until students agentially subject it to themselves.

Knowledge
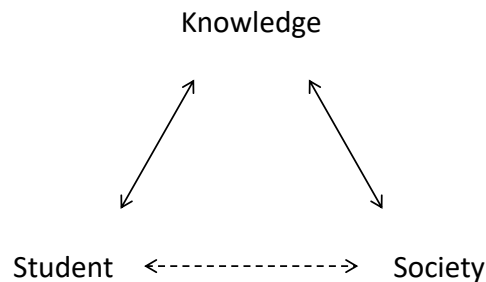
Student <---------------> Society

Figure 9.4 Knowledge as a mediator between student and society

9.4. Conceptualisation of academic self-formation

So far, this essay was devoted to answering the questions about the power and role of knowledge in academic self-formation, leading to the last closing question: what does this say about higher education as academic self-formation?

The two research strands, the sociocultural theory and powerful knowledge theory, were found to have respective weaknesses in fully explaining the process of academic self-formation, which can be addressed by the other. In Sociocultural theory, a space for imagination an alternative future in human development through social relations is unclear. By imagining social structure preceding to individual development, student self-formation in Vygotsky undermines the imaginative capacities to dream of 'other world' and 'other life' in Foucault (Ball 2017, p. 56). This makes it hard to explain students' creative powers of "resisting, repudiating, suspending, or circumventing structural and cultural tendencies" through their self-formation (Archer, 1995, p. 195). However, academic knowledge involves the power to imagine and generate

alternative possibilities. Thus, by taking the lens of powerful knowledge, socially nested self-formation via academic knowledge can involve students' imaginative capabilities.

However, the powerful knowledge approach alone cannot explain academic self-formation because it does not take into account the power exercised for the work on the self. This might be because the self and the social world are always separated in knowledge theories, and the power is always exerted by one over the other. This relational concept of power can incorporate negative freedom (power over) and positive freedom (power to), but not agency freedom that is critical for self-formation. Thus, there is a need to move the discussion of power of knowledge to "the relation of self to self and the constitution of oneself as subject" (Archer, 2000, p. 33). This can be achieved by Vygotsky's theory, in which engagement with powerful knowledge is one form of mediated social relations within a process of self-mastery. Students actively subject the power of knowledge to work on the self, not to fight for freedom against society.

Building on these two points about 'imaginative capabilities' from knowledge theories and 'power for the work on the self' in Sociocultural theory, I propose a tentative approach to conceptualise academic self-formation. As illustrated in Figure 9.5, what is integral to self-formation is the relationship between the current self and other possible selves. Self-formation formation is a process of becoming the imagined self, which is nested within different levels of social domains that students internalise into themselves. Just like knowledge mediates relations between the self and the social world, it mediates between the self and the possible other selves.
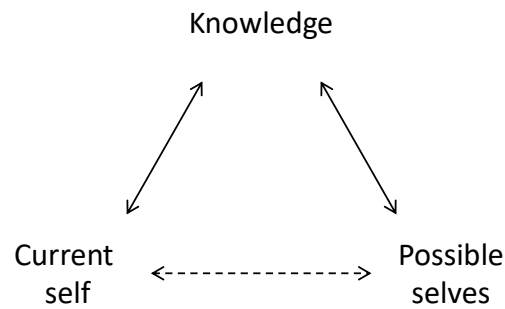
Figure 9.5 Academic self-formation mediated by knowledge

Although 'society' is removed from the model, it does not intend to impose a micro, individuals-focused, asocial lens on student self-formation. Instead, based on Vygotsky's theory of socially-nested human development, both the current and possible selves are the outcomes of self-formation process that hybridises the power of student agency and social structure through knowledge in higher education. In doing so, I aim to move beyond the question of 'who has more student-forming power between structure and agency', the barrier that keeps researchers from investigating the self-formation phenomenon itself.

Conclusion

Based on the multiple theoretical approaches to the transformative power of knowledge, I conclude the present essay with the following conjecture. Academic knowledge conveys power for imagining and generating alternative possibilities. Such knowledge is initially a tool that provides capabilities to act on the world then becomes a part of internal operation. This is a self-forming process because students subject the power of knowledge to master themselves. Higher education then is not a platform where students are transformed in a way that society, economists, politics, or teachers want. It provides imaginative reflexivity, personal projects, and the power to achieve the desired self. Higher education is what mediates the relationship between the current self and the new self via knowledge. As the self and social world are not

necessarily separated but integrated to create the hybrid self, higher education is also social formation. In short, higher education is ongoing academic self-formation through the interaction between the present self/world and the possible imaginative selves/worlds through academic knowledge.

