Plants talking and what we hear

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Invasives, injurious and poisonous to livestock, contaminators of wool, competitors of crops and pastures, and carriers of disease. Invaders of native ecosystems, foreigners who reduce biodiversity and degrade water quality. Preventers of regeneration who exclude natives. Impactors on human health causing allergies. Can be poisonous. They are declared pests!

These are quotes from Australian government websites about plants that have been demonised and vilified as 'weeds'. At a recent *Weed's Network* Landcare road tour, a member of the audience became very emotional when discussing Tropical soda apple, calling it "Evil". He urged people to fight this "wicked plant". The Tropical soda apple in this man's narrative took on humanlike characteristics capable of intentions, that is, to be 'evil'. By name-calling, we personalise and characterise plants. We turn plants into beings with personality with whom we can interact in accordance with the character/personality we have assigned to them. By characterising Tropical soda apple as Evil, we then interact with the plant 'as if' it is an evil entity and any means we choose in dealing with it is therefore justified. Chemical warfare is justified and collateral damage becomes part of the necessary price. In this paper, I explore plants' abilities to communicate and have intentions, and whether they are truly 'evil', or simply misunderstood. Working within the frameworks of New Materialism, I examine what conversations may be taking place between humans and non-humans.

The emotive language used in relation to the plants we call 'weeds' betrays a psychological fear of what 'weeds' signify or invoke in us. The provocation of this psychological fear has been manipulated by government agencies in its use of war propaganda to conscript the public in a 'War on Weeds' (Dywer, 2011). Herbicides such as 'Agent Orange' and 'Agent

Blue' were once used as chemical weapons of war against Vietnam in a bid to defoliate large areas and to destroy food crops. These same chemicals are now the weapon of choice in our current 'War on Weeds'.

Once this battlefield with the plants we call 'weeds' has been set up, then the justification for chemical warfare is also set up and normalised. In this scenario, 'weeds' become the enemy that must be 'destroyed' at all costs. Australia now spends over A\$1.3 billion dollars annually on wholesale herbicides (APVMA, 2010-2011). These chemicals are dangerous and are designed to 'kill' (Koger and Winter, 2010).

Nature seems to be particularly protective of plants we call weeds. The plants we call weeds have learnt to fight back and resist our attempts at eradication. The need for a wide range of increasingly toxic chemicals in common use today is due in part to 'Nature' fighting back in the form of herbicide resistance. Plants are able to process and evaluate environmental factors, distinguish self and non-self, and in turn modify their behaviour accordingly (Witzany, 2006). Herbicide resistance is the ability of 'weeds' to assess their environment and adjust their behaviour in order to fight for their life (Thompson, 2012).

There are consequences that arise from transforming the Earth into a battlefield. Increasing the toxicity of herbicides increases their ecological impact. Herbicides leach into waterways, damaging delicately balanced ecosystems. Out of balance ecosystems are then treated with more herbicides. Toxic synthetic herbicides are running off onto the Great Barrier Reef killing coral and other marine life. Studies are finding that herbicides play a key role in decreasing biodiversity. They are related to many health issues such as cancer, Parkinson's disease, birth defects and lowered fertility. These chemicals are impossible to avoid – they volatise into the air and drift onto the food we eat (c.f. The Weed's Network).

How did plants become so vilified, maligned and hated that we are prepared to pollute the environment, kill wildlife and damage our health in a bid to kill them with toxic synthetic chemicals?

Weeds: Friend or Foe

What are the conversations, interactions, entanglements and emotional spaces created when humans and plants deemed as weeds come into relationship? Is the entanglement one of friendship or hostility? What stories are told about weeds and what stories do weeds

themselves tell? What are the emotional spaces generated when we come into relationship with weeds. For instance, the killing of weeds can provide vital sources of income. Creating the idea of an alien invasive species generates an affective and very lucrative economy (c.f Ahmed, 2004). As Latour says, the new Inquisition is economic and would be shocked to learn that the Earth is alive, sensitive and "a full-fledged *actor*" (2014:3). Considering both humans and nonhumans to be "full-fledged actors" in this drama, I want to examine some of the stories that emerge when the two meet.

