Genu(re)flections: Mathematics, democracy and the arts

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Abstract

Lest we forget: what it means to be human

In her address at the November 2009 graduation ceremony of the University of St. Andrews, Scotland, Principal and Vice-Chancellor, Dr. Louise Richardson, made the following rather insightful remark in reference to the role of the university in the mandate of educating (http://www.st-andrews.ac.uk/news/archive/2009/Title,44179,en.html):

In a somewhat unlikely statement, the German philosopher, Friedrich
Nietzsche, once said: “The most common form of human stupidity is forgetting what we were trying to do.”

What are we universities trying to do? As John Stuart Mill memorably said in his inaugural address as Rector of St Andrews in 1867: "Universities are not intended to teach the knowledge required to fit men for some special mode of gaining their livelihood. Their object is not to make skilful lawyers, or physicians or engineers, but capable and cultivated human beings." Universities are not here simply to provide raw materials for the skills economy. Rather, universities generate understanding of where we have been, where we are, where we might go, and what it means to be human. The Arts are essential to that exploration.

Her comment is equally applicable to contemporary education and modern society more broadly, most especially in recognition of our new era of neoliberal economic globalization. More and more standardized, efficiencies-based and surveillance-driven modus operandi are prescriptively defining the interests of the individual and collective in terms of market-driven imperatives in consonance with the demands of the nation state competing for resources, means and power on a global stage. Acting in accordance with ‘(inter)national’ relations of exchange, this dominant thinking is reflected in the production of fact factories for the ‘New Knowledge Economy’ through the increasing trend towards techno-scientific corporatist economic utilitarianism in education[1], or rather, ‘learning’ discourses[2]. This functionalism is concomitant with increasing privatization, standardization, instrumentality and commodification of curricula and educational environments. It is in this prevailing (structural) condition that the (ideological) rules of the game have been set in terms of the (ironic) assumption of ‘common/global good’ by (uneven) capitalist relations of production and ‘market forces.’ It is a normalizing condition pervading all aspects of our lives and is increasingly foreclosing the public sphere, in Arendtian terms[3], and leaching (imaginative and practical) capacity and disaggregating political will for resistance. It instigates the question: in our incremental accommodation of this general depoliticized “common sense” hegemony, our slow capitulation to a diminished public space, and our relinquishing of freedoms even with greater consumerist “choice” and networked transnational intercommunicative access, is this neoliberal spread a form of global “political evil”[4] as Patrick Hayden (2009) asseverates in drawing on the political thought of Hannah Arendt, or is it ‘merely’ stupidity on our parts[5], in forgetting what we were trying to do?

So what are we trying to do? And whatever it is, or is not, why might it be important? Who cares? Why should we care, and why might it be important not to forget, but rather to witness, recognize and remember, even as this is complicated and tenuous? And further, what ‘appropriate’ ethical action(s) might we explore or be called upon to support or participate in? …. And, why are the Arts, in particular, important to that exploration as Louise Richardson asserts?

**Implications and implicatedness: mathematics, science and society**

The sciences, and in particular, the mathematical sciences have a long history of claiming universal Truth through perpetuating the myths of precision, objectivity and certainty. This claim to truth and epistemological ‘purity’ has in the past taken on (almost) theological significance in its clinical repulsion of the taintedness and messiness of subjectivity, political bias and the unpredictability of the human condition. Implicit in this claim to Truth is the dangerous “dream of the universality of a single logic” (Smith, 2006). Inevitably as I write this here, I am caught up, myself, in the very discourse that speaks of science and mathematics as if they were coherent and discrete bodies of knowledge, for this non-neutral point of view disregards the multiplicities of epistemologies that can be constituted (although perhaps need not be constituted)[6] as mathematical or scientific through the lived experience of their ontological emergence in numerous indigenous, contemporary or localized cultures or contexts geopolitically (See Swanson, 2009). It is the product of Enlightenment thinking that allows as normal the constitution of ‘mathematics’ as synonymous with Western mathematics, and which permits the
principles of its recognition to be deployed in terms of Western orthodoxies. But the problem is even greater, for such claims to pure, universal Truth and objectivity have masked cultural and socio-historical bias and laid claim to epistemological authority through the very process of such effacement of its human and therefore subjective roots. This would be an interesting point to note for its own sake, except that it is a very dangerous narrative of truth-making because its interest is one of power and position.

