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Translanguaging and flows: towards an alternative conceptual model

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Abstract: While much scholarly work has contributed to the theorizing of translanguaging, in this article, we sketch an alternative model based on materiality and information theory (Bateson, Gregory. 1951. Information and codification; and Conventions of Communication. In Jurgen Ruesch & Gregory Bateson (eds.), *Communication: The social matrix of psychiatry*, 168–227. New York: Routledge; Lemke, Jay L. 2015. Feeling and meaning: A unitary bio-semiotic account. In Peter Pericles Trifonas (ed.), *International handbook of semiotics*, 589–616. Dordrecht, the Netherlands: Springer) to theorize translanguaging together with *flows*, through reconsidering issues of speech events in which features normally associated with different language systems co-occur. And in doing so, we hope to contribute to the ongoing theorizing work in the field of translanguaging.

Keywords: information theory; materiality; social semiotics; trans-knowledging; translanguaging

1 Introduction

Since García and Li's seminal work on translanguaging in 2014, translanguaging has become a hot topic (Canagarajah 2018; García and Lin 2017; Li 2018; MacSwan 2017; Nikula and Moore 2019). While translanguaging has become a buzzword in contemporary literature of applied linguistics and language education, it has also attracted its fair share of critique. Of prominence is Jaspers' 2017 commentary:

... translanguaging is likely to be less transformative and critical than is often suggested. The main reasons for this are that translanguaging scholars share a number of convictions with the monolingual authorities they criticize ... (Jaspers 2017, p. 2)

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Some of the recurrent concerns and queries can be summarized as follows:

- (1) ‘What are the differences between translanguaging and code-switching/code-mixing or code alternation? Why invent a new term when there is already a well-established tradition of researching code-switching/alternation?’
- (2) ‘I cannot wrap my mind around the notion that there are no boundaries among languages; that a speaker only has one holistic repertoire and there are no internal differentiations in this repertoire. It goes against my gut feeling that I am speaking different languages ... How does translanguaging theory explain the fact that I do feel that I am speaking different languages?’
- (3) ‘Translanguaging pedagogy is similar to existing pedagogical approaches that argue for the importance of valuing students’ familiar linguistic and cultural resources (Cook 2001; Cummins 2007) and sociocultural theories of ‘funds of knowledge’ (González et al. 2005); what’s new about it?’
- (4) ‘There is limiting potential of translanguaging theory to disrupt the hierarchy of languages: many of the translanguaging examples sound so much like previous examples of using L1 to scaffold the learning of L2, L3 ... etc.; the hierarchy is still there. Translanguaging is just a means to the end of teaching the standardized language valued by schools’ (This seems to be the main focus of the critique by Jaspers 2017).

(Adapted from Lin et al. 2020, p. 47)

The critique of Jaspers also includes an injunction to improve the conceptual clarity of the term, translanguaging:

In sum, translanguaging can apply to an innate instinct that includes monolinguals; to the performance of fluid language use that mostly pertains to bilinguals; to a bilingual pedagogy; to a theory or approach of language; and to a process of personal and social transformation. By any standard this is a lot for one term. (Jaspers 2017, p. 3)

While much scholarly work has contributed to the theorizing of the term, translanguaging; e.g., Li’s (2018) seminal article on Translanguaging as a Practical Theory of Language, a tenacious critique remains with the question of whether an individual has one unitary repertoire of meaning making resources or whether there are sub-divisions (whether separate or coordinated) in the repertoire (Cummins 2021). The existing literature on translanguaging frequently refers to an individual’s holistic meaning making repertoire and it seems to be precisely this term that has invited some robust queries (Cummins 2021; MacSwan 2017). To contribute to breaking through this theoretical impasse, we intend to sketch an alternative theoretical model based on materiality and information theory (Bateson 1951; Lemke 2015) for theorizing translanguaging and *flows*, through reconsidering issues of speech events in which features

normally associated with different language systems co-occur. And in doing so, we hope to contribute to the ongoing theorizing work in the field of trans-languaging. In the last section, we shall revisit the above-mentioned concerns in light of the proposed theoretical model of translanguaging and flows and outline some directions for future research.