The first stories I want to consider are of animosity and invasion. The stories are sourced from Government websites. In these stories, weeds are demonised as foreign invaders who displace natives.

On an Australian Weed Warriors website we find the following quote:

...invasive pest plants, a major environmental menace to Australia

And from the Depatment of Environment Victoria:

Weeds rate as one of the most serious threats to primary production and the natural environment in Australia. They are a major contributor to the loss of biodiversity, reduce the productivity and sustainability of our primary industries, cause ill-health in the population and are a key constraint for communities in achieving sustainable development.

From a Weed Warriors website in Newcastle we have the following quote:

Our motto: "We Battle Invasive Weeds and Restore Habitats".

There are many such government and non-government sites rehashing the same story of weeds as a serious threat, as invaders and an enemy of all that is 'good and right' but together we can defeat them. We are advised to fight the plants, to wage war, to become warriors against unwanted life.

There is a long history of plants being portrayed as evil and dangerous, ranging from the 'forbidden fruit' in the Garden of Eden to the witch hunts associated with the use of herbs to our present deadly cocktail of poisonous potions. The fear of plants who invade our territory, our lives and our livelihood creates an affective economy of hate and can be likened to other economies built on affect.

Some of the stories told by herbicide manufacturers include from Bayer Cropscience the following:

Our range of herbicides... gives you the diversity you need to help manage the growing **threat** of herbicide resistant weeds.

Whatever weed challenges you face, you can ... call on our expert technical advice

Herbicide resistance is the result of using herbicides. Here the *economy of undesirables* is selling a solution to a problem which has been created by the very solution they are selling. As Hodder suggests in his article *The Entanglements of Humans and Things*, "these fixings often make the problem worse" (2014:31). Requiring ongoing 'fixings' work to increase economic growth.

The conversation that seems to be taking place in the demonising and industrial stories is that the threat is not just the weed itself, but what the weed is doing in response to the threat on its existence. The weed is resisting, refusing to be killed. It is developing an immunity to herbicides. The problem is placed with the weed and its response to our efforts at chemical extermination. The solution offered focuses on how to outsmart the weed by attacking it with a new chemical; one which the weed hasn't seen before and thus hasn't had time to adjust itself to - pitting the company's 'expert technical advice' against that of the weed's ability to adapt and to resist.

Note also that the relationship has moved from a community group focus, as noted within the Weed Warrior campaigns, to a partnership between the supplier and the chemical user in their fight against these 'outlaws'. Helena Chemical have in their arsenal of 'Crop Protection' products a herbicide called 'Outlaw'. They say:

Outlaw is a **highly effective** ... herbicide that offers **exceptional** control ... Outlaw provides a three way approach to controlling **tough weeds** ... that **rob** your ground of moisture and nutrients.

The conversation offered by Helena Chemical is one of crop protection against thieving *outlaw* weeds who would rob your ground of precious moisture and nutrients.

From Monsanto:

Transorb® II technology delivers a **lethal** dose of **weed-killing power** within minutes ... on **tough** weeds

The message from Monsanto is that these weeds may be tough, but we are tougher.

I have aimed with the above quotes to illustrate some of the emotional spaces or dramas that are created when humans and nonhumans become entangled in each other's lives. Hodder (2014:20) uses the term entanglement to, "capture the ways in which humans and things

entrap each other". These entanglements are emotional and influence whether the relationship be inclusive or exclusive. As Ahmed (2004:117) has argued, emotions work "to align some subjects with some others and against other others". Ahmed points out that the passion of "negative attachments to others is redefined simultaneously as a positive attachment to the imagined subjects brought together through the repetition of the signifier" (2004:118). In the case of plants we call weeds or alien invasive species it is the negative attachments that we have for these plants that becomes redefined as a "positive attachment to the imagined subjects brought together through the repetition of the signifier" such as "Weed Busters" "Weed Warriors" or "Bush Regenerators". In this scenario it is the love of native flora and/or other desirable vegetation "that supposedly explains this shared "communal" visceral response of hate. *Together we hate, and this hate is what makes us together*." (Ahmed, 2004:118).

