



A story of bodying in science education

Christie C. Byers¹ · Maria F. G. Wallace²

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Abstract

In poetic dialogue with *Becoming Alive within Science Education (Research): Thinking with Life History(ies), Bodies and Stickiness*, stories of bodying and body(ies) of work are playfully explored.

Keywords Poetic inquiry · Science education · Posthumanism · Affect · Research-creation

A lived story. A body of work. Or is it, was it, the other way around?

In their article, *Becoming Alive within Science Education (Research): Thinking with Life History(ies), Bodies and Stickiness*, El Halwany et al. (2021) provide science educators and researchers of science education much to consider. We use this space to accomplish three objectives: (1) respond to the posthumanist invitation set out by El Halwany et al. (2021); (2) illuminate a body of work that has been in the making; and (3) amplify El Halwany et al.'s (2021) call to explore life history(ies) as ripe with pedagogical possibility to be/live differently. Building on El Halwany et al.'s (2021) use of *thinking with nature* (Higgins et al. 2018), we further complicate the relationship between nature, culture, and the work of research on science education.

The entangled relationship between the stories we live, the work we embody, and the bodies of work we live has enduring implications. Whether those stories capture affective experiences producing the conditions of science education or (as we show in this piece) multispecies encounters (Haraway, 2007), life history(ies) render the affective experience (ill)legitimate. Also inspired by Whatmore (2006) we recognize:

This review essay addresses issues raised in El Halwany et al. (2021) paper entitled: *Becoming Alive within Science Education (Research): Thinking with Life History(ies), Bodies and Stickiness* <https://doi.org/10.1007/s11422-020-09994-4>

✉ Christie C. Byers
cbyers3@gmu.edu

Maria F. G. Wallace
maria.wallace@usm.edu

¹ George Mason University, Fairfax, Virginia, USA

² University of Southern Mississippi, Hattiesburg, Mississippi, USA

An urgent need to supplement the familiar repertoire of humanist methods that rely on generating talk and text with experimental practices that amplify other sensory, bodily and affective registers and extend the company and modality of what constitutes a research subject. (p. 606–607)

Notably, El Halwany et al. (2021) make a unique contribution in that they explicitly illuminate the ontological tensions of engaging posthumanist research for readers. We attempt to extend this commitment to transparency by sharing a glimpse into another lived story; another body of work that has been (and continues to be) in the making for several years. Taken together, these persistent inquiries encourage us to deeply question onto-epistemological and methodological boundaries of research on science education.

“You had me at ontology.”

As many researchers of science education who work in the margins know, these words are rarely spoken aloud; yet, this unlikely occurrence is how we (Christie and Maria) originally met at a science education research conference in 2016. Since then, we have exchanged infinite musings of “what if,” “why must we,” and “perhaps something different can exist” (e.g., Wallace & Byers, 2018). From thinking-feeling with horseshoe crabs to conversations about teaching, encountering this work on rethinking life history(ies) is just the most recent invitation for us to follow questions of nature hidden in plain sight (Wallace et al., 2018). Specifically, we were inspired to compose with this body of work and generate a new research-creation: a poetic dialogue about bodying (Manning, 2016).