2 Reconsidering traditional views of languages from the lens of *flows*

The traditional view of languages is insufficient in part because it presumes separate and isolated language systems as pre-existing realities and in part because it overemphasizes conscious choice within such systems by speakers. The primary error in these views is that they are insufficiently grounded in the observable *material processes, mediums, and flows* of the events. They are also biased in the first case by emphases on the quasi-reality of paradigmatic systems of contrasts as theorized in structuralist linguistics (Jakobson and Halle 1956), and in the second case by an ideological bias in favor of individual intention, action, and responsibility.

However, let's consider that speech events are in the first place *unfolding activities across multiple material media and multiple timescales*. Such unfolding activities are in the first place *flows*; they are not abstractions in the usual sense, but rather they are instances of *material flows of matter, energy, and information*. The human body is one medium in which these flows occur, and the human brain is merely one part of the participating body. The activities and flows are not normally confined to a single body, and the events occur in and through multiple mediums including one or more human bodies, other immediately available artifacts and material media, and the larger scale flows of matter, energy, and information which sustain the existence of all these mediums through time.

We have used the term “speech event” because it is familiar, but in fact what we have in mind is more than what is often included in this term. Speech alone cannot be the focus without also taking into consideration nonspeech actions, nonspeech events, physical responses of non-human mediums, and in general *all processes and flows which contribute to the unfolding of an activity* or event. We might call these “action events” or just events, except for the tendency to think of events as happening only on a single, usually short, timescale. We will instead always assume that an unfolding action event is being constituted and constrained on and across multiple timescales, and if one of these is in focus in the discussion at a particular point, we will always try to keep in mind both the longer-term, larger

scale niches and constraining processes at higher scales and also the shorter-term, smaller-scale contributing sub-processes which are being organized into the emergent event at the scale in focus (Lemke 2000; see Table 1).

We take here a functional approach to speaking and other actions, processes, practices, and activities which together produce unfolding events or flows of unfolding processes. This means that primary relevance and attention is given to any such processes which contribute to a functional outcome, that is, on which that outcome appears retrospectively to have been dependent. A retrospective view of function is somewhat necessary in practice, but in principle function applies on and across multiple timescales, so that an action or practice, including an utterance, functions to organize shorter-term contributing processes and flows, such as speech articulation, as well as to contribute itself to immediate and longer-term outcomes, such as responding to another's utterance and keeping a conversation going (see Table 1).

This view generalizes prior work that emphasized the complementarity of a dynamic moment by moment speech production or text production perspective with a more synoptic, retrospective view of meaning production (Lemke 1988). The first focuses on what an utterance could be meaning at-the-moment, the second on what it is taken to have meant looking back from some future point in the text or connected discourse. Now we are saying that there are many intermediate timescales between the most momentarily meaningful and the most distantly relevant retrospective views. Unfolding events, including extended speech, conversation, talk-in-action, etc. are organized and patterned as a consequence of the interdependence of processes and flows across these many scales (see Table 1).

Let's imagine then an event unfolding across several minutes in which two people are both speaking and acting cooperatively to achieve some conventional outcome. The focus of our analysis is on the unfolding event itself as an entangled complex of flows of matter, energy, and information that in principle encompasses what is happening from the molecular and cellular level to that of the whole event once completed and onto include larger scale, longer-term flows on which the material media through which the event occurs themselves depend for their longer-term existence (Lemke 2006). This resonates with process anthropologist Tim Ingold's idea of 'with-ness' (or 'correspondence') (2020). As Ingold explains:

Whereas 'of-ness' is intentional, 'with-ness', I would argue, is *attentional*. And what it sets up are relations not of intersubjectivity but *correspondence*. ...

We have been so concerned with the interaction between ourselves and others that we have failed to notice how both we and they *go along together in the current of time*. ...

Table 1: Representative timescales for education and related processes (inspired by Lemke 2000, Table 1, p. 277 and Scollon and Scollon 2004, Table 1, p. 168).