Long considered the “Queen of the Sciences,” Western Mathematics is deferentially constituted as pre-eminent in the “social division of labour of discourses” (Bernstein, 2000) in the social domain. Reasons for this are historical and rooted in the rationalist enterprise of the Enlightenment. Its epistemological authority amongst the sciences and other knowledge domains has afforded it the privilege to speak on behalf of Others, epistemological ‘others’ as well as human ones, silencing voices and behaving divisively in paying homage to the hierarchy of capitalist relations as a ‘natural’ condition of being with the rise of civil libertarianism. In other words, who can and who cannot have access to mathematics, how it is interpreted, used, and in whose name it speaks, are both ideological and invested in power. The verticalization of discourses in the social domain where the mathematical sciences assert more ‘credibility,’ voice and power than say, indigenous perspectives (see Swanson, 2007) or the Arts is an arbitrary condition invested in agency and a particular world history, but has become a naturalized condition, from dominant perspectives, of the doxic order of the everyday world. In this sense, mathematics and its associated sciences have participated in the normalization of unjust eco-social conditions and are implicated in racism, ableism, gender and ethnic discrimination, and prejudice of almost every kind (see Swanson, 1998, 2004, 2005, 2006, 2008), yet hidden behind a veil of political neutrality and universal objectivity: a powerful public relations front. Thus, it can be interpreted that its relationship is most often one of “intrinsic dissonance with democracy” (Skovsmose & Valero, 2001). In these ways, it can be understood as committing a universalized symbolic violence (Bourdieu and Wacquant, 1992) on the marginalized, underrepresented, impoverished and ‘localized’ in contexts glocally, participating in dividing the world and normalizing these unequal divisions.

Yet, global social institutions, or international policies—whether these reference global or national conflict, development issues or climate change—genuflect towards the sciences, especially in the name of the guru of technology. The accompanying incantations often purpose ‘saving the world’ or advancing the acceptance of a ‘progressive,’ ‘modern’ future as a settled promise of universal ‘rightness’ and global ‘hope,’ conflating the aspirations of individuals or situated collectives with those of the nation state.

But, the reflections of this state of affairs can be seen in the education system internationally. Perhaps more than any other subject on the school curriculum, mathematics has appealed to notions of a ‘universal language’ in the education of which triumphs technocentric economic utilitarianism, and in whose differentiated access individuals are defined in terms of nationalist, and now global, ‘citizenship.’ To be a ‘good’ economically-contributing and successful citizen for the nation state (and now globally ‘relevant’), is to be ‘mathematically literate.’ Mathematical illiteracy is most often constituted as concomitant with ‘failed citizenship,’ vagabondism, a burden on the state, resulting in denied access to academic advancement and life opportunities for alienated individuals and marginalized groups within the nation state. Increasingly standardized mathematics education curricula across the world, despite ‘learner-centered,’ ‘constructivist,’ seemingly-democratic curricular language that is appropriated and accommodated by this economic exchange-relations model, propels global neoliberal spread and rational imaginaries of new iterations of empire, justified under the banner of ‘upliftment,’ ‘progress’ and ‘modernization.’ The assumed rightness of the current global economic development agenda is facilitated through the universalisms and technocisms of dominant mathematics, and mathematics education, practices. In this sense, current hegemonic mathematics practices have a poor record of contributing to democratic fora. For the most part, despite moves in several quarters towards more ‘progressive’ or democratic ideals, the narrowness of mathematics curricula’s (state-centered) objectives—such as, mathematical literacy for citizenship towards global competitiveness and national economic growth; national prestige and global advantage through scientific advancement; and modernization and (post)industrial development of the state—in effect, increase our (political) ignorance and aid our stupidity in forgetting what other purposes might be worthy of/towards our
(post)humanity. In examining our ethical commitments towards those purposes, perhaps we may recall what we might have been trying to do, or what we might do (differently). At least in the educational arena, as an awakening from our lethean languor, perhaps this might be in fact to generate pluralist understanding(s) of where we have been, where we are, where we might go, and what it means to be human.