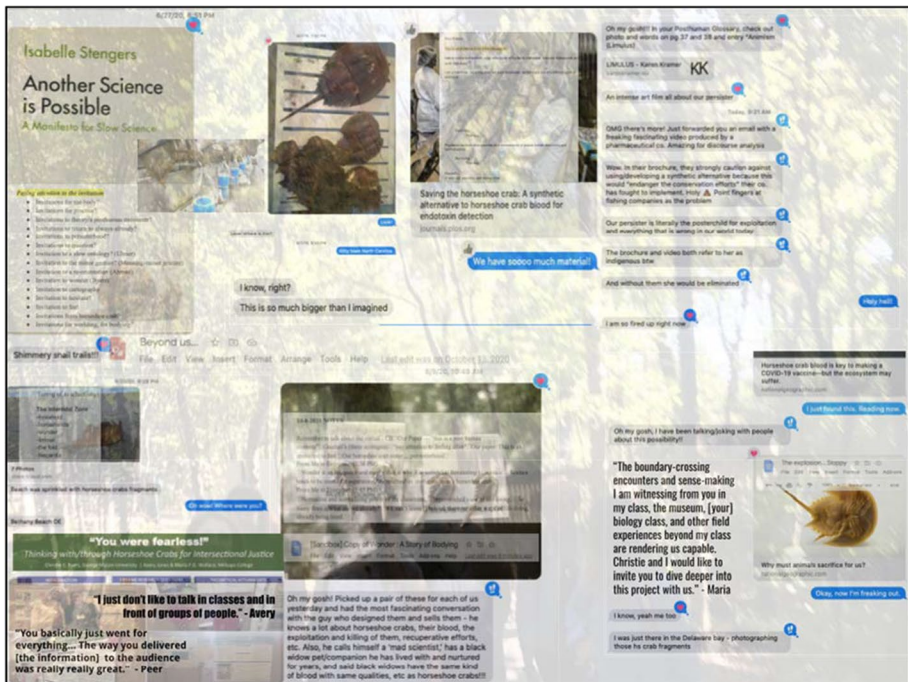


Fig. 1 A lived story. A body of work

Figure 1, a data assemblage, exemplifies the countless “threshold moments” we have chosen to intentionally reside within since 2016 (Nordstrom, 2015). The cellular text messages, email exchanges, manuscripts drafts, titles, and images depict pieces of our story triggered by more-than-human entanglements. Specifically, one moment in 2018 at a museum with preservice elementary science teachers and a horseshoe crab resonated. This moment, like the stories shared by El Halwany et al. (2021), has remained on the move ever since. Wayfaring alongside these authors, we weave our own body(ies) of work together where (new) life, and/or a body of work for (or of) science education emerges (Ingold, 2011).

A Body of Work (Christie & Maria).

Becoming Alive (El Halwany et al., 2021).

The way that light is caught
 absorbed reflected
 spoken back
 in shimmer
 moves, is moving
 differently
 on-through this and that
 moves me
 moves into me
 moves with me

I-we do feel it.

*An invitation
 for movement
 that refuses
 containment*

Then also comes
 the felt necessity of rain
 an accumulation, a weight:
 the too heavy to hold on to,
 the too much to push on,
 the too much to float with,
 the too much to contain anymore,
 a drip drip drip¹

*A sense of dissatisfaction
 grew out of those initial encounters -
 accumulation of
 affective value²*

a dimming, a puddle, a sorrow, a leak³
 with the too much of this,
 the too much of that.
 Cloud bodies growing heavy and
 finally just letting go -
 a sobbing.

Yet there is also always
 the return of the sun
 a sunbeam, the shimmer,
 a shimmer: a bodying of sunlight and water,
 “water capturing and reflecting the sun,
 the sun glinting on the water”⁴

And so an uplift,
 a what’s next? a what else?
 a splayed out stretching
 in-with the splendor of it
 a moving-on-with it all.

*Life as movement:
 a viscous becoming
 in time space*⁵

Wings extending
 claws scratch, scratching
 vines reaching
 desiring, thriving
 flourishing-in-through-with
 sunlight;
 growing, warming up
 climbing in-through-with
 air.

The power of the weather
 an idea, a word
 a sound
 a drip drip
 a shimmer
 the shaping of a cloud
 unshaping again
 the twisting of a tendril
 the sudden uplift singsong of a bird;
 an unexpected invitation
 of liveliness
 from a horseshoe crab⁶

*An overarching wonder:
 What might it mean to become alive
 in one’s pedagogy
 and one’s research?*

Minor gestures⁷ of-from life itself
 in its always movement-moving⁸
 reaching out and touching
 skin-shell-feather-claw-wing

breathing in and out
 in-and-through one another⁹
 aliveness living
 other-word-ing
 other-world-ing
 beckoning a becoming
 other-wise.

*Becoming alive could be regarded
 as a continuous state of striving
 an invitation to think with lives;
 an incessant coming into presence¹⁰*

The power of moments
 of wonder
 of-at-with-through
 bodies moving
 to move bodies
 to story a bodying
 toward what else might be possible
 is felt -

*Life history as it is
 lived in the moment
 unraveled-in-the-moment
 could be equated to the world
 (or the real)*

And yet, also felt,
 are the scratch scratch
 moment-memories
 of other stories,
 sadder songs
 tales of hurting or giving up,
 leaky sorrows
 like the one about
 the once lively striving bird
 discouraged now and so
 peck pecking with
 less vigor;
 or the horseshoe crab
 exploited weakened
 and now swimming with
 less blood¹¹

*Thinking with life history(ies):
 An invitation to
 think with lives
 with what exists*

*and could exist -
yet at times
'other' lives are
made lifeless*

To feel, to be felt
to affect
and be affected.¹²
These are bodies.
This is bodying.

