**On the Educational Mode of Existence: Latour, Meta-Ethnography, and the Social Institution of Education**

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**Abstract**

This article constitutes an argument for both the use and expansion of the philosophical anthropology of Bruno Latour, as established in his recent work *An Inquiry into Modes of Existence* (AIME). Drawing on ethnographies of education as a methodology for empirical inquiry and specifically on meta-ethnography as a methodology for establishing objectivized knowledge concerning education in a manner that is commensurate to the underpinning epistemological and ontological principles of AIME, this article explicates and then applies the theoretical components of AIME to the field of education research and proposes that education be added to Latour's schema as an additional mode of existence.

**Key Words**

Actor-Network Theory; Education; Ethnography; Latour; Modes of Existence.

**Introduction: education, ethnography, and anthropology**

The field of education has for a long time been of interest to both ethnographers and anthropologists (Anderson-Levitt, 2011),[1] predominantly researching in schools, but also community settings and workplaces. More specifically, researchers have increasingly drawn on actor-network theory (ANT)*,* a component of ethnography and of Science and Technology Studies that is concerned with processes of social ordering in order to explore how the social is accomplished across networks made up of non-human as much as human actors (Latour, 2005; Law, 1994). ANT has been employed to explore fields as diverse as undergraduate physics and management studies (Nespor, 1994), and international assessment regimes and league tables of educational attainment (Gorur, 2011). One of the architects of ANT, Bruno Latour, has now absorbed it within a new project: *An Inquiry into Modes of Existence* (AIME). My intention here is to insert education into AIME in a manner akin to the ways in which education has become a matter of concern for ANT (Fenwick and Edwards, 2010).

My rationale for this is twofold. First: Latour has posited AIME as being capable of expansion, and I argue that the exploration of education as a social and cultural facet of the world around us needs to be included within AIME, just as other recognisable social formations such as politics and law already are. Second: I am going to argue that the anthropological/ethnographic study of educational cultures, practices, spaces and so forth can be contributed to through AIME in order to encompass novel perspectives for researching and making sense of education, and that the tools offered by AIME can generate important insights for the ethnographer/anthropologist of education. By education I here to refer to all those forms of social and cultural practice that might pertain to education in both formal contexts (schools, technical colleges, universities, adult education centres) and informal contexts (workplaces, co-operatives, libraries, community centres).

My argument consists of four steps. First, I discuss AIME and highlight key analytical as well as methodological tenets. Second, I draw on the theoretical components of AIME in order to interpose *education* within Latour's framework. Third, I discuss meta-ethnography as a vehicle through which I can establish an empirical foundation in order to say things about education that is analogous to the empirical foundations that Latour rests AIME upon. Finally, I argue that education is a Latourian mode of existence and outline the analytical affordances of this for the ethnographer/anthropologist of education.

**First Step. Introducing the Modes of Existence**

An Inquiry into Modes of Existence – AIME – is both the culmination and starting point of an empirical and philosophical inquiry by Bruno Latour (2013a) into the different institutions or domains that make up the world around us – institutions such as religion, politics, or morality. It is a culmination because the moment of publication marked the end of a longer period of work by Latour that was conducted alongside his inquiries into, *inter alia*, administrative law in the French *Conseil d'Etat* as well as ongoing work with actor-network theory, arguably the project for which he is best known (Latour, 2005, 2010, 2013b). And it is a starting point because the AIME website was designed to be a collaborative space "to transform the inquiry of a lone ethnographer into a collective undertaking of a community of co-inquirers" (Ricci et al., 2015: 36).[2]

Although Latour introduces his inquiry by discussing institutions or domains, it quickly becomes apparent that these established terms are insufficient. Instead, he borrows the term *Mode of Existence* from Souriau (1943, 2009) and Simondon (1958). For Latour, there is more to a mode of existence than merely the different patterns of social structure that can be traced between different institutional settings or the different ways of talking that can be identified within different sociocultural contexts, although these are nonetheless important. A mode of existence is a way or pattern of being in the world, and AIME is a "comparative anthropology" (Latour, 2014: 305) that sets out to unravel the ways in which these patterns have been tangled up.