In analysing literature from Weedbuster/Weed Warrior websites there is evidence of Ahmed's (2004) suggestion that hate economies bring together some subjects through negative attachments to others. Ahmed (2004) argues that hate is economic, gaining currency through circulation. In this way, hate is an affective economy that aligns individuals with communities through intense emotional attachments. For instance on the Weedbusters website we find the following:

Weedbusters is a community awareness campaign ... It is held each year to draw attention to the impacts of invasive weeds on agricultural and other industries, the environment and our way of life... (DAFF QLD)

It is suggested that invasive weeds are threatening our very existence.

Ahmed (2004:118) argues that in creating desired subjects and undesirable object attachments, the "ordinary or normative subject is reproduced as the injured party: the one "hurt" or even damaged by the "invasion of others".

In the above passage there are a number of ordinary subjects who are threatened through the invasion of weeds. It is stated that invasive weeds are threatening our economic livelihood through invading our agricultural and industrial practices. They are also threatening our environment by endangering desirable native flora and fauna with whom we have positively attached. Last, they are threatening our very freedom to live our life in the way we desire. The passage suggests that we are not powerless against these "invasives", there is hope and that through joining in with Weed Warriors and working together, we can defeat "them".

Here we see that subjects and objects are divided into desirable attachments which belong together, and the undesirables which do not. In using the term 'invasive' is it intended to indicate that the object does not belong. Identities are thus been formed through what Val Plumwood (2002) would argue is a dualistic classical prepositional structure of logic based in exclusions and negation of otherness. It is not so much difference between plants which creates dualism, but the valuing or devaluing of some plants over others.

There is another important theme that can be discerned from the above quotes, that is, the agency and animation of weeds. Latour notes that for anything to be *doing* as much as say the weeds are in the above examples is to witness "a lot of animation", and where there is animation there is agency, (2014:12). The issue perhaps is not only whether plants have agency, but how their actions are understood and whether they have any rights to their actions. In the above quotes the understanding is that the plants called weeds are agents of invasion and destruction who have no right to go where they are unwanted. However, this *unwantedness* may be only side of the story. There may be other agents inviting these plants in. Perhaps the soil has invited them in, or the Earth itself for the Earth can't bear to be so exposed?

Some of the characteristics which humans assign as negative traits to weeds, such as that wees are fast growing and competitive colonisers, are the very traits that disturbed soils need. For instance plant species known as ruderal species are specially adapted for colonising naturally occurring disturbed environments (Lambers, Chapin and Pons, 2008). Human land and agricultural practices often imitate natural environments where weedy species have evolved. Disturbed areas such as urban lawns, roadsides and construction sites as well as agricultural practices provide the very conditions in which weeds thrive.

When we use chemicals to kill life and create bare ground, we invite weeds in by providing the perfect conditions. This is why so many plants we consider weeds in fact play important ecological roles.

Could it be then, that weeds 'clean-up' after us and need us as much as we need them, that it is in fact a symbiotic relationship? By disturbing and damaging soil, we provide the very conditions that weeds need to flourish and by flourishing weeds repair the damaged soil. Tubers break up compacted soils and those with deep taproots bring up nutrients deep in the soil to the surface.

Another example of a symbiotic relationship is that of lawns; undesirable plants in one context and cultivated weeds in another. In order for a lawn to exist it needs to be maintained as a lawn, otherwise it is something other than a 'lawn'. Robbins asks.