Reference

Adler, P. S. (1975). The transitional experience: An alternative view of culture shock. *Journal of humanistic psychology*.

Ahearn, L. M. (2001). Language and agency. *Annual review of anthropology*, 109-137.

Akkerman, S. F., & Bakker, A. (2011). Boundary crossing and boundary objects. *Review of educational research, 81*(2), 132-169.

Akram, S. (2012). Fully Unconscious and Prone to Habit: The Characteristics of Agency in the Structure and Agency Dialectic. *Journal for the Theory of Social Behaviour, 43*(1), 45-65.

Alexander, J. C. (1988). *Action and its environments* New York Columbia University Press

Alheit, P., & Dausien, B. (2000). Die biographische Konstruktion der Wirklichkeit. überlegungen zur Biographizität des Sozialen. *Biographische sozialisation, 17*, 275-277.

Archer, M. (1995). *Realist social theory: The morphogenetic approach*: Cambridge university press.

Archer, M. S. (2000). *Being human: The problem of agency.* Cambridge University Press.

Archer, M. (2003). *Structure, agency and the internal conversation*: Cambridge University Press.

Archer, M. (2007). *Making our way through the world: Human reflexivity and social mobility*: Cambridge University Press.

Archer, M. (2008). The Internal Conversation: Mediating Between Structure and Agency: Full Research Report ESRC End of Award Report. *(Report No., RES-000-23-0349)*.

Archer, M. (2012). *The reflexive imperative in late modernity*: Cambridge University Press.

Ashwin, P. (2014). Knowledge, curriculum and student understanding in higher education. *Higher Education, 67*(2), 123-126. doi:10.1007/s10734-014-9715-3

Ashwin, P. (2020). *Transforming university education: a manifesto*: Bloomsbury Publishing.

Ashwin, P., Abbas, A., & McLean, M. (2014). How do students' accounts of sociology change over the course of their undergraduate degrees? *Higher Education, 67*(2), 219-234. doi:10.1007/s10734-013-9659-z

Ashwin, P., Abbas, A. H., & McLean, M. (2016). Conceptualising transformative undergraduate experiences:A phenomenographic exploration of students' personal projects. *British educational research journal, 42*(6), 962-977.

Ashwin, P., Blackie, M., Pitterson, N., & Smit, R. (2022). Undergraduate students' knowledge outcomes and how these relate to their educational experiences: a longitudinal study of chemistry in two countries. *Higher Education*, 1-16.

Asikainen, H., & Gijbels, D. (2017). Do students develop towards more deep approaches to learning during studies? A systematic review on the development of students' deep and surface approaches to learning in higher education. *Educational Psychology Review, 29*(2), 205-234.

Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of college student personnel, 25*(4), 297-308.

Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological review, 64*, 359–372.

Baillie, C., Bowden, J. A., & Meyer, J. H. (2013). Threshold capabilities: threshold concepts and knowledge capability linked through variation theory. *Higher Education, 65*(2), 227-246.

Ball, S. J. (2017). *Foucault as educator*: Springer.

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review, 84*(2), 191.

Bandura, A. (1986). Social foundations of thought and action : a social cognitive theory / Albert Bandura. *New Jersey: Prentice-Hall, 1986*.

Bandura, A. (1989). Human Agency in Social Cognitive Theory The Nature and Locus of Human Agency. *American Psychologist, 44*(9), 1175-1184.

Bandura, A. (1997). *Self-efficacy: the exercise of control*. New York.

Bandura, A. (2001). Social cognitive theory: An Agentic Perspective. *Annual Review of Psychology, 52*, 1-26. Retrieved from www.annualreviews.org

Bandura, A. (2018). Toward a Psychology of Human Agency: Pathways and Reflections. *Perspectives on Psychological Science, 13*(2), 130-136. doi:10.1177/1745691617699280

Bandura, A., Ross, D., & Ross, S. A. (1961). Transmission of aggression through imitation of aggressive models. *The Journal of Abnormal and Social Psychology, 63*(3), 575.