**Performing interconnections as a performance of democracy**

Finding a set of paths back to the purposes that Louise Richardson reminds us of might well lie in relationships. In the case of Mathematics, this may lie in its relationship to the Arts (including Social Sciences and Humanities), to indigenous perspectives, to society, to history and culture, to language, to ideology. This may include its relationships to political purpose, to principles of democracy, to histories, to social justice, to geo/(bio)politics, to ecological ways of knowing, to spirituality, … relationships to the interconnectedness between these, the nodes and interstices, and relationships to itself and its own defining principles and mandates—reflexivity in mathematics discourse and practice [9]. I believe, as a starting point, this means unraveling the discursive knots while embracing the difficulties and complexities of these relationships. Beginning to understand implies a searching—critically, studiously, precisely—through the sodden rhizomes hidden beneath the heavy soil of assumptions. It also means never guaranteeing meaning or settling on a hegemonic singularity of logic[10]. Coming to understand generatively is seeking poetic ecologies of knowing and filigreed hope. It is about discomfortingly searching for liminality and the (in)between of things. It is fostered through pondering, looking awry (Žižek, 1992), embracing difficult knowledge (Britzman, 1998) and being receptive to the unexpected. It is about claiming rather than repulsing paradox and ambiguity. It is enabled through (de)liberating (on) ways of (re)imagining other pathways, other purposes, other pluralities, and other ways of being/becoming human[11].

These connections, such as the ones between mathematics, democracy and the arts, cannot be understood as natural. They are constituted tenuously and are the substance of the discursive constitution of the boundaries of mathematics, of democracy, of the arts. This is a function of how they are defined and maintained from dominant perspectives. Mathematics and the sciences, upholding their authority, police their own boundaries. It is the strength of the “insulations between discourses” (Bernstein, 2000) that inhere in power and create silences, acting to diminish other discourses and weaken voices, generally common characteristics of mathematics practices. What constitutes and does not constitute mathematics or science is a function of agency—savoir and pouvoir, knowledge and power, in the Foucaultian sense.

Mathematics, a saturated discursive practice (Dowling, 1998) and pre-eminent in the social division of labour of discourses in the hierarchical social domain (Bernstein, ibid.) casts a gaze upon other discourses, fields, and practices and recontextualizes (Bernstein, ibid.) these practices into its own (Dowling, ibid.). In this way, mathematics’ connection with the arts is often a consumptive one, one of appropriation, so that the uneven relationship is maintained rather than contested. This is a critical concern for advocating interdisciplinarity, which often does not address the inequality and contest the agency in the “new” relationships. In advocating for connectedness between the arts and mathematics, the relationship often maintains the patronage towards the arts, which have been peripheralized by the “strong voice” of the sciences[12].

The same applies to connections with democracy. Skovsmose and Valero (2001) discuss how in mathematics education research in general, assumptions are most often made by researchers that their research objectives are automatically democratic in principle. This is without any critical interrogation of whether this holds true or even addresses principles of democracy directly. Often, assumptions about democracy are made based on a facile understanding of what classifies something as democratic even as this is a debated term. Further, the connections are often superficial where they exist and may even work counter-logically to the deeper underpinnings of democracy as a result. An example of this is some of the ways in which mathematics is used towards ‘democratic citizenship,’ where it is nothing more than addressing issues of the electoral process—democracy equals voting, nothing more, nothing
less, according to this premise [13]. The deeper ideological and philosophical meanings of democracy as a political and social condition are disregarded. Another related issue is that of mathematics’ relationship with social justice. Often, certain initiatives are taken towards a ‘Mathematics for Social Justice’ approach, which while most useful in directly addressing social justice issues through problem-solving, sometimes leave unattended the structural conditions of injustice in which mathematics itself is implicated. Its divisive power in the social domain is left intact. For example, in some instances, those who do not have access to mathematics paradoxically do not have access to social justice mathematics, so that it remains a privileged position for those with the means to choose to be ‘global citizens’ or social justice-oriented. (See Swanson (2008), response to Gutstein). Problematic is the structural conditions of poverty, oppression, ecological degradation, social inequality, constructed disadvantage via ‘difference’ discourses (see Swanson, 2004, 2005, 2006, 2008, 2009, 2010a, 2010b) in which mathematics discourse and practice is implicated in socio-political context.