There are two main procedures by which Latour sets about his task. The first is for the anthropologist to identity which mode or modes are of interest/importance: Latour has identified fifteen and each is labelled using a three-letter notation system. Some are straightforward to recognize, such as politics [POL], religion [REL], or technology [TEC]. Others are more metaphysical, such as reference [REF], reproduction [REP] and fiction [FIC]. By filtering our inquiries through different combinations or crossings between modes we can resolve some questions, and highlight new ones (Latour, 2013a: 63). The way we do this is through the second procedure, which is to look for incidents, episodes or other occurrences when something to do with one mode is mistaken for something to do with another. When this happens, a *category mistake* has occurred.

A category mistake is an ontological mistake. It is what occurs when we say that something possesses a property that it could not possibly possess, or if we say that something belongs to one order or category of things when it actually belongs to a completely different order. It is a construct first introduced by the philosopher Gilbert Ryle (1949). One of Ryle's examples relates to the game of cricket: if, after being told about which player bats and which player bowls, a new spectator asks which player maintains 'team spirit' then a category mistake has been made because unlike the other sporting roles, team spirit is an ethos, a form of behaviour performed by the entire team (1949: 9-13). The anthropologist Matthew Engelke provides a different order of category mistake relating to cricket, derived from a period of fieldwork in Zimbabwe. On being asked by one of his hosts 'do you like cricket?' and replying in the affirmative, Engelke was then presented with a fried cricket, an insect, to eat (2017: 30-31). Within AIME, category mistakes occur when two modes come together in a crossing. It is the crossing of two modes that both combines the two modes in question for the purposes of analysis, and also indicates the category mistakes – the mistaken ascription of some aspect of one mode to something pertaining to another. The canon law of the church has its own way of working, of being expressed, of being written and talked about, that is quite distinct from the ways of working and so forth of the secular law of the French state. They are both kinds or types of legal stuff, but in fact each pertains to a distinct mode of existence – either to [LAW] or to [REL]. To evaluate the way in which a legal explanation within secular law has been established from the point of view of canon law would be a category mistake, identified within AIME therefore as being of the [LAW-REL] type.

For some, AIME has merely attempted to resolve the inadequacies of the earlier actor-network theory. ANT is absorbed into the new project and relabelled as [NET], with the central concept of the network as being made up of both human and non-human social actors remaining unchanged. But this has served only to generate an entirely new series of conceptual and methodological difficulties. The modes of existence evince a 'mind-boggling' heterogeneity

(Hämäläinen and Lehtonen, 2016), take account of history but not geography (Edward, 2016), and through their mobilization generate "malfunctions and adverse effects…fairly regularly" (Delchambre and Marquis, 2013: 571), reducing experience to the opinion of experts (Blake, 2016). For others, AIME represents a simple continuation of Latour's earlier work, a recognition by Latour of the shortcomings of actor-network theory and an attempt to gather the different strands of his work into one investigation that upgrades actor-network theory but does not pretend to be anything other than pragmatic, allowing the inquiry to travel where Latour wishes – to the unravelling of Modernism that has preoccupied much of his intellectual career (Delchambre and Marquis, 2013; Harman, 2016; Tummons, 2021; Weber, 2016).

A mode of existence is more than an institution, field or domain, therefore. For Latour, use of the modes offers "a new type of understanding […] especially when we learn to liberate ourselves from some of the supposedly uncrossable borders" that the longer established notions of field or organization put up (Latour, 2013a: 62). Instead, Latour argues for each different form or mode of existence to be explained according to its own conditions. In this way, we can explore what makes each mode unique whilst at the same time accommodating the fact that they nonetheless co-exist alongside and across each other. Each mode of existence –Latour has identified fifteen – all share a number of particular qualities or *conditions* that helps each one stand apart from the other fourteen, and I shall return to these below. For now, it is sufficient to note that if the ways of being of one mode, including in relation to any of that mode's conditions, are mixed up with those of another mode, then a category mistake has once again been made.

**Second Step. Identifying a further Mode of Existence**

In this article, I take seriously Latour's invitation to add to the laboratory, to provide an account of an additional mode of existence that will help resolve category mistakes that otherwise risk confusing our ethnographies of the entanglement between human and non-human (Latour, 3013b). And notwithstanding the problems as well as affordances that AIME generates, I propose that *education* [EDU] is a mode of existence (Tummons, 2020a, 2020b), just as law [LAW] or religion [REL] are modes of existence. A mode of existence is identified through four conditions. It is important to remember that these four conditions are of equal importance: they all pertain simultaneously to each mode. Before I can establish the beings of education [EDU] as a mode of existence, I need to explicate each of these four conditions so that I can in turn apply them to education.