Semiotic process	Duration	Reference events/ semiotic unit	Personal/group histories
Vocal articulation	Fraction of a second	Edge of awareness.	
Phoneme	1–200 ms	Segmental level.	
Word		Suprasegmental levels.	
Utterance	1–10 s	Word, holophrase, short monologue.	Student-student interaction, student-teacher interaction.
Exchange	2–10 ² s	Dialog, interpersonal relations, developing situation, utterance, sentence.	Student-student interaction, student-teacher interaction.
Episode	10 ³ s (15 min)	Thematic, functional unit; speech genre.	Student-student conversation; student-teacher conversation, lunch break, changing classrooms; parent-teacher conversation.
Lesson	1 h	Curriculum genre.	Studying in a library; parents-teachers meeting.
Lesson sequence	2–3 h	Macro curriculum genre.	Reviewing content for an exam; planning and organizing a school event.
School day	1 day		A school event (science fair); a field trip.
Unit	2–10 days	Thematic, functional unit.	Organizing a school event.
Unit sequence	2–4 weeks	A unit sequence in a course.	
Semester/term	4–6 months	Organizational level; unit planning.	
Academic year	8–12 months	Organizational level; curriculum planning.	
Multi-year curriculum	2–4 years	Elementary education, secondary education, (parts of) a degree; curricular changes.	The stages in K-12 education; a college degree, a bachelor's degree; creating, approving, and implementing new curricula.
Lifespan educational development	20–30 years	Biographical timescale; urban development.	Building a family; identity change(s); promoting community change(s); progressing in a career.
Educational system change	200–300 years	Historical timescale; new institutions.	
Worldsystem change	3,200 years	New cultures; new languages; limit of historical records.	

This shift from interaction to correspondence entails a fundamental reorientation, from the between-ness of beings and things to their *in-between-ness*. Think of a river and its banks. We might speak of the relation of one bank to the other, and crossing a bridge, we might find ourselves halfway between the two. But the banks are continually being formed and reformed by the waters of the river as they sweep by. These waters flow in between the banks, along a line orthogonal to the span of the bridge. To say of beings and things that they are in-between is to align our awareness with the waters; to correspond with them is to join this awareness *with the flow*. (Ingold 2020, p. 41; italics added)

We can draw on Ingold's insights in understanding the following example. For instance, if we see a speaker translanguaging, we do not want to regard it as a purely individual phenomenon. If we think about the individual's history, then an individual who will at some time in the future do a translanguaging performance must be an individual who in the past has encountered these different varieties. This individual must have been integrated into flows, integrated into communities, in which these various resources and meanings and ways of speaking have connected you to other people, connected you to written texts, connected you to just walking around in a world, in an ecosystem. And that is *all flowing through time*, influencing you and influencing now the cumulative probabilities of you making different choices in the translanguaging performance of right now, as well as fitting to the current circumstances. So, when we say, well, this person has chosen this way of expressing themselves in more than one named language now, in part because they are talking to a person like this and in part because the institutional tenor is like that, and so forth. Yes, but not just then at that moment. We also have to go back and take into account the history that leads up to that moment. Under this view, persons can be seen as constituted by flows (Lemke 1995).

The point we are trying to make here is that conversation and interaction should be seen as an *emergent* phenomenon in a dynamic, open system of people '*going along together*' talking in a material environment with a history. This view diverges from the usual model of intentional actors producing utterances to the newer model of *people being entrained and caught up in ongoing processes (or flows) at the trans-individual level* (i.e., going along together). We are never the sole authors even of our own utterances.

Continuing with the above example, getting done what needs to be done requires cooperation, and effective cooperation depends on speech exchanges. But we want to shift our view away from the two people as autonomous agents and rather look at how the sequence and flow of utterances entrains them and comes into existence through them as its medium. And not only of course through them, but also through the air as an acoustic medium, and not just as we imagine by default quiet and still air, but air with the absence of loud noise that would disrupt or functionally nullify speech-as-cooperation. Each body produces the speech

sounds that it does not simply as an autonomous source, but *as a co-participant (as a medium)* that is more or less fully entrained and responsive to surrounding conditions through the mechanism of their flows to and through the body, for example what is heard, what is seen, what is felt (acoustic flows, flows of visible light, flows of compressive pressure and neural responses and transmissions, etc.). The speech event thus gets itself done through the organized and coordinated entrainment of both bodies and a variety of artifacts and elements of the setting involved.