Bandura, A., Ross, D., & Ross, S. A. (1963). Imitation of film-mediated aggressive models. *The Journal of Abnormal and Social Psychology, 66*(1), 3.

Baxter Magolda, M. B. (1992). *Knowing and reasoning in college: Gender-related patterns in students' intellectual development*: Jossey-Bass.

Baxter Magolda, M. B. (2009). The activity of meaning making: A holistic perspective on college student development. *Journal of College Student Development, 50*(6), 621-639.

Becher, T., & Trowler, P. (2001). *Academic tribes and territories*: McGraw-Hill Education (UK).

Bennett, J. (1977). Transition shock: Putting culture shock in perspective. *International and intercultural communication annual, 4*, 45-52.

Bernstein, B. (2000). *Pedagogy, symbolic control, and identity*: Rowman & Littlefield Publishers.

Berry, J. W. (1997). Immigration, Acculturation, and Adaptation. *Applied Psychology, 46*(1), 5-34. doi:10.1111/j.1464-0597.1997.tb01087.x

Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations, 29*(6), 697-712. doi:10.1016/j.ijintrel.2005.07.013

Best, J. R., & Miller, P. H. (2010). A developmental perspective on executive function. *Child development, 81*(6), 1641-1660.

Bialystok, E. (2011). Coordination of executive functions in monolingual and bilingual children. *Journal of experimental child psychology, 110*(3), 461-468.

Biesta, G., & Tedder, M. (2007). Agency and learning in the lifecourse: Towards an ecological perspective. *Studies in the Education of Adults, 39*(2), 132-149.

Biggs, J. (1993). What do inventories of students' learning processes really measure? A theoretical review and clarification. *British Journal of Educational Psychology, 63*(1), 3-19.

Biggs, J. B. (1987). Student Approaches to Learning and Studying. Research Monograph. *Australian Education Research and Development*.

Biggs, J. B., Kember, D., & Leung, D. Y. (2001). The revised two-factor study process questionnaire: R-SPQ-2F. *British Journal of Educational Psychology, 71*(1), 133-149.

Biglan, A. (1973). The characteristics of subject matter in different academic areas. *Journal of applied Psychology, 57*(3), 195-203.

Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science education, 84*(6), 740-756.

Black, J. S., & Mendenhall, M. (1991). The U-curve adjustment hypothesis revisited: A review and theoretical framework. *Journal of international business studies, 22*, 225-247.

Bourdieu, P. (1977). *Outline of theory of practice* Cambridge: Camgridge University Press.

Bourdieu, P. (2018). *The forms of capital*: Routledge.

Bowden, J., & Marton, F. (2003). *The university of learning: Beyond quality and competence*: Routledge.

Bowden, M. P., Abhayawansa, S., & Manzin, G. (2015). A multiple cross-cultural comparison of approaches to learning. *Compare: A Journal of Comparative and International Education, 45*(2), 272-294.

Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*: sage.

Brown, G. W., Bhrolchain, M. N., & Harris, T. (1975). Social class and psychiatric disturbance among women in an urban population. *Sociology, 9*(2), 225-254.

Buhler, C. (1971). Basic theoretical concepts of humanistic psychology. *American Psychologist, 26*(4), 378.

Case, J. M. (2013). *Researching student learning in higher education: A social realist approach*: Routledge.

Case, J. M. (2015). A social realist perspective on student learning in higher education: the morphogenesis of agency. *Higher Education Research & Development, 34*(5), 841-852. doi:10.1080/07294360.2015.1011095

Case, J. M., & Marshall, D. (2009). Approaches to learning. In *The Routledge internacional handbook of higher education* (pp. 9-22).

Case, J. M., & Marshall, D. (2016). Bringing together knowledge and capabilities: a case study of engineering graduates. *Higher Education, 71*(6), 819-833.

Case, J. M., Marshall, D., McKenna, S., & Disaapele, M. (2018). *Going to university: The influence of higher education on the lives of young South Africans*: African Minds.

Castells, M. (2009). Communication power: Oxford University Press. *Inc. NewYork, USA ISBN, 199567042*, 9780199567041.

Chein, J. M., & Schneider, W. (2005). Neuroimaging studies of practice-related change: fMRI and meta-analytic evidence of a domain-general control network for learning. *Cognitive Brain Research, 25*(3), 607-623.

Chickering, A. W. (1969). *Education and identity*: Jossey-Bass.