**First condition: continuity and discontinuity**

The ways in which each mode sustains itself and is sustained provide a foothold for the researcher because it is in this first condition that the roots of the more familiar actor-network theory – now [NET] – can be most clearly seen. Within AIME, [NET] becomes the empirical launch pad for the inquiry as a whole. Any network of human and non-human actors that appears to be running smoothly is actually doing something quite different. The way in which any heterogeneous network of actors is held together is always prone to breakdown at the weakest point (Latour, 2005). Or, to put it another way, what looks like continuity is in fact discontinuity: it is simply the case that the different actions, processes, ways of talking and so forth that pertain to that mode are managing to work through all of the

different breaks or inconsistencies (Latour refers to this as *hiatus*) and therefore are keeping the network going (Latour refers to this as maintenance of *trajectory*.)

For example, in [LAW], the trajectory of the legal process of buying or selling a home would be accompanied by the hiatus generated through the linking of the heterogeneous elements of the actual building on the one hand, and the title deeds on the other. Here, the hiatus refers to the specific processes of [LAW] that allow a particular text-based artefact (a title deed) to represent a physical building and parcel of land. In [TEC], the technological mode, the trajectory that ensues from the employment of a pressure gauge to measure the air pressure in a tyre relies on the hiatuses of bringing together not only the different components of the gauge (the valve, the calibrated rod, the piston, and so forth) but also the dexterity required by the user in holding the gauge correctly on the valve so as to obtain a reliable reading, and the knowledge that the maximum permitted pressure is embossed on the side of the tyre.

**Second condition: felicity and infelicity conditions**

In establishing the second condition for modes of existence, Latour draws on Austin's speech act theory (1962), and specifically the concepts of felicity and infelicity conditions, allow Latour to establish the type of *veridiction* that each mode possesses (Latour, 2013: 53-54). By veridiction, Latour refers to the ways in which truths and untruths are established within a mode. There are two important aspects to this. The first is that if we agree that each mode is ontologically different, it follows that the ways in which knowledge is established within each of them must also rest on particular ways of establishing that knowledge that pertain uniquely to the mode in question. The second is that AIME is neither positivist nor postmodernist: "we want to be able to say that one thing is rational and another irrational, this thing true and that other thing false" (Latour, 2013: 94). In order to do this, Latour endows each mode with a unique type of veridiction – a mechanism for reconciling the very different ways in which statements are considered true or false – which depends on the different ways of establishing knowledge within the mode within which those statements are being made.

Thus, the way in which something counts as true within religious doctrine is different to what counts as true within law: or, to use the metalanguage of AIME, the veridiction of [REL] is different from the veridiction of [LAW]. This prevents the beings of one mode from dismissing or confounding the veridiction of beings from another: the veridiction of [LAW] cannot gainsay the truths of [REL], or *vice versa*, because each speaks from the standpoint of a different type of veridiction. Here, we discern the influence of speech act theory, according to which "we must consider *the total situation* in which the utterance is issued" (Austin, 1962: 52, emphasis added).

**Third condition: the beings that the mode leaves behind**

One of the ways by which we can ascertain a mode at work is by looking for those things – Latour describes these as *beings* – that the mode leaves behind: this might be something that has been created within the networks of the mode, or something that has been reshaped, adjusted or inscribed upon. It is important not to reduce the notion of beings to single types that are unique to each mode, however, nor to reduce them to being analogous to artefacts or reifications or texts, or even to particular kinds of people. For example, different forms of texts can be found at work

within networks that pertain to [REL]igious beliefs, to [POL]itics, or to [LAW]. Indeed, people move and are moved by innumerable networks as they go about their lives. The concept of the beings that a mode leaves behind is intended to draw our attention to the particular formations of actors (non-human and/or human) that pertain to the mode in question and that through having been brought into being and being sustained within and through that mode, help the mode to persist (as per the first condition, above). Thus, the beings of each mode have properties that are different in each case (Latour, 2013: 21).

So, religious experience of the [REL] mode leaves behinds beings that provide "a renewal, a revitalization" (Conway, 2016: 52) for those to whom their messages are addressed and who in turn take up that message. The beings of the mode of fiction [FIC] can more-or-less perfectly or accurately capture real as well as imagined worlds: narratives, whether fictional or factional, written or spoken, do not differ (Latour, 2013: 251).