Now focus on the ongoing production of a particular utterance within this unfolding event. Why is it produced in the first place? Usually in response to something prior, whether a prior utterance or small occurrence in the setting. Or perhaps as a next step following the completion of a prior step in a typical ongoing sequence (e.g., a speech genre). In fact, most actions and utterances even down to the timescale of particular syllables and enunciations are part of longer-term ongoing, unfolding *typical sequences*. Over time by participating as a medium (i.e., consider oneself as a medium) in the emergence of many conversations, activities, typical speech events, etc., we acquire habits and a *habitus* for responding in particular ways to particular conditions through time (Bourdieu 1994). We come to have a feel for what comes next in enacting a typical event, in completing a habitual phrase, in continuing a prosody, sustaining a mood, etc. We are marked with the traces of our prior participations in action-events; we are ourselves, bodily, *semiotic media* on which our life has written a unique “text” of experiences/under-goings, which in turn shapes how we participate in future events. This view flips our previous human-centric view of ourselves as the intentional initiator of the speech event; instead, we are media participating in the unfolding events that flow through us!

We say here “feel” because we are sometimes conscious of our entrainment in these ongoing unfoldings (flows), but most often they are not consciously self-monitored, except where circumstances require variation on habitual patterns. We have a feeling that things are going along normally and that is often enough. But clearly, we do not simply exactly repeat prior sequences. *In fact, at ultra-short timescales no sequence is ever exactly repeated.* But small differences do not matter so long as they are functional at a higher timescale. Slight variations in how we pronounce vowels or consonants will not trigger a sense that we have shifted from one distinctive feature to a phonologically contrasting one. This is a general feature of complex dynamical systems, in which lower-level fluctuations are buffered at higher levels so that only functionally equivalent classes of emergent co-patterning of processes at the lower-levels make a difference at still higher levels. Any member of the functional class will do, so long as it is not so divergent from the norm that it sounds like a member of a different class. This resonates with

Rene Thom's idea of structural stability as a basis for phonemic units and similar contrastive paradigmatic relationships (Thom 1975) in the tradition of Jakobsonian phonology (Jakobson and Halle 1956).

Nevertheless, there are normally aggregate differences that do make a difference at higher levels and which correspond to distinct "attractors" in the dynamics of the system. These "differences that make a difference" (Bateson 1951, 1972) are the basis of functional contrasts and, in traditional linguistic terms, of paradigmatic alternatives. We can also take this feature of multiscale dynamics as a basis for noting that what counts from the point of view of longer-term larger scale functional outcomes is not the microscopically detailed shape of an utterance or action, but only a class or category of functionally equivalent doings, what we might consider to be an "envelope" within which small variations are inconsequential. For instance, Thibault (2011) draws on the idea of "attractors" in dynamical systems theory to explain "first-order languaging dynamics" as "a nonlinear, de-stratified flow of matter-energy and information" while "lexicogrammatical patterns are attractors on longer, slower, cultural timescales that constitute basins of stability and becoming that may be embodied (not encoded) in first-order dynamics" (p. 780).

As we look across many timescales, we find envelopes within envelopes within envelopes. And we also find that distinctions that do not make a difference under some circumstances can and do make a difference under other circumstances. Sometimes any phrasing will do, and other times we have a choice between one variant alternative and another, such that some outcomes are indifferent to the choice, but other simultaneous or longer-term outcomes are sensitive to that choice. This is the foundation of the well-known phenomenon of connotative meaning, and also of many kinds of indexical meaning. We may answer your question with a simple word, but how that word sounds may index for you that we are speaking with a foreign accent, or that we have a bad cold. It may also in context function as an allusion to some classic or shared text.