Chirkov, V., Vansteenkiste, M., Tao, R., & Lynch, M. (2007). The role of self-determined motivation and goals for study abroad in the adaptation of international students. *International Journal of Intercultural Relations, 31*(2), 199-222. doi:10.1016/J.IJINTREL.2006.03.002

Clay, R. A. (2002). A renaissance for humanistic psychology. *Monitor on Psychology, 33*(8), 42-43.

Coleman, J. S. (1986). Social theory, social research, and a theory of action *American journal of sociology, 6*, 1309-1339.

Cross, W. E. (1995). The psychology of nigrescence: Revising the Cross model.

Cullaty, B. (2011). The role of parental involvement in the autonomy development of traditional-age college students. *Journal of College Student Development, 52*(4), 425-439.

Davis, J., Mengersen, K., Bennett, S., & Mazerolle, L. (2014). Viewing systematic reviews and meta-analysis in social research through different lenses. *SpringerPlus, 3*(1), 1-9.

Deci, E. L. (1975). Intrinsic motivation. New York, NY, US. In: Plenum Press. http://dx. doi. org/10.1007/978-1-4613-4446-9.

Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological bulletin, 125*(6), 627.

Deci, E. L., & Ryan, R. M. (2012). Self-determination theory. *Handbook of theories of social psychology, 1*(20), 416-436.

Deci, E. L., & Ryan, R. M. (2002). Overview of self-determination theory: An organismic dialectical perspective. *Handbook of self-determination research*, 3-33.

Denzin, N. K. (2012). Triangulation 2.0. *Journal of mixed methods research, 6*(2), 80-88.

Di Domenico, S. I., & Ryan, R. M. (2017). The emerging neuroscience of intrinsic motivation: A new frontier in self-determination research. *Frontiers in Human Neuroscience, 11*, 145.

Diamond, A. (2013). Executive functions. *Annual Review of Psychology, 64*, 135-168.

Dolmans, D. H., Loyens, S. M., Marcq, H., & Gijbels, D. (2016). Deep and surface learning in problem-based learning: a review of the literature. *Advances in health sciences education, 21*(5), 1087-1112.

Drew, L., Bailey, S., & Shreeve, A. (2002). Fashion variations: Students approaches to learning in fashion design.

Dweck, C. S., & Molden, D. C. (2000). *Self theories*: London.

Eaglestone, R. (2020). 'Powerful knowledge','cultural literacy'and the study of literature in schools. *Impact, 2020*(26), 2-41.

Eley, M. G. (1992). Differential adoption of study approaches within individual students. *Higher Education, 23*(3), 231-254.

Emirbayer, M., & Mische, A. (1998). What is agency? *American journal of sociology, 103*(4), 962-1023.

Entwistle, N. (1991). Approaches to learning and perceptions of the learning environment: Introduction to the special issue. *Higher Education*, 201-204.

Entwistle, N., & McCune, V. (2004). The conceptual bases of study strategy inventories. *Educational Psychology Review, 16*(4), 325-345. doi:10.1007/s10648-004-0003-0

Entwistle, N., McCune, V., & Hounsell, J. (2002). Approaches to studying and perceptions of university teaching-learning environments: Concepts, measures and preliminary findings. *Enhancing teaching and learning environments in undergraduate courses occasional report, 1*, 1-19.

Entwistle, N., & Ramsden, P. (1983/2015). *Understanding student learning (routledge revivals)*: Routledge.

Feldman, K. A., & Newcomb, T. M. (2020). *The impact of college on students*: Routledge.

Fleetwood, S. (2008). Structure, institution, agency, habit, and reflexive deliberation. *Journal of Institutional Economics, 4*(2), 183-203. doi:10.1017/S1744137408000957

Fryer, L. K. (2017). Building bridges: Seeking structure and direction for higher education motivated learning strategy models. *Educational Psychology Review, 29*(2), 325-344.

Furnham, A., & Bochner, S. (1986). Culture shock. Psychological reactions to unfamiliar environments. *Culture shock. Psychological reactions to unfamiliar environments.*

Gardner, H. (2008). The five minds for the future. *Schools, 5*(1/2), 17-24.

Garner, J. K. (2009). Conceptualizing the relations between executive functions and self-regulated learning. *The Journal of Psychology, 143*(4), 405-426.

Gecas, V. (1982). The self-concept. *Annual review of sociology*, 1-33.