**Fourth condition: the alterity of the beings of the mode**

The beings that inhabit modes of existence do not possess any *a priori* quality or substance that renders them different from each other. In fact, they move in and around each other whilst maintaining their condition of alterity in order to maintain their own subsistence – to stop themselves from being absorbed or forgotten. The beings of each mode have particular ways of establishing otherness that are particular to that mode. So one way of establishing otherness is through the different ways by which the networks of different modes are established (as per the first condition, above); another is to consider the different ways by which people talk – the type of veridiction – that pertain to each mode (as per the second condition). By seeing how the beings of the mode do what they do, we can establish how they do those things in a way that is particular to their ontology, whilst still existing alongside other beings in other modes.

Thus, there are different ways by which people come together in order to express shared concerns, philosophies, or interest. However, to provide an example, the ways in which this is done within the religious mode [REL]] is different from, exists in a state of alterity in relationship to, the mode of politics [POL]. The "temporarily associated wills" of people who come together to further a political [POL] cause through recourse to a political 'truth' (Conway, 2016: 51) stand in contrast to the self-evidently different ways in which 'truth' is established within religious [REL] talk and action (to distinguish religious talk and action from the formal institutional structures of churches and so forth). These modes (as with all of the others) occupy contrasting types of veridiction that in turn mark out the differences between them.

**Third Step. AIME: an *empirical* philosophy**

AIME is an empirical project, resting on an explicit body of empirical work. Within AIME, this would be described as a body of knowledge of the reference [REF] mode (Latour, 2013: 51). [REF] is a central mode for the AIME project because it "underpins the process through which it is possible to generate verifiable instrumented knowledge about distant states of affairs" (Latour, 2016: 544). AIME is not a positivist project, however: [REF] is stable but also mutable, objectivized through research but also capable of being changed as research techniques improve and measuring

instruments become more refined. To ignore the processes of knowledge formation would result in treating knowledge as unmediated and untransformed: using the metaphor of a computer mouse, Latour describes this as Double Click [DC] (Latour, 2013a: 93).

Some kind of methodological framework is necessary for this knowledge to be assembled, however. ANT, the predecessor to AIME, lacks clear methodological explication. And yet it is not so difficult to establish that ANT in fact demands a focus on the empirical (Blok and Jensen, 2011; Elder-Vass, 2015), and an "insistence on painstaking ethnographic research" (Kipnis, 2015: 43). Indeed, notwithstanding the fact that he tends to eschew explicit methodological statements, anthropology remains the discipline that Latour most frequently identifies with (Berliner et al., 2013).[3]

To argue that the educational mode of existence – [EDU] – is a legitimate addition to the inquiry requires an account that satisfies each of the four conditions that any mode needs to meet. To do this, I need to draw on existing empirical research that speaks to the ethnographic sensibilities that underpin Latour's work. I propose *meta-ethnography* as a suitable approach. However, two issues need to be clarified: first, I am not conducting a meta-ethnography in order to establish [EDU]; rather, I am drawing on extant meta-ethnographies. Secondly, I am doing so in order to be able to say things about education that rest on research that has established knowledge of the [REF] mode.

**Meta-ethnographies of education**

Meta-ethnography is a way of organizing and comparing the findings of individual ethnographic studies in order to answer research questions that require a synthesis of prior findings to construct overarching theoretical and/or explanatory frameworks. Meta-ethnography rests on a theory of social explanation that seeks to reconcile the uniqueness of the original ethnographies with the capacity to compare and generalise from them. Firmly located within an interpretivist paradigm, "meta-ethnography must be driven by the desire to construct adequate interpretive [rather than aggregative] explanations" (Noblit and Hare, 1999: 94). Meta-ethnography embraces the lack of consistency between individual studies and posits the creation of a knowledge base as the result of a process of translation between studies (Turner, 1980).

Meta-ethnography and AIME share much common ground. Both share a commitment to building bodies of objectivized knowledge that possess the possibility of being revised or even refuted. Both reject the synthesis of knowledge without also preserving an understanding of how that knowledge has been established. Both acknowledge the oxymoronic ambition of generating interpretive social explanations whilst preserving the uniqueness of individual standpoints (one of the distinguishing characteristics of ethnography). And meta-ethnography understands the movement of knowledge as a process of translation, "a sense of movement without pretending to a lack of alteration by the process of that movement" (Turner, 1980: 41), a movement that is expanded within AIME to apply to not only a body of knowledge of the [REF] mode but to any social actor within any mode (Latour, 2013: 125). It is through the painstaking research done by the 'original' ethnographers that has then been translated by the meta-ethnographers, that objectivized knowledge of the [REF] mode has been established (Latour, 2013a).