We believe that we have here a basic material systems explanation for why meaningful human speech and action can be seen as being organized both syntagmatically and paradigmatically. Syntagmatic organization is a normal outcome of habit formation (cf. Peirce 1991) in a temporally organized dynamical system. Paradigmatic organization represents habituation of functionally contrasting alternatives within temporally unfolding sequences across different time scales. Novelty in speech and action and the fact that more extended speech or action rarely exactly repeats even for individuals have the same sources on much shorter timescales that the endless proliferation of new species does on evolutionary timescales. In both cases it is the richness of contexts (situational or ecological) which ensures that new variants are constantly being produced and selected for

those which will propagate in communities or ecologies. This is particularly true when we take into account that what makes a functional or adaptive difference depends not only on the at-the-moment situation but also on shorter or longer histories and ongoing processes at much longer timescales. These may be the histories of dyads in conversation or of progressive deforestation or climate warming; they may be processes of social accommodation across cultures or a Great Vowel Shift.

We cannot step into the same river twice, and for some purposes it doesn't matter, and for others it matters very much.

History is not just something which existed in the past and does not exist materially now. Past events, past participations, past unfoldings, past under-goings, leave their traces in material mediums including human bodies (akin to Scollon and Scollon's notion of historical body; see Scollon and Scollon 2004), arrangements of furniture, wear and tear, habit formation, action tendencies, dispositions, etc. In many cases envelopes of prior events leave traces which make it more likely for new instances to fit within those envelopes. This is the basis of what we call learning, habit, and *habitus* (Bourdieu 1994). *But these are not phenomena internal to individual organisms. They are in all cases phenomena of the entanglement of material flows across multiple mediums*, which may include human bodies but always also include other bodies, artifacts, features of the landscape and setting, etc. Complex material systems remember. That is to say, their histories are relevant to the probability of different outcomes on future occasions.

3 Issues of language and translanguaging

Descriptions of large corpora of speech events frequently result in the identification of syntagmatic and paradigmatic regularities. These corpora remove situational context, aggregate across many speakers or writers, and frequently also across many genres and institutional settings. They tend to be biased towards written norms and they tend to exclude utterances or texts produced in the same physical community by speakers who are not deemed to be using "this language". That is to say, if what linguists recognize to be different languages, or even substantially different dialects are in use by speakers in the community, corpora for analysis tend to remove or separate examples that are not deemed to belong to the same "language".

Historically national languages were the product of political programs of homogenization and control (Milroy and Milroy 2012). The linguistic definition of a language variety, although it no longer privileges standard dialects, still depends on an imagined and exaggerated homogeneity of usage among speakers. Even

more, it argues somewhat circularly that the syntagmatic and paradigmatic regularities to be found in a relatively homogeneous corpus define a linguistic system that can be treated as an object of study as if it were a material reality. Without doubt this traditional approach of linguistics has produced many insights into features of language in general and the language of various speech communities. However, it is fundamentally limited when it comes to the study of speakers and communities in which linguistic variation goes so far beyond dialect variation that it becomes what is traditionally called multilingualism. *Yet, it is not true that in all cases or perhaps indeed in most cases that it is multilingual in the sense that separate and distinct language systems are being employed in some sort of switching or mixing.* Rather, for many speakers and local communities *the linguistic meaning making resources conventionally assigned to separate languages operate coherently as a single resource repertoire whose historical connections to distinct language systems may be of only academic relevance.*