What then is/or could be
the power of a body?
the capacity of bodies?
the why of bodies?
the more of bodies?

*Some perceive the body
as biological and/or social¹³
an object, container, or vehicle
for emotions: reactive*

Bodies of water, of sunshine
of blood, claws -

*Or the body as
the flesh of the world¹⁴
sentient and sensible
a site of knowledge
and perception*

The growing, knowing, becoming
the moving-with;
I mean, what else is/of a body?
This body? Our bodies?
What else can this-these bodies do?

*Others claim
there is never a body as such;
a body is its movement¹⁵
threading through the world¹⁶
moving through others*

Are we really *bodying*¹⁷ with-through this sunshine,
this shimmer,
this heavy rainy day?
that flowing rivulet?
the stillness of this puddle?
that grassy field?
this prehistoric 'crab'?

*Who is dancing?
Who is becoming beauty?
Who is moved by who?*

I mean, did we really
see-feel-move-with-through
those bodies becoming-capable?
That moment of light
moving across-on-with
a pool of,
the flow of,
the still of
water?

If so, how long—what is the duration of
this com-position(ing)¹⁸ of bodies?
What is the shape
of this presence-moving,
the in-forming of bodies in
a present moment?¹⁹

*The chronological progression
in time and place of lives
is predictable and comforting;
we felt attached to practices
which supposedly legitimized
our research—grounded it
made it strong
gave it meaning*

Some days I feel
I want my body -
(and yet can I even say *I* want, or *my* body?)
I mean, how far and how wide and
what else is 'this' body?
In-with a bodying of water and sunshine,
where is the boundary of *my* body?
A body?

*We were haunted
by a search for meanings*

Some days I feel ready
for this bodying,
this shaping of
moments-moving and
wonder-world-worlding
with bodies.

Other days
 I just want it-me, the body
 the constant body-ing
 a body +
 to dissolve
 to become sunshine²⁰
 to melt like snow
 to just seep softly
 into grass.

An-other kind
 of bodying?

I mean, how much
 can a bodying body really do?
 Bodying bodies grow older
 and tired too.

*Wayfaring: These lives are not traced
 across a world already laid out,
 but through a world
 in perpetual formation²¹*

But maybe after a little joy
 some movement across (through)
 a puddle -
 maybe a little bit of sparkle
 or sudden birdsong reminder
 of what else is possible

I-we might feel inspired to
 make a little scratch scratch scratch²²
 leave a mark
 sing a little song about it
 write a poem together:
 a story of bodying

*A body: that which comes into existence
 from its encounters with other bodies,
 emerging through acts of storying
 what comes to matter
 (and matter less)*

Tell it, tell the story
 leave, share, speak the story
 create a story
 with the fullness of a body,
 our bodies.

A story of bodying
 with sunshine and water
 horseshoe crabs and blood²³
 with birdsong
 backgrounded,
 foregrounded.

*Points of contact
 of being with nature
 of being touched by nature -
 here nature touches plays
 (with) humans*

But then also,
 (we can't really help it,
 can we?).
 I-we may feel
 the return of
 the heaviness of rain
 the sogginess, the sorrow
 maybe a little bit of
 hopelessness,
 loneliness.
 a why why why
 tell a story,
 this story?

*We wondered how human life
 may usurp rights
 of non-human others
 to come to life,
 limiting opportunities
 for storying life histories
 otherwise*

And so comes a washing,
 a washing away again
 a soaking of bodies
 a monsoon feeling of
 drenched drippy sullen
 soaked, soakiness;
 I-we hurt, are hurting, and are soaking wet.
 Freezing.

Some days I-(we?) just want to
 dissolve, melt away
 like those old limestone tombstones
 disappearing slowly
 the chiseled words,

the scratching, etching
 attempts at meaning-making, sense-making
 purpose, purposing.
 hoping, creating, saying, becoming
something
 Some thing of value?