Giddens, A. (1979). *Central problems in social theory* London: Macmillan Press Ltd. .

Giddens, A. (1984). *The constitution of society: Outline of a theory of structuration*. Berkeley & Los Angeles: University of Califormia Press.

Graham, S. (1991). A review of attribution theory in achievement contexts. *Educational Psychology Review, 3*(1), 5-39.

Gullahorn, J. T., & Gullahorn, J. E. (1963). An extension of the U-Curve Hypothesis 1. *Journal of social issues, 19*(3), 33-47.

Hofer, B. K., & Pintrich, P. R. (2012). *Personal epistemology: The psychology of beliefs about knowledge and knowing*. Routledge.

Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments*: Psychological Assessment Resources.

Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*.

Inouye, K., Lee, S., & Oldac, Y. I. (2022). A systematic review of student agency in international higher education. *Higher Education*, 1-21.

James, W. (1890). The consciousness of self. In W. James (Ed.), *The Principles of Psychology*: Dover Publications.

Kant, I. (2009). An answer to the question: 'What is enlightenment?' In I. Kant (Ed.), *An answer to the question: 'What is enlightenment?'* (pp. 1-11). London Penguin

Kerr, C. (2001). *The Uses of the University. 5th Edition.* Cambridge, MA: Harvard University Press. First published in 1963.

Kember, D., & Watkins, D. (2010). Approaches to learning and teaching by the Chinese. In *Oxford handbook of Chinese psychology*.

Kim, Y. Y. (2001). *Becoming intercultural: An integrative theory of communication and cross-cultural adaptation*. Sage.

Kim, Y. Y. (2012). Beyond cultural categories: Communication, adaptation and transformation. In *The Routledge handbook of language and intercultural communication* (pp. 241-255): Routledge.

Kim, Y. Y. (2017). Cross-cultural adaptation. In *Oxford Research Encyclopedia of Communication*.

King, A. (2010). The odd couple: Margaret archer, Anthony Giddens and British social theory. *British Journal of Sociology, 61*, 253-260. doi:10.1111/j.1468-4446.2009.01288.x

King, P. M., & Kitchener, K. S. (1994). *Developing Reflective Judgment: Understanding and Promoting Intellectual Growth and Critical Thinking in Adolescents and Adults. Jossey-Bass Higher and Adult Education Series and Jossey-Bass Social and Behavioral Science Series*: ERIC.

Kirschner, P. A., Sweller, J., Kirschner, F., & Zambrano R, J. (2018). From cognitive load theory to collaborative cognitive load theory. *International Journal of Computer-Supported Collaborative Learning, 13*, 213-233.

Klemenčič, M. (2015). What is student agency? An ontological exploration in the context of research on student engagement. *Student engagement in Europe: Society, higher education and student governance*, 11-29.

Klemenčič, M. (2017). From student engagement to student agency: Conceptual considerations of European policies on student-centered learning in higher education. *Higher Education Policy, 30*(1), 69-85.

Klemenčič, M. (2020). Students as actors and agents in student-centered higher education. *Routledge international handbook on student-centered learning and teaching in higher education. Routledge*.

Klemenčič, M. (2023). A theory of student agency in higher education. In *Research Handbook on the Student Experience in Higher Education* (pp. 25-40): Edward Elgar Publishing.

Kroger, J., & Marcia, J. E. (2011). The identity statuses: Origins, meanings, and interpretations. In *Handbook of identity theory and research* (pp. 31-53): Springer.

Kusurkar, R., Ten Cate, T. J., Vos, C., Westers, P., & Croiset, G. (2013). How motivation affects academic performance: a structural equation modelling analysis. *Advances in health sciences education, 18*(1), 57-69.

Lee, S. (2021). Researching higher education as students' academic self-formation. *Centre for Global Higher Education working paper series, 76*.

Lee, S. (2023). The Mechanism of Student Agency in Self-Formation Through Knowledge Engagement in Higher Education. In *Student Agency and Self-Formation in Higher Education* (pp. 89-113): Springer.

Lee, S. (2024). *Students' academic self-formation in local and international higher education: evidence from South Korean students.* University of Oxford.

Levesque, C., Zuehlke, A. N., Stanek, L. R., & Ryan, R. M. (2004). Autonomy and competence in German and American university students: A comparative study based on self-determination theory. *Journal of Educational Psychology, 96*(1), 68.