Whose voice does the lawn owner hear as they open the door and look out on the grass, checking the moisture to determine whether it is time to mow ... it may be the lawn itself [...] its signals are apparent to homeowners, who response is an act of subjection... to the lawn. (2007:16).

In a study by Harris, Martin, Polsky, Denhardt and Nehring (2013). they quote a reluctant lawn-maintainer saying:

I feel a constant pressure to keep up on the grass, and, so it hangs over me [...] every Saturday I'd be thinking about it and if I didn't get it done by Sunday I'd be upset [...] it's been a lot of pressure. (2013:354)

The lawn is asserting a certain influence over the homeowner. It is as if the lawn is the master and driver and the homeowner a pressured servant. The emotional space created between the homeowner and the lawn in this instance is one of pressure and urgency. In order for the lawn to survive and remain a lawn it needs to exert pressure over the homeowner to maintain it as such. In another passage from Robbins & Sharp, they observe:

The lawn itself has independent power [...] It has its own interests too, mediated by the structured flows of fertilizer, water and pesticide [...] This role, previously only assigned to social actors and institutions [...] must be extended to non-humans if there is any hope of resisting and dismantling the political economies of nature in which we are so tightly bound. (Robbins & Sharp, 2006:122).

Ahmed (2004) in her discussion of affective economies based in hate, suggests that a driving force in such economies maybe Freud's conception of displaced fear. If there is some merit to Ahmed's assertion, then the question becomes, "What fear are we in the West displacing on the plants we call weeds? As Hillman suggests,

Perhaps killing weeds on my lawn with herbicides may be as repressive as what I am doing with my childhood memories. (1995:xix-xx)

What childhood dangers do we fear may lurk hidden in tall grasses and bushes that are being displaced onto natural landscapes so that neatly clipped lawns and well maintained 'nature' become places of safety where there are no places for danger to lurk? In relation to weeds, could it be the idea that things which are hidden pose a potential threat has been repressed, but the affect that is, the fear of hidden dangers lurking, has remained. A repressed fear thus being what drives our obsession and addiction with the use of toxic chemicals.

In the Landcare tour I mentioned earlier, a female audience member stood up and said, "we don't kill white people as alien invasives why do it to plants?" She then went on to share her relationship with *Camphor Laurel*, a tree considered to be an alien invasive species. She related how as a child she could play safely under the *Camphor Laurel* tree without fear of being bitten by a snake. Camphor Laurel trees create a bare understory which allowed her as a child to see if there were snakes lurking about. At a psychological level, is this what we are doing with herbicides? Herbicides kill vegetation and allow us to see if there are any enemies lurking, hence its use in the Vietnam War. This woman's love for *camphor laurels* came about from its protective affect during her childhood. For this woman, camphor laurels provide the same effect that herbicides do; both result in cleared vegetation.

Harris *et al.* (2013) building on Ahmed's (2004) "affective economies" argue emotions both shape and are shaped by management practices. Therefore, the use of herbicides, or in this case, a tree that makes a natural herbicide, both shape and are shaped by the user's emotions. This theory gives credence to the ability of herbicides or any other object to *affect* and *shape* one's emotional subjectivity (Harris *et al.*, 2013).

Elliot notes that Freud's talking cure has these days been largely replaced with pharmacology and that "drug treatment rather than therapy is now the preferred line of attack for mental distress." (2002:4). The same can be said for 'weeds', instead of understanding 'weeds' as symptoms of an earthly distress in need of a dialogue-based therapy, the first line of attack has become pharmacological. By doing this we treat the earth's distress by furthering its distress. We either generate herbicide resistance, rendering the chemical useless, or we are forced to apply increasingly toxic chemicals that damage or kill far more than we intend.

Hillman asks us to consider imaginatively the world as a patient in need of care. Moore on Hillman says;

The world, too, is a patient in need of therapeutic attention. When our fantasy of the world deprives it of personality and soul, we tend to treat this "inanimate" world badly...If the world has soul, then each thing in its own way will manifest consciousness and affect...Returning soul to the world not only attends to the world, it offers more opportunity to engage in the work of soul ourselves (1990:95-96).