*What is science?
 What does it mean to learn science?
 For what?*

Something is always being valued.
 Something is always being cared for.²⁴

*His three science teachers
 they only cared about the right answer;
 what life is thought to be
 affects the ways
 we care*

Some bodies might continue persisting, caring.
 A persisterhood of might.
 Might: A collective of
 strength and possibility.
 Hope?

Strong bodies. Resilient bodies.
 Bodies of sensitivity and grit.
 (stay interested²⁵
 stay with the trouble²⁶
 the scholars say)

450 million years of bodying other-wise, a persister,
 and now bodying with us? Bleeding with-for us?²⁷
 Our bodies?

*Bringing bodies-meanings
 together*

This is persisterhood.
 And this is trouble.
 Stay with it?

*Make an ontological move
 towards increased social
 and ecological
 justice?*

What are we valuing and caring for
 here/now/then

as we body?
 As we are bodying
 in-with-this trouble?

*Enact forms of care
 that lie outside
 what is formally
 cared for?*

For now, as a body of persisters,
 feeling other-wise
 we might:
 write a little something
 leave a record, a recording
 a story
 a restorying
 a restoration
 a scratch,
 scratching away

*A mutual telling:
 in methodological striving
 one might encounter
 this work*

Like her pushing up the shoreline,
 and though perhaps feeling tired,
 exploited, blood-drained²⁸
 we-she might still strive
 to leave a little mark,
 make a few scratched lines
 sing a little song
 leave a tiny cluster
 of jiggly green jelly-eggs,
 (to be half-eaten by red knots²⁹)
 nourishing a journey
 of bodies leaving
 a leaving of bodies
 leaving a body
 a body of work
 that others
 might digest.

*Becoming alive:
 a continuous state of striving
 gesturing toward pedagogical possibilities
 for being/living differently
 with nature, science, and
 science education*

Remember me, my blood
 my blue blood, your red blood
 (or is it, was it, the other way around?)
 Purple.
 Our bodying together.
 a vibrant, lively gesture -
 an orientation³⁰
 a movement, a moving-with
 and on toward
 something else.

*Life history(ies), bodies, stickiness,
 sticking to what is normal/natural
 and what is not.
 Some forms of stickiness are about
 holding things together.³¹
 Some are about blocking
 or stopping things
 moving.³²*

'I—my body—our bodies
 were here bodying
 but now I-we are
 leaving waning,
 maybe letting go
 un-bodying

There is a warmth, a relief
 in the letting go³³
 in the flowing out,
 dissolving
 in-with sunshine
 in the spreading out, dispersal
 (maybe like dandelion seeds?)
 a de-composing of bodies,
 of leaving stories
 storying leaving
 being partially eaten,
 or just carried away
 by wind, on wings,
 with air.

Finally a landing space?

*Stepping into risky terrains:
haunting fears mixed with
desires for belonging*

And perhaps a seeping in at last,
a feeling deeply just
for a moment (again)
the quiver-shimmer of light on water -
of touching earth, grass -
of gently slipping into soil
of bodying and un-bodying
no-bodying
back to *a life*³⁴
(worth living)

*completely release
from that which has turned
so sticky*

a felt feeling of relief,
done striving
 just wonder(ing).

Notes.

1. See Ahmed (2021)
2. See Ahmed (2004)
3. See Ahmed (2021)
4. See Rose (2017, p. G53)
5. See Vannini (2015)
6. See Byers, Jones, & Wallace (2019)
7. See Manning (2016)
8. Ibid.
9. See Weber (2017)
10. See Biesta (2010)
11. See Byers, Jones, & Wallace (2019)
12. See Spinoza (1994), Deleuze & Guattari (1987), Massumi (2015)
13. See Lupton (1988)
14. See Merleau-Ponty (1995/1945)
15. See Manning (2014)
16. See Ingold (2011)
17. See Manning (2013)
18. See Massumi's prelude in Manning (2013, p. x)
19. See Stern (2004)
20. See Manning (2016)
21. See Ingold (2011))
22. See Ahmed (2021)
23. See Byers, Jones, & Wallace (2019)

24. See Elliot, Spruill & Volpe (2021)
25. Jesse Bazzul, email correspondence (2020)
26. See Haraway (2016)
27. See Byers, Jones, & Wallace (2019)
28. Ibid.
29. See Funch (2017)
30. See Ahmed (2006)
31. See Ahmed (2004)
32. Ibid.
33. See King & Valentine (2015)
34. See Deleuze (2005)

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