It may well be the case with human language varieties as it is with birdsong and many observed nonlinguistic communication systems among other species that there is a tendency of interbreeding communities to segregate themselves according to distinct homogeneous varieties of the communication system (but see Pepperberg and Schinke-Llano 2010). It is certainly the case culturally in the West in modern times since the era of Nationalism that even when children are raised bilingually in a home where members of the family speak two conventionally distinct languages, parents may try to push the children to keep the two languages separate and distinct. There is, however, no apparent biological or communicative imperative for doing so. And we do observe, especially when we bother to look for such cases, that many speakers produce utterances, conversations, and extended discourse in which *features from historically distinct language sources co-occur in intimately interconnected ways that form a coherent language and communication system in their own right.* In communities where speakers of this kind are numerous and in frequent communication with each other, it seems only natural that *shared patterns of preferred feature combinations, sequences, and meaning contrasts would develop.* The nature of these shared or mutually understood patterns may not be the same as those traditionally described by linguists for idealized “pure” languages. Or they may. This is an empirical question about which researchers, educators, and policymakers need to keep an open mind. The nature of these regularities in such “translanguaging” communities or communication networks may depend on how long the community has been in existence, how stable its membership is, the rate of change in preferred or newly meaningful options, etc. Probabilistic descriptions of sequence contingencies suggest themselves as descriptive tools in addition to or in place of all-or-nothing notions of “grammaticality”.

This does not mean that such communities consist of autonomous individual speakers who simply pick and choose among language features without regard to any emerging shared system of practices and expectations among those with whom they speak. Nor is it possible that any such emerging system would not be organized both with regard to preferred sequences, higher and lower probability combinations, systematic meaning contrasts, and indexical values of features. *But we need not expect that such a system at least in the shorter-term will have as rigid a set of grammatical and semantic regularities as we find in standardized (mainly written) national languages, or their long-established, formal, institutionalized registers and genres.* The range and frequency of variation is likely to be substantially greater. *These speakers are operating in principle in a larger space of semiotic possibilities and combinations,* where the “envelopes” may be larger and looser, and where emerging functional regularities are still in flux. Nor should we expect that every such community must by necessity evolve towards rigid linguistic uniformity and normativity. One has only to look at texts of earlier ages prior to nationalist unification movements to see how normal it was to draw on the resources of multiple historically distinct language sources and to produce with them even very artful outcomes; for example, the Speke Parrot poem widely circulated in Europe in 1521 (Skelton and Dyce 1970).

Nor do we have to imagine that this freer mode of translanguaging arises only in children in bilingual homes or multilingual communities. It can arise as well when people learn a “second language” or add further language options to their repertoire. That is to say, when we learn to participate in settings where historically different language forms are in circulation usually alongside (if clearly separated from) those we have been habitually using. In such settings, whether classrooms, online activities, or direct participation in communities of speakers using these new (to us) forms, *we find ourselves becoming entrained in unfolding speech events where we are acquiring new language and resources.* How we then deploy those resources alongside our habitual ones depends very much on the further speech events and cultural activities in which we become entrained. If those events and the communities in which we operate insist on keeping “languages” separate, we are likely to do so except inadvertently. If the activities and events which we come to frequently undergo do not so insist, or even support or require us to deploy all our resources in a freer way, *then we are likely to go with that flow.*

Apart from politics and certain cultural norms, do language forms and patterns with distinct historical origins tend to repel one another? We think this is unlikely as a matter of material necessity. *Abstract structural forms do not interact, attract or repel.* It may still be the case, *however,* that *the material processes and flows involved in the production of speech according to the habits coming from these*

different sources may in some respects be easier or more difficult to conjoin at particular timescales. We are thinking here initially of prosodic patterns and phonological features. Beyond this the regular habits of completion of habitual sequences, including ordering patterns, may make the inclusion of features which have very different or contradicting sequence patterns something that is likely to only occur at certain points in speaking or responding (e.g., phrasal or prosodic unit boundaries, conversational turn boundaries, or after interruptions or pauses). But combinations from other historically distinct sources may very smoothly mesh with one another, with correspondingly few barriers.

Although we are mainly formulating this perspective in relation to speech, *writing is likewise a matter of material actions and flows in which our bodies, writing instruments, and writing media among much else form the mediums.* Because of these material differences with the mediums of speech and speech-in-action, the constraints and affordances and the probabilities for various combinations may well be different. To the extent that our sense of what looks good in writing follows our sense of what sounds good in speech, there will be similarities. But we know that frequently the norms of written language diverge substantially from those of spoken language, and our inner voicings may go relatively silent as we freely innovate in written combinations of resources from different historical sources. This is an interesting area for future empirical investigation. We can also expect it to be genre dependent for reasons of cultural norms and social pressures. Longstanding formal and institutionalized written registers and genres will not normally exhibit features of multiplex linguistic repertoires in the same ways as newly emergent, informal, and weakly or un-institutionalized ones (e.g. today in online social media, experimental artistic production, or “mashups” vs. in traditional educational, legal, academic, or bureaucratic contexts; see Li et al. 2020).