Li, J. (2012). *Cultural foundations of learning: East and West*: Cambridge University Press.

Little, T. D., Oettingen, G., Stetsenko, A., & Baltes, P. B. (1995). Children's action-control beliefs about school performance: How do American children compare with German and Russian children? *Journal of personality and social psychology, 69*(4), 686.

106

Locke, J. (1978). *Two treatises of government* New York E. P. Dutton.

Lukes, S. (1973). On the social determination of truth. *Modes of Thought in Western and Non-Western Societies*, 230-248.

Lukes, S. (2004). *Power: A radical view*: Macmillan International Higher Education.

Malcolm, J., & Zukas, M. (2001). Bridging pedagogic gaps: conceptual discontinuities in higher education. *Teaching in Higher Education, 6*(1), 33-42.

Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of personality and social psychology, 3*(5), 551.

Marcia, J. E. (1980). Identity in adolescence. *Handbook of adolescent psychology, 9*(11), 159-187.

Marginson, S. (2014). Student Self-Formation in International Education. *Journal of studies in international education, 18*(1), 6-22. doi:10.1177/1028315313513036

Marginson, S. (2019). The Kantian University: Worldwide Triumph and Growing Insecurity. *Australian Universities' Review, 61*(1), 59-70.

Marginson, S. (2023). Student self-formation: an emerging paradigm in higher education. *Studies in Higher Education*, 1-15.

Marton, F., & Saljo, R. (1976). On qualitative differenceces in learning. *British Journal of Educational Psychology*.

Maslow, A., & Rogers, C. (1979). Humanistic psychology. *Journal of humanistic psychology, 19*(3), 13-26.

Maton, K. (2013). *Knowledge and knowers: Towards a realist sociology of education*: Routledge.

McArthur. (2020). Assessment for Social Justice: achievement, uncertainty and recognition. In C. Callender, W. Locke, & S. Marginson (Eds.), *Changing Higher Education for a Changing World*. London Bloomsbury.

McArthur. (2021). Rethinking student involvement in assessment. *Centre for Global Higher Education working paper series, 58*.

McCune, V., & Hounsell, D. (2005). The development of students' ways of thinking and practising in three final-year biology courses. *Higher Education, 49*(3), 255-289.

McLean, M., Abbas, A., & Ashwin, P. (2013). The use and value of Bernstein's work in studying (in) equalities in undergraduate social science education. *British Journal of Sociology of Education, 34*(2), 262-280.

McLean, M., Abbas, A., & Ashwin, P. (2017). *Quality in undergraduate education: How powerful knowledge disrupts inequality*: Bloomsbury Publishing.

Meredith, J. (1993). Theory building through conceptual methods. *International Journal of Operations & Production Management, 13*(5), 3-11.

Miyake, A., Friedman, N. P., Emerson, M. J., Witzki, A. H., Howerter, A., & Wager, T. D. (2000). The unity and diversity of executive functions and their contributions to complex "frontal lobe" tasks: A latent variable analysis. *Cognitive psychology, 41*(1), 49-100.

Muller, J., & Young, M. (2019). Knowledge, power and powerful knowledge re-visited. *The Curriculum Journal, 30*(2), 196-214.

Newman, J. H. (1982). *The idea of a university*. Notre Dame University of Notre Dame Press.

Nix, G. A., Ryan, R. M., Manly, J. B., & Deci, E. L. (1999). Revitalization through self-regulation: The effects of autonomous and controlled motivation on happiness and vitality. *Journal of experimental social psychology, 35*(3), 266-284.

Nussbaum, M. (2000). Women's capabilities and social justice. *Journal of human development, 1*(2), 219-247.

Oberg, K. (1960). Cultural shock: Adjustment to new cultural environments. *Practical anthropology*(4), 177-182.

Oettingen, G., Little, T., Lindenberger, U., & Baltes, P. (1994). School performance-related causality, agency, and control beliefs in East and West Berlin children. *Journal of personality and social psychology, 66*, 579-595.

Oldac, Y. I., Yang, L., & Lee, S. (2023). *Student Agency and Self-Formation in Higher Education*: Springer Nature.

Ortner, S. (1989). *High religion: a cultural and political history of Sherpa Buddhism*. Princeton, New Jersey Princeton University Press.

Paas, F., Renkl, A., & Sweller, J. (2004). Cognitive load theory: Instructional implications of the interaction between information structures and cognitive architecture. *Instructional science, 32*(1/2), 1-8.