The ‘postmodern’ trend, in which the ‘narrative’ and ‘social justice’ turns have found their moments, have in many instances enabled an inclusive interdisciplinarity that has opened up options for considering relationships and interconnections—such as those between the mathematical sciences, the arts and aesthetics, and democracy discourses—with more paradigmatic credibility and freedom. Arts-infused discourses and arts-based practices have been at the forefront of this movement. As well, with popular emphases on identity, otherness, culture, citizenship, posthumanism, postcolonialism and transnationalism, the new discourses on ‘border-crossing’ and ‘bridging of boundaries’ (see Swanson, 1998) offer vital approaches to critical engagement with multiple perspectives, hegemony and power, intersubjectivity, liminality, and the ‘inbetween-ness’ of things. Greater focus lies in the agency invested in demarcations and relationships, centres and margins, dominance and alterity. The poststructural consideration of how things might come to be understood as true, rather than whether they are in fact true or not, honours this shift in focus, and permits questions about how discourses, events, operations, disciplines, and so forth, come to be constituted in one way as opposed to others. Testing the boundaries of mathematics, a discipline whose borders traditionally have been rigorously policed, is no straightforward task. There are always investments and interests in such a supremacist status quo. Probing for porosity along its edges through which the unruliness of ‘the margins’ in the form of the arts, for example, or indigenous and other ways of knowing may find play, or encouraging conversations about and between them, might be the intention of (post)humanizing and democratizing a discipline that has formally claimed objective distance from such subjectivizing. The jury is still out on whether such commitments serve the interests of a greater human ethic, but whether this is the case or not, it is the Arts (in which I am including the Humanities and Social Sciences) that serve the important purpose of critiquing the conceits and hegemonies of mathematics practices and its technoscientific and economic utilitarianism. It is the Arts that live in human institutions. It is the Arts that claim the hope of decolonizing it. As Giovanni Battista Vico, who lived from 1668 to 1744, Italian philosopher, lawyer and classicist, once noted:

Mathematics is created in the self-alienation of the human spirit. The spirit cannot discover itself in mathematics. The human spirit lives in human institutions. (x, in Davis & Hersh, 1986)

The rhizosemiotic (Gough, 2006, 2009) links between mathematics, democracy, and the arts, are often tenuous, moving and weak ones. But this ‘weakness’ is an opportunity. Rather than cementing and foreclosing on what those linkages are to mean in a globalized world, they offer spaces of opportunity for imagining multiple alternatives, resistances, diverse understandings and pluralities of possibility.

From Dust to dust: a narrative

In teaching a mathematics methods course in an arts-based elementary and middle school level Teacher Education cohort at the University of British Columbia, I collaborated with the Arts-methods teacher and artist-in-resident, Dr. Alex de Cosson, in a joint Visual Art—Mathematics project with our 36 students. As an Art-Mathematics installation, we aspired to the creation of a Sierpinski Triangle [14], a fascinating fractal geometrical form in which is embedded wonderful imbricated and self-similar patterns of patterns, Fibonacci sequences found everywhere in nature and the cosmos, and magical
concepts that play with ambiguous and anti-intuitive ideas on infinity. Embedded in the Sierpinski are
the reflections of conceptual patterns from what is often referred to as Cantor’s Dust, exposing Cantor’s
fascination with an ‘infinity of absence.’ Integrating eco-sustainability concerns, visual art,
embodiment, social and mathematical history, and exposure to non-standard mathematics curricular
ideas, we set out to collaboratively collect literally hundreds of used, recyclable ‘pop’ cans [15] with
which to build our installation. We planned our construction over several classes, studying the concepts
and collaborating in small groups over design and implementation. We collaboratively collected,
washed and dried the used pop cans. We acquired the bottles of glue and glue guns. The project had
parallels in the design of large colourful cardboard tetrahedra that were constructed alongside the
installation of the tin-can Sierpinski Triangle. Our plan was to put the tin-can Art-Mathematics
installation and adjoining cardboard tetrahedra on display for all to enjoy in various places around the
foyer of our Faculty of Education building. The huge tin-can installation was carefully installed near
the entrance to the Faculty of Education for all to see on entry and suitably photographed for posterity.
The student teachers and teachers were delighted and the Sierpinskie installation was striking and
satisfying. There was much discussion about the artistic and mathematical merits of the project and
about issues of creativity, embodiment and eco-sustainability in pedagogic practice. Discussions ensued
about integrating mathematics and the arts, as well as about how, through the integrated project,
mathematics might become reconceptualized and (re)constituted as more accessible, exciting and
intriguing through such a project, especially for students alienated by the often disinterestedness,
disembodiedness and rigidity of traditional approaches to the teaching and learning of mathematics.
Issues of democracy came into focus in the discussions. From our perspectives as teachers of
mathematics and art methods, and as expressed by the students to us, the joint collaborative project was
felt to be a wonderful success.