After reading such research, we can therefore say that we know things about education. The kind of knowledge that we want to establish as (meta) ethnographers is knowledge that is in some ways objectivized, robust, capable of being translated across contexts in order to say something more than local about education. This is not to say that meta-ethnographies, or the ethnographies that they rest on, constitute the 'only' or 'best' way to establish objectivized knowledge [REF] about education. Research that derives from the other disciplines that constitute educational research remains important to the field of education research as a whole. But in order to accomplish my argument within the space afforded, economy of movement is needed and meta-ethnography is a good way to be able relatively quickly to say things about education that meet the empirical strictures of the AIME project without being mistaken for knowledge of the [DC] mode.

**Fourth Step. On the Educational Mode of Existence: [EDU]**

No mode exists in isolation. The beings of [LAW] constitute a mode of existence characterised by particular kinds of process, specific ways of establishing veracity and felicity, and clearly identifiable ways of working, doing, and talking that mark them all out as pertaining to [LAW] – but we would never expect them to be isolated from the workings of [POL], not least as it is through the disputes and debates of the political realm that some pieces of legislation are then brought into being. The important thing to remember is not to confuse one for the other because this would lead to a category mistake of the [LAW-POL] type. We can say the same for [EDU]: for example, it is through political [POL] processes that many countries have made education compulsory, enacted through statute [LAW]. Things that are of the educational can have aspects of the political or the legal about them, in just the same way as aspects of the religious [REL] can possess aspects of the political or legal. But it is through empirical inquiry that we can establish as objectivized knowledge of the [REF] mode that a particular course of action pertains to [LAW] or to [POL] by tracing the networks [NET] of people and things that unfold before us during our ethnography – [NET]s that we can qualitatively distinguish from each other. Thus, being mindful of the overlapping and simultaneous nature of the four conditions that pertain to any mode of existence, we can begin to establish the particular nature of [EDU] in relation to and drawing on the other modes. I do not claim to have exhausted the possibilities for each condition, but I discuss each with examples from relevant meta-ethnographies that are sufficient to allow the conditions to be satisfied.

**First condition: the continuity and discontinuity of [EDU]**

The stuff and people of education maintain themselves (in the metalanguage of AIME, they accomplish their trajectories) through connecting, in a continuous fashion, different source elements (within AIME, described as an act of connecting that requires the bridging of different hiatuses). This involves collecting together disparate activities, typically referred to as a curriculum (practicing carpentry, grammar, athletics, or the lines of a play) that are arranged within and established through an organisational schema [EDU-ORG] that is immediately familiar (the mode of organising [ORG] is how Latour (2013a: 391) explains the ways in which different series of behaviours can be embedded or brought together). Such an organisational schema might consist of a timetable, a series of lessons, an examination, meetings of parent-teacher committees, and so forth. And they can vary across, for example, institutions (primary to tertiary) or contexts (geographical as well as institutional, such as those explored in the cross-national study by Anderson-Levitt and Bueno (2017)). Such activities are brought into being *inter alia* in part through the

deployment of a range of technological objects [EDU-TEC] of varying levels of sophistication (it is important to remember that although much research focuses on the use of ICTs (Tondeur et al., 2012), the [TEC] mode within AIME equally pertains to more straightforward technologies such as pipettes within a school science laboratory or protractors within a mathematics classroom), in part through the use of literacy artefacts (textbooks which have written specifically for educational purposes [EDU-FIC], novels or play scripts which have been written beyond/outside education but which have been translated into educational contexts for pedagogical purposes, and handouts and workbooks that have been written/collected by the teachers). And they are also brought about in part through the assemblage of a wide range of people performing a variety of roles and/or tasks. Teachers, for example, are invariably enrolled in non—academic pastoral duties that are not always commensurable with their own constructions of themselves as professional educators, as discussed in the cross-national meta-ethnography of Kakos and Fritzsche (2017). Some schools, universities and other institutions with an educational remit are founded by and/or align themselves, in terms of curriculum as well as ethos, to religious institutions [EDU-REL]. Others are particularly vulnerable to political decisions regarding funding, inspection, or recruitment [EDU-POL]. Some educational providers explicitly state an ambition to bring about individual as well as social change or transformation [EDU-MET] (metamorphosis is the mode through which any existent can transform itself or bring about transformation, and this might be emotional or psychological for example (Latour, 2013a: 190)). Such change might pertain not only to students but also to parents and other members of local communities (Beach and Vigo-Arrazola, 2020). And yet, notwithstanding this heterogeneity, all of the people and things enrolled within these socio-technical [EDU-NET] networks are nonetheless beings of education.