Paas, F. G. (1992). Training strategies for attaining transfer of problem-solving skill in statistics: a cognitive-load approach. *Journal of Educational Psychology, 84*(4), 429.

Parsons, T. (1963). On the concept of political power. *Proceedings of the American philosophical society, 107*(3), 232-262.

Pascarella, E. T., & Terenzini, P. T. (2005). *How College Affects Students: A Third Decade of Research. Volume 2*: ERIC.

Patton, L. D., Renn, K. A., Guido, F. M., & Quaye, S. J. (2016). *Student development in college: Theory, research, and practice*: John Wiley & Sons.

Pavlov, P. I. (1927/2010). Conditioned reflexes: An investigation of the physiological activity of the cerebral cortex. *Annals of neurosciences, 17*(3), 136-141. doi:10.5214/ans.0972-7531.1017309

Perry, W. G. (1999). *Forms of Intellectual and Ethical Development in the College Years: A Scheme. Jossey-Bass Higher and Adult Education Series*: ERIC.

Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review, 16*(4), 385-407.

Ramsden, P. (2003). *Learning to teach in higher education*: Routledge.

Rao, N., & Chan, C. K. (2010). Moving beyond paradoxes: Understanding Chinese learners and their teachers. In *Revisiting the Chinese learner* (pp. 3-32): Springer.

Redfield, R., Linton, R., & Herskovits, M. J. (1936). Memorandum for the study of acculturation. *American anthropologist, 38*(1), 149-152.

Renn, K. A., & Arnold, K. D. (2003). Reconceptualizing research on college student peer culture. *The Journal of Higher Education, 74*(3), 261-291.

Richardson, J. T. (2005). Students' approaches to learning and teachers' approaches to teaching in higher education. *Educational psychology, 25*(6), 673-680.

Richardson, J. T. (2015). Approaches to learning or levels of processing: what did Marton and Säljö (1976a) really say? the legacy of the work of the Göteborg Group in the 1970s. *Interchange, 46*(3), 239-269.

Robbins, B. D. (2008). What is the good life? Positive psychology and the renaissance of humanistic psychology. *The humanistic psychologist, 36*(2), 96-112.

Rotter, J. B. (1954). *Social learning and clinical psychology*: Johnson Reprint Corporation.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological monographs: General and applied, 80*(1), 1.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of instrinsic motivation, social development, and well-beilg. *American Psychologist, 55*(1), 68-78.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*: Guilford Publications.

Ryle, G. (2009). *The concept of mind*: Routledge.

Sahlins, M. (1981). *Historical metaphors and mythical realities: structure in the early history of the Sandwich Island Kingdom*. Ann Arbor University of Michigan Press.

Sam, D. L., & Berry, J. W. (2006). *The Cambridge handbook of acculturation psychology*: Cambridge University Press.

Sayer, A. (1992). *Method in social science: A realist approach*: Psychology Press.

Sayer, A. (1999). *Realism and social science*: Sage.

Schartner, S. A. & Young, T. J. (2019). *Intercultural transitions in higher education: International student adjustment and adaptation*: Edinburgh University Press.

Schieffelin, B. (1990). *The give and take of everyday life: language socialisation of Kaluli children* Cambridge, UK Cambridge University Press

Schlossberg, N. K. (1981). A model for analyzing human adaptation to transition. *The Counseling Psychologist, 9*(2), 2-18.

Schmidt, W. H., Wang, H. C., & McKnight, C. C. (2005). Curriculum coherence: An examination of US mathematics and science content standards from an international perspective. *Journal of Curriculum Studies, 37*(5), 525-559.

Schnotz, W., Fries, S., & Horz, H. (2009). Some motivational aspects of cognitive load theory. *Contemporary motivation research: From global to local perspectives*, 86-113.

Schunk, D. H., & Pajares, F. (2009). Self-efficacy theory. *Handbook of motivation at school*, 35-53.

Scott, J., & Marshall, G. (1998). *Oxford dictionary of sociology (2nd edn)*. Oxford Oxford University Press.

Seligman, M. E., & Csikszentmihalyi, M. (2000). *Positive psychology: An introduction* (Vol. 55): American Psychological Association.