The next day, I received an early morning e-mail from Alex to the effect that the Sierpinski installation
had disappeared… It was gone…. There were no remains. We were both aghast and set out to
investigate who might be responsible. Whatever could have happened to it?.... A student working late
in the library had come out into the foyer on leaving to go home and caught on camera the event. A
‘homeless person’ looking for recycling material to sell at a recycling depot had wandered through the
foyer of the building, seen the installation, and in recognizing the monetary value of the tin cans, had
systematically deconstructed the entire installation, leaving with many huge bags full of recyclable
cans. From Cantor’s Dust, to the everyday dust of the street. The everyday realities of poverty and
injustice in a local community had crept into the edifices of the ivory-towered academy and had
disrupted any sense of neutrality of education possible. The lived injustices, entrenched in our societies,
articulated politically with a collaborative project to integrate visual art and mathematics. The
unexpected dismantled the expected outcomes of curriculum. It evoked questions about what happens
when the dust of the street and the everyday infuses itself within the dusty corners of the school
mathematics curriculum. For the pre-service education candidates, the unexpected deconstruction of the
installation that they had constructed in the foyer of the university’s education building led to
pedagogic discoveries about the political implications of teaching—amongst other points, that
education is always ever a political act. The need for survival that compelled the ‘street person’ to
derconstruct the installation in order to access the recycled material for monetary gain for his own
survival surpassed the need for preservation of ‘the mathematics’ or ‘the art’ which imbued the
structure, from our privileged perspectives, with ‘value’ outside of a purely economic one. Ironically, it
served as a challenge for the pre-service teachers to look beyond the pedagogy of the school
curriculum to the political pedagogic curriculum of everyday social injustice. Through rhizosemiotic
play and the pedagogic experiences of this collaborative Art-Mathematics project, mathematics,
democracy and the arts laid claim to each other in constituting learning opportunities, but also in their
integral relationship in this project, to meanings for pedagogy and curriculum beyond the confines of
disciplines. It did so, while bringing to the fore the need for critical fora to debate and challenge the
interests of education and society, to look deeply and democratically into society and our vision(s) of
the world. It is these critical fora for which the Arts offer dialogical space and promise support to
sustain public debates and engage political, human and ecological challenges that demand our attention.
Debates that may help us reclaim the public, the political, and the human. Ones that help us to witness
and remember, albeit with ambiguity and difficulty. Debates and challenges that in education go
beyond content and curricular specifics, but that instead help us generate pluralist understanding(s) of
where we have been, where we are, where we might go, and what it means to be human.

Notes

[1] Ironically, Louise Richardson draws on Nietzsche’s comment about stupidity while bringing forward her argument that universities are not there to provide fodder for the skills economy. The correlation between stupidity or ignorance and educational functionalism is strong when we are reminded of Hobart’s (1993) remark that as standardized, managerial, functionalist and “technical superiority grows, so does the growth of ignorance” (10).

[2] Gert Biesta (2005) differentiates ‘learning’ from ‘education,’ bemoaning the fact that the ‘new language of learning’ heralds a trend towards education as a marketable commodity invested in economic relations of exchange rather than something whose purpose and value may be deeply and intellectually debated in terms of democratic principles, where trust, violence and human relationships are necessary features of such a debate and of education itself.

[3] Chet Bowers (2006) refers similarly to this effect as “enclosing the (cultural) commons.”