**Second condition: the felicity and infelicity conditions of [EDU]**

Saying that something is 'right' or 'wrong' within [EDU] is an instance of veridiction – sometimes trivial, sometimes profound – that anyone who has passed through education will easily recognise. But these are not the only veridictions that [EDU] rests on. The multitude of correct and incorrect answers that a student might utter, of accurate and inaccurate measurements that a student might make, or of competently or incompetently physical movements that a student might embody, accumulate over the time that the student spends within [EDU] and come together at specific moments of assessment to form qualifications and certificates [EDU-FIC] that await activation through being read or otherwise recognised by others – students, teachers and stakeholders – all in agreement that the assessments have been carried out tolerably fairly (Rasooli et al., 2018). Students are told what is correct and what is not through performative utterances (Austin, 1962) that encompass the areas/topics that they study (more-or-less willingly, depending on the age of the student and the nature of the institution) but that also pertain to domains that lie outside as well as within [EDU]. The former are straightforward to identify: the ways in which teachers tell their students the 'right' way to organise their examination answers, or the 'correct' way to saw a dovetail joint. The latter might include being told the 'appropriate' way to address a visitor to the school; the 'correct' way to behave when waiting outside the classroom; the 'right' way to dress and behave in public. Nor do such utterances pertain only to students: within different national contexts, the work done by teachers – even where teachers work – are shaped by political initiatives [EDU-POL], by legal frameworks [EDU-LAW] or by religious expectations [EDU-REL]: examples include the impact of successive policy regimes on teachers' professionalism (Beach et al., 2014), and cross-institutional measures to encourage collaboration for professional development in school networks (Rice, 2002). Likewise, idealised notions of

the engaged parent or guardian are constructed through governmental discourses that subsequently fail to understand the challenges faced by students and parents who do not conform to such models, such as the differing ways in which literacies are valued by educational institutions and the extent to which these are aligned to family literacy practices (Compton-Lilly et al., 2020). Educational establishments [EDU-ORG] are suffuse with speech acts that set out to shape or influence or form the trajectories of *all* of the people who move within and through them.

**Third condition: the beings that [EDU] leaves behind**

The educational mode of existence simultaneously engenders and relies on a complex array of beings – human and non-human – in order to be sustained and to sustain itself. In this way, [EDU] is typical of any network: [NET] is a concept that encompasses not only the process by which heterogeneous elements are brought together but also the ongoing maintenance needed to keep the elements of the [NET] in circulation. The [EDU-NET] creates a multitude of texts and documents and is in turn created by them. Policy [EDU-POL] mandates overarching factors such as school leaving ages or the contents of a curriculum, as well as fine-grained factors such as age-mixing in the primary school classroom (Huf and Raggl, 2017). Textbooks [EDU-FIC] provide packets of information for students to read, memorize and discuss. The routinized business of a typical university or college day is punctuated by habits [EDU-HAB]: lessons/seminars that run for fixed periods of time, or the ways in which students shuffle into their seats. Within a school, college or university, the work of the teachers/lecturers is organised separately from – and sometimes by – the work of the administrators and bureaucrats [EDU-ORG]. But the maintenance of these networks requires a constant refreshment of humans as well as non-humans: curricula do not stand still and are refreshed by research as well as professional dialogue (Krishnasamy et al., 2019; Savid-Baden et al., 2008). New lecturers join and others depart (Cahill et al., 2019), graduates collect their degree certificates a few weeks before the new students sign up for their first classes, and parents wait to collect their young children from school: a constant flow of people [EDU-REP] following a variety of trajectories: teachers, school inspectors, government ministers, parents, and students, sustaining and sustained by a concurrent flow of written words, tools, routines, and regulations.