Seligman, M. E., Ernst, R. M., Gillham, J., Reivich, K., & Linkins, M. (2009). Positive education: Positive psychology and classroom interventions. *Oxford Review of Education, 35*(3), 293-311.

Seligman, M. E., & Maier, S. F. (1967). Failure to escape traumatic shock. *Journal of experimental psychology, 74*(1), 1.

Sen, A. (2000). *Development as freedom*: Oxford Paperbacks.

Shay, S. (2008). Beyond social constructivist perspectives on assessment: the centring of knowledge. *Teaching in Higher Education, 13*(5), 595-605.

Sheldon, K. M., & Kasser, T. (2008). Psychological threat and extrinsic goal striving. *Motivation and Emotion, 32*(1), 37-45.

Skinner, B. F. (2002). *Beyond freedom and dignity*. Hackett Publishing. First published in 1971.

Skinner, E. A. (1996). A guide to constructs of control. *Journal of personality and social psychology, 71*(3), 549.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research, 104*, 333-339.

Stetsenko, A., Little, T. D., Oettingen, G., & Baltes, P. B. (1995). Agency, Control, and Means–Ends Beliefs About School Performance in Moscow Children: How Similar Are They to. *Developmental Psychology, 31*(2), 285-299.

Strange, C. C., & Banning, J. H. (2001). *Educating by Design: Creating Campus Learning Environments That Work. The Jossey-Bass Higher and Adult Education Series*: ERIC.

Sweller, J. (1994). Cognitive load theory, learning difficulty, and instructional design. *Learning and Instruction, 4*(4), 295-312.

Sweller, J. (2011). Cognitive load theory. In *Psychology of learning and motivation* (Vol. 55, pp. 37-76): Elsevier.

Sweller, J. (2022). The role of evolutionary psychology in our understanding of human cognition: Consequences for cognitive load theory and instructional procedures. *Educational Psychology Review, 34*(4), 2229-2241.

Thomas, P., & Bain, J. (1984). Contextual dependence of learning approaches. *Human learning, 3*, 230-242.

Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*: ERIC.

Tran, L. T., & Vu, T. (2018). 'Agency in mobility': towards a conceptualisation of international student agency in transnational mobility. *Educational Review, 70*(2), 167-187.

Van Dinther, M., Dochy, F., & Segers, M. (2011). Factors affecting students' self-efficacy in higher education. *Educational research review, 6*(2), 95-108.

Van Merrienboer, J. J., & Sweller, J. (2005). Cognitive load theory and complex learning: Recent developments and future directions. *Educational Psychology Review, 17*(2), 147-177.

Vygotsky, L. S. (1997). *The collected works of LS Vygotsky: Problems of the theory and history of psychology* (Vol. 3): Springer Science & Business Media.

Vygotsky, L. S. (2012). *Thought and language*: MIT press.

Ward, C., Bochner, S., & Furnham, A. (2020). *The psychology of culture shock*: Routledge.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological review, 92*(4), 548.

Weiner, B. (2012). *An attributional theory of motivation and emotion*: Springer Science & Business Media.

White, R. W. (1959). Motivation reconsidered: the concept of competence. *Psychological review, 66*(5), 297.

Ylijoki, O.-H. (2000). Disciplinary cultures and the moral order of studying–A case-study of four Finnish university departments. *Higher Education, 39*(3), 339-362.

Young, M. (2007). *Bringing knowledge back in: From social constructivism to social realism in the sociology of education*: Routledge.

Young, M., & Muller, J. (2013). On the powers of powerful knowledge. *Review of education, 1*(3), 229-250.

Zaharna, R. S. (1989). Self-shock: The double-binding challenge of identity. *International Journal of Intercultural Relations, 13*(4), 501-525.

Zhou, J. (2015). International students' motivation to pursue and complete a Ph. D. in the US. *Higher Education, 69*(5), 719-733.

Zhou, Y., Jindal-Snape, D., Topping, K., & Todman, J. (2008). Theoretical models of culture shock and adaptation in international students in higher education. *Studies in Higher Education, 33*(1), 63-75. doi:10.1080/03075070701794833

Zhu, C., Valcke, M., & Schellens, T. (2008). A cross-cultural study of Chinese and Flemish university students: Do they differ in learning conceptions and approaches to learning? *Learning and Individual Differences, 18*(1), 120-127.

Zimmerman, B. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology, 81*(3), 329.

Zimmerman, B. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist, 25*(1), 3-17.