4 Revisiting the queries

In sketching out these arguments about translanguaging and flows, we are not aiming at closure about the theory of translanguaging; rather, we hope to open up this theorizing for furthering the project of conceptual building in the field of translanguaging. Much published work can be said to be “consuming” the concept of translanguaging without contributing to its theorizing. We hope the sketching of these theoretical arguments could contribute to the ongoing theorizing of translanguaging and in a small way, perhaps, help address some of the theoretical concerns and queries mentioned at the beginning of this paper. Below, we shall revisit these questions in light of the theoretical model sketched above:

- (1) ‘What are the differences between translanguaging and code-switching/code-mixing or code alternation? Why invent a new term when there is already a well-established tradition of researching code-switching/alternation?’
- (2) ‘I cannot wrap my mind around the notion that there are no boundaries among languages; that a speaker only has one holistic repertoire and there are no internal differentiations in this repertoire. It goes against my gut feeling that I am speaking different languages ... How does translanguaging theory explain the fact that I do feel that I am speaking different languages?’

To address queries (1) and (2), we have outlined a theoretical view of translanguaging based on materiality and information theory. This view diverges from the usual view of intentional actors producing utterances to the newer model of *people being entrained and caught up in ongoing processes (or flows) at the trans-individual level* (i.e., going along together). We cite Thibault (2011)’s use of “attractors” in dynamical systems theory to explain first-order translanguaging dynamics as flows of matter-energy and information while “lexicogrammatical patterns are attractors on longer, slower, cultural timescales that constitute basins of stability and becoming that may be embodied (not encoded) in first-order dynamics” (p. 780). While code-switching/mixing research focuses on “the switches/mixes” of “codes”, our theorizing emphasizes *people being entrained and caught up in the ongoing entanglement of material flows across multiple mediums*, which may include human bodies but always also include other bodies, artifacts, features of the landscape and setting, etc. As for the question of whether there are separate languages, varieties, genres, registers, styles, etc.? We see these as patternings that are like envelopes within envelopes within envelopes, which are more or less open depending on historical and ongoing circumstances. In short, we want to highlight the theoretical idea that:

Making meaning is a practice, a process, an activity. It is not itself a formal system. All formal systems, all meaning relations, are immanent in and enacted by our actions, by what we do in using them. Our objective in inquiry is to add to and change the patterns of our actions in such a way that we can analyze and criticize the way things are done now and create new, different patterns in place of the automatic ones we are limited by. (Lemke 1995, p. 133)

In this sense, the debate between whether an individual has a holistic repertoire of resources or separate repertoires (or separate sub-divisions within the same repertoire) is a debate about our formal representations of linguistic systems, which are abstracted from first-order dynamics of flows of matter-energy and information. These formal systems are second-order entities. They can have an influence on first-order meaning making dynamics but they are not meaning making itself.

Translanguaging theory can thus offer a theoretical lens to research the possibility of creativity and transformation in education processes. In particular, it can address queries (3) and (4):

- (3) ‘Translanguaging pedagogy is similar to existing pedagogical approaches that argue for the importance of valuing students’ familiar linguistic and cultural resources (Cook 2001; Cummins 2007) and sociocultural theories of ‘funds of knowledge’ (González et al. 2005); what’s new about it?’
- (4) ‘There is limiting potential of translanguaging theory to disrupt the hierarchy of languages: many of the translanguaging examples sound so much like previous examples of using L1 to scaffold the learning of L2, L3 ... etc.; the hierarchy is still there. Translanguaging is just a means to the end of teaching the standardized language valued by schools’ (This seems to be the main focus of the critique by Jaspers 2017).