**Fourth condition: the alterity of the beings of [EDU]**

The alterity – the conditions of otherness – of the beings of the mode of education are sometimes straightforward to identify, at other times difficult to ascertain. The straightforward can be exemplified through thinking about books. Penguin Classics or Petits Classiques Larousses, both [FIC], may well find themselves being studied by college students or written about by university academics, but despite being thereby enrolled within an [EDU-NET] these texts are travellers or visitors. A school textbook, by contrast, is indigenous to [EDU], a member of a particular genre of text that has no other home [EDU-FIC]. It would be a category mistake, therefore, to read a textbook whilst believing that it belonged to a different genre. A school building might be used for a civic function such as providing space for a community meeting space or a polling booth, but it remains a school, characterised as [EDU] by furniture, signposts, bookshelves, and other semiotic devices. Students might be marked out through wearing uniforms and/or lanyards, on the basis of their residential status, or in terms of gender or ethnicity (Mangan and Winter, 2017; Neal-Jackson, 2018). And although they will always only ever be temporarily enrolled within [EDU], they will carry traces of that network with them as they move through others. These traces might be material – a qualification certificate for

example [EDU-FIC] that summarises their assessment trajectories. Or they may be embodied – physical and intellectual capacities, moral or spiritual perspectives [EDU-MET; EDU-REL] that have in some ways left their marks on students. Or they may be conspicuous through their absence. It is in comparing the people who do or do not successfully complete their trajectories through [EDU-NET] that the clearest conditions of alterity can be observed, when the life chances of the successful graduate are compared to the life chances of the 'drop-out' or 'failure'. The student who failed their exams and is systematically othered by societies that are increasingly credentialised, exists in contrast to those students who are credentialled and, as they accrue more/higher levels of certification constitute a minority that is increasingly othered from the wider population. And yet both conditions are forms of alterity – it is not the fact of possession of certificates that signifies [EDU] but the fact that the certificates may or may not be possessed, that trajectories within [EDU-NET] have the potential to leave certificates as well as the absence of certificates in its wake. As with any other kind of actor-network, the porous boundaries of [EDU-NET] allow for movement of things as well as people, attitudes as well as discourses, some of which belong to [EDU] and others of which borrow from [EDU], but all of which mark out education as being distinct – as being other.

**Conclusion: [EDU] and ethnographies of education**

At the outset I suggested that there are two ways in which an extension to the cosmology of AIME can contribute to the work done by ethnographers/anthropologists of education. The first contribution is theoretical, and speaks to the open-ended, collective inquiry that has characterised the AIME project from its beginning. This expansion of AIME, through establishing a new mode, is nothing more than a response to Latour's invitation that:

> the laboratory is now wide open for new discoveries […] by proposing accounts different from mine […] we may even be able to sketch out the lineaments of other institutions.
> (Latour, 2013: xx).

Latour does not address education specifically, although he does note that in exploring the technological [TEC] mode the researcher needs to "follow the slow process of learning a previously unknown skill" (Latour, 2013a: 213), suggesting that it is through watching the hesitant apprentice rather than the fluent expert that the ways in which people use technological tools can best be discerned by the ethnographer. In fact the [TEC] mode, together with [FIC] and [REF] are grouped together by Latour and work in concert. And it is alongside these three modes that I propose to place [EDU], and from which point it can make a second contribution, empirical and methodological, although the theoretical should not be seen as isolated from these:

> …humanoids *become* humans – thinking, speaking humans, by *dint of association* with the beings of technology, fiction, and reference. They become skilful, imaginative, capable of objective knowledge, by dint of grappling with these modes of existence.
> (Latour, 2013a: 372, emphasis in the original).

[EDU] provides an explanatory framework that allows the researcher to maintain the uniqueness, the specificity of educational practices alongside the ubiquity and familiarity of so much of what goes on inside schools or colleges,

whilst being free to move beyond such institutions not because the boundaries between them are now able to be crossed, but because these boundaries were only ever spurious in the first place (Tummons, 2021). With this additional tool, conceptual frameworks for making sense of how people talk and write, how non-humans and humans work together, or the ways in which objectivized knowledge is established within the social semiotic space of the mode in question, become available: the four conditions that pertain to any mode reveal what the architects of meta-ethnography have described as "the social institution of education" (Noblit and Hare, 1999: 97). This offers four key affordances that should be considered as augmentations of, rather than replacements for, other well-established approaches to the ethnography of education (Hammersley, 2018).