[4] Patrick Hayden (2009), working in the field of International Relations, and drawing on the political theory of Hannah Arendt, notes:

   Even as globalization shapes the horizon of current political thought and action, it does so at the risk of drawing that horizon ever tighter; it is less certain that the concept of ‘globalization’ continues to express transformative potentials rather than functioning as a token of the very effacement of the political. Globalization has become not only the political foundation of the present, but also the suspect guardian of the future of the political itself… I argue that neoliberal economic globalization is a form of political evil. (92)

[5] This stupidity is itself an effect and offset of the political evil of neoliberalism, a production of ignorance that contributes to a symptomatic erasure of history, a making unnecessary the historical in the constitution and vitalization of the human condition. The apolitical, ahistorical comportment of modernization permits the ‘forgetting’ and the stupidity of such forgetting is thus tolerable, hence an ignore-ing/ance of the necessity of our political/historical condition in understanding what it means to be human. I believe that this ignoring and forgetting is an attributable structuring of neoliberalism rather than just a side-effect. In conversation with Graham Giles, he reminded me that Hannah Arendt had commented that there was no cure for stupidity, referring to the absence of the kernel of judgment, and that “following Heidegger, the ‘forgetting’ is precisely what is forgotten in the ethos of liberal conceit!” (E-mail communication: April 7, 2010)

[6] I add the important caveat that these localized, contextualized or indigenous emergences of lived experience and contributions might not need to be constituted as ‘mathematical’ or ‘scientific.’ Of course, the performance of the words mathematics and science carry their own assumptions, and the principles of recognition that constitute them as such lie within Western discourses and are viewed through a particular colonizing lens. The fact that the activities of many cultures in the past are now constituted (often, but not always, dichotomously) as art or mathematics, when no word for art or mathematics was used to describe them as such in their time and culture, testifies to the normalizing governmentality (Foucault, 1991) of Western scientific discourses.

[7] In one sense of this, as Smith (2006) avers: “What distinguishes the tension in current circumstances especially for teaching is the fact that the very question of what constitutes knowledge, its nature and character, has been posed and answered for today’s world almost exclusively by Western powers. This has been the case since the 18th century, when so-called European Enlightenment philosophers sought the universal conditions of knowledge in human reason, thereby conflating and confusing their own determinations of what is reasonable with the determinations of everyone else” (xxiii).

[8] In respect of its extrapolation to the North-South debate, as a normalized and legitimized logic, dependency on modes of global knowledge that have been verticalized over local, indigenous or situated ways of knowing and being, educational systems in many ‘developing’ country contexts afford little opportunities for creating traction to assist in resisting and redirecting the development agendas set out for them by international agencies, partnerships and institutions that have an investment in the existing set of paternalistic social relations.

[9] In reference to what he refers to as a “political and epistemological crisis” (16), Smith (2006) avers:

   The consequence is that a profound rupture is evolving between a new, deep social awareness of the human world’s interconnectedness (and its interconnectedness to the
natural world) while hard-line economistic interpretations of life are insisting on an older rationality that relies on exactly the opposite—on the split between the subject and object, on a conception of radical personal autonomy, and most disastrously, on a split between politics (now conflated with economics) and history. (Ibid.)

[10] This refers to the danger of the dream of a single logic, as Smith (2006) asserts.

[11] Or perhaps this might entail rediscovering earlier, indigenous or localized ways of knowing.

[12] I have often addressed this in discussions with teacher education candidates in mathematics methods courses I have taught. I believe that in our enthusiasm to incorporate art into mathematical practices in the classroom, towards the asserted commitment of greater ‘social justice,’ we need to be careful that it doesn’t become tokenism, or that the effect isn’t simplistic. It is what I refer to as ‘bunnies on the borders’ pedagogy, one which makes mathematics ‘look pretty’ with colourful handouts that hide the dry instrumentality of the practice, as with a sugar-coated pill. This practice is often a manifestation of the teacher’s own fear or dislike of the subject (more prevalent than what you’d imagine in elementary and middle school teachers), and unable to engage with it in any alternative or positive way, the teacher attempts to hide mathematics’ perceived ‘distastefulness’ from her students by incorporating ‘art’ as a peripheral pretty-making or ‘fun-making’ process.

[13] This is only the case in certain instances. There is a lot of work being done to democratize mathematics education practice in schools—street mathematics, Ethnomathematics, and culturally responsive mathematics pedagogy are all examples (See Swanson, 2009).

[14] This is a similar initiative to the one Darren Stanley and Wayne Tousignant describe in their paper in this special issue, although this construction is a 3D triangle as opposed to the tetrahedron. We did construct different sized tetrahedra from coloured cardboard with different size triangles cut out and placed on the main tetrahedra. We were not aware of each others initiatives at the time of engaging in these projects.

[15] Fizzy drink tin cans, such as Coca Cola, Sprite, Pepsi. Pop drinks and pop cans are North American terminology.

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