Semiotically and in terms of materiality and information theory, we want to emphasize that many more meanings can be made through translanguaging. Translanguaging allows us to make many more meanings because it offers many more possible combinations through its larger repertory of historically distinct language resources. Each such combination can now potentially be used functionally for a distinct meaning (and/or connotation). Translanguaging is thus a superior communicative resource to either monolingualism or strict language-separating multilingualism, including for pedagogical purposes and language policy in education.

This raises an educationally important and decolonial point as it can expand the theorizing of translanguaging towards the theorizing of transknowledging (Heugh 2019): when many more meanings can be made, especially when many more *previously denigrated meanings* (knowledges and ways of seeing/organizing/relating to the world) can be made and validated in the curriculum, classroom, and beyond (Lin 2012, 2015). Our theorizing of translanguaging as sketched out above thus contributes to providing some of the theoretical grounds in furthering epistemic justice as part of an agenda for social change (i.e., not just for scaffolding). As Heugh (2017) points out, we need to theorize translanguaging as engaging new ontologies of speakers and languages (Heugh 2017). In what is laid out above, we contribute to sketching out such a new ontology.

5 Directions for future research

As pointed out earlier, much published work can be said to be “consuming” the concept of translanguaging without contributing to deepening its theorizing.

Similarly, some published work on translanguaging can be said to be a “multi-modal version” of previous code-switching/mixing research. As with pioneering with new theory, the path leading towards new ways of doing research is not well-established and well-trodden, and below are just some initial proposals based on our emphasis on translanguaging and dynamic flows:

- (1) Analysis of moment-to-moment meaning making processes as part of complex *phenomena of the entanglement of material flows across multiple mediums*, which may include human bodies but always also include other bodies, artifacts, features of the landscape and setting, etc. This research orientation departs from the traditional linguistic analytical focus on the speaker/listener dyad or the human participants as center of interactions with everything else analyzed as “context”. In this sense, we can learn from some of the pioneering studies conducted from new materiality theoretical perspectives (e.g. Toohey and Smythe 2021; Toohey et al. 2020).
- (2) Complex material systems remember. That is to say, their histories are relevant to the probability of different outcomes on future occasions. Based on this theoretical view, research needs to take into consideration the history of material systems, including but not limited to the historical bodies of the human participants. In this sense, Scollon and Scollon’s nexus analysis (2004) seems to be a promising methodology to draw on to develop new ways of doing educational research with an analytical focus on complex material systems. Nexus analysis is action-focused research; it departs from traditional ethnographic research that focuses on human participants. We would further push for dynamic process/flows-focused research.

To conclude this article, we would like to outline some specific research questions for researchers in the field to consider:

- (1) What is the nature of the structuring and the ordering in translanguaging performances? They are not as tightly structured as formal written grammars would dictate, but they are not so loosely structured that any mix is possible. They are something in between.
- (2) If translanguaging performances can be conceptualized as including complex performances of trans-registering, trans-styling, or trans-featuring even by “monolinguals”, how would you explore and describe the characteristics, structuring and patterning, and meanings of these complex dynamic performances? What would be the methodological approaches to move the field forward? What insights could the theoretical perspective of ‘translanguaging and flows’ offer?
- (3) Since writing is also a matter of material actions and flows in which our bodies, writing instruments, and writing media among much else form the mediums.

Because of these material differences with the mediums of speech and speech-in-action, the constraints and affordances and the probabilities for various combinations may well be different. To what extent our sense of what looks good in writing follows our sense of what sounds good in speech? What does a moment-to-moment analysis of the dynamic writing process look like? What methodological approaches can be developed to analyze this dynamic process?

- (4) When does transknowledging take place and how? What methodological approaches can be developed to analyse transknowledging processes? Do these processes encompass both speech and writing processes?

(Adapted and extended from Lin et al. 2020, p. 74)

As the saying goes, ‘It takes a village to research a village’. We hope this article can inspire a new generation of researchers and scholars to deepen and extend the theorizing of translanguaging, while developing the new research methodologies that will almost certainly be needed. We hope that our initial sketch here of a *dynamic process model of translanguaging and flows* can inspire and help them in this endeavor.

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