The first affordance is the category mistake, the breakdown in the [NET] that signifies a matter of concern to the ethnographer/anthropologist, a starting point for inquiry. The assumption that making student teachers write reflective practice assessments will make them reflective practitioners once in the workplace is a category mistake because it assumes both an unproblematic definition of the predictive validity of the assessment task and an unproblematic transfer of the enactment of reflective practice (Tummons, 2020). The second affordance is a move away from a focus on individual institutions as the locus for fieldwork, a shift long advocated for but not always taken up (Walcott, 2011), reminiscent of the ways in which the chains, paths, networks and conjunctions that join people, things, metaphors and stories together are tracked by multi-sited ethnography (Marcus, 1995). With the notion of *a priori* boundaries between sites or domains removed, it falls to the researcher to trace, empirically, the networks [NET] that are of concern to the inquiry being undertaken, including how and where to stop following the actors (Berliner et al., 2013; Latour, 2005, 2013a). The third affordance is an empirical and methodological capacity to explore the practices, cultures, artefacts, tools, and people of education in the broadest sense without requiring a commitment to provide or engage with an explanatory framework for learning, different models of which are contestable at best (Blum, 2019; Illeris, 2007). The final affordance foregrounds the principle of symmetry that is one of the main contributions of actor-network theory and that is maintained within AIME – the refutation of an *a priori* difference between human and non-human actor (Latour, 2005). This principle allows for a shift of emphasis away from the anthropocentric concern to answer a question such as "how and why do human beings *educate* the way they do?" (González, 2010: s249, emphasis in original), towards the question (to paraphrase Latour) "what are the beings of education we are likely to encounter if we ask ourselves the question of their existence?"

Education requires places: workshops, training wards, lecture halls, and classrooms. It requires stuff: tools, textbooks, reading lists, counting blocks. It needs policy, funding, government departments, curriculum authorities, and examination boards. And it takes people, places and stuff that are not in and of themselves particularly about education at all, although they are enrolled within it. Ethnographies of education are not restricted to classrooms, workshops and lecture halls. They encompass school corridors, staff rooms, parent-teacher meetings and private tuition sessions, funding agencies, government departments, and standardisation bodies. The things, people, institutions and places that are of education are so distinct, notwithstanding their overlaps with and connections to other aspects of life such as politics, or religion, or technology, that they need to be considered beyond institutional constructions such as primary schools or technical colleges or universities. Rather, these beings of education constitute a particular sphere or collective, overlapping with other areas of life rather than walled off from them. It is in education that people might be allowed to try using tools for the first time that they would not otherwise be able to

handle, have access to literature that they would otherwise not necessarily encounter, and associate with bodies of objectivized knowledge reified (albeit imperfectly) within curricula. It is within schools, workshops, colleges, adult education centres and universities that beings of technology, fiction and reference are brought together, specifically for the purpose of affording access to them. The impulse for doing so might be a religious one [REL], or a political one [POL]; the curriculum might focus on bodies of knowledge [REF] or moral and social values [MOR]; the underpinning philosophy/ideology might refer to social and cultural reproduction [REP] or to the enlightenment of the individual [MET][4]: it is through further empirical research that these inquiries can be resolved. But throughout these inquiries, the fact that the places, events, people and things that the ethnographer will be concerned with are all of education is unavoidable, and this is why, from the standpoint of AIME, we can consider education as occupying a distinct place in the world as a mode of existence: [EDU].

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[1] I subscribe here to Anderson-Levitt's statement that "many non-anthropological ethnographers define ethnography more or less as anthropologists would" (2011: 13) and draw on examples from ethnographic rather than anthropological literature as this reflects my own publication/research activity (though see Hasse (2015:6) for a model of ethnography/anthropology as an analytical/empirical continuum).

[2] As with other aspects of the inquiry, it is in the AIME website [http://modesofexistence.org/inquiry/#a=START+UP&s=0] rather than book (Latour, 2013a) that an operationalisable explication of the component elements of the modes is provided, evidencing the digital humanities impetus that underlined the AIME project when first published (Ricci et al., 2015).

[3] Latour (2013a) variously refers to "anthropologist/l'anthropologue" (71 instances), "ethnographer/l'ethnographe" (8 instances) and "ethnologist/l'ethnologue" (83 instances).

[4] The 15 modes identified within AIME are conveniently summarised in Latour (2016: 543-546): the three that have not formed part of this account are [HAB]it, [ATT]achment, [PRE]condition.