Tacey also supports Hillman when he says:

Just as psyche speaks through pathology and disease, and was discovered through symptoms, we are faced with the rediscovery of soul-in-the-world through ecological illnesses (2012:179).

Thus plants we call 'weeds' can be seen as a psychopathology of the world soul expressing its condition. For instance, Damery a biodynamic farmer, says that she listens to weeds and views them as symptoms of Nature talking – of thorny plants she says;

Thorny plants often grow on disturbed ground...the idea is to...understand the conditions that have allowed their growth. Listening to the thorns, we may hear this message: "Stay away!

This patch needs rest, to lie fallow!" (2011:111-112)

An important issue to consider here may be; how do we know it is *other* speaking and not anthropomorphism or our own psychological projections founded in past childhood issues carried over into present adulthood? As our kitchen builder said when he installed a wrong coloured bench top, "Does it matter?" Maybe what does matter, is just starting the dialogue.

References

Ahmed, S. (2004). Affective economies. Social Text 22(2):117-139

APVMA. http://www.apvma.gov.au/about/corporate/annual_reports/. Downloaded 1 June 2013.

Australia Weed Warriors website.

http://www.senrm.sa.gov.au/Portals/10/education%20&%20training/Weed%20Warriors%20Flyer.pdf._Download 23 March 2014.

- Bayer Cropscience website. http://www.bayercropscience.com.au/cs/products/herbicides.asp.
 Download 23 March 2014.
- Damery, P. (2011). The Enclosed Garden. *Jung Journal: Culture & Psyche*. Vol. 5(2): 102-116
- Department of Agriculture, Fisheries and Forestry (DAFF) Queensland, Weedbusters. http://www.daff.qld.gov.au/plants/weeds-pest-animals-ants/weeds/weedbusters Download 23 March 2014.
- Department of Environment Victoria website. http://www.dse.vic.gov.au/effective-engagement/case-studies/case-study-weed-warriors. Download 23 March 2014.
- Dwyer, J. (2012). Messages and metaphors: is it time to end the 'war on weeds'? *Eighteenth Australasian Weeds Conference*. Melbourne, 8-11 October 2012.
- Elliot, A. (2002) Psychoanalytic theory. An introduction. 2nd ed. Palgrave. New York.

- Harris, E.M., Martin, D.G., Polsky, C., Denhardt, L. & Nehring, A. (2013). Beyond "Lawn People": The role of emotions in suburban yard management practices. *The Professional Geographer*, 65(2): 345-351.
- Helena Chemicals website.

 http://www.helenaconnects.com/outlaw/products/chemistry/outlaw. Download 23 March 2014.
- Hillman, J. (1995). A psyche the size of the earth: A psychological forward, in *Ecopsychology: Restoring the Earth Healing the Mind*, eds. Roszak, T., Gomes, M.E. & Kanner, A.D. Sierra Club Books, San Francisco.
- Hodder, I. (2014). The entanglements of humans and things: A long-term view. *New Literary History*. Vol. 45(1):19-36.
- Koger, S.M. & Winter, D. (2010). *The Psychology of Environmental Problems*. Psychology Press, New York.
- Lambers, H., Chapin, F.S & Pons, T.L (2008). *Plant Physiological Ecology*. New York: Springer Verlag. Online at Monash Library, viewed 3 May 2014.
- Latour, B. (2014). Agency at the time of the Anthropocene. *New Literary History*. Vol. 45(1):1-18.
- Monsanto website. http://www.monsanto.com/products/Pages/roundup-weathermax-herbicide.aspx. Download 23 March 2014.
- Moore, T. (1990). Anima Mundi. In The *Essential James Hillman*. A Blue Fire. Ed. Moore: 95-96. T. Routledge. London.
- Plumwood, V. (2002). Dualism: the logic of colonisation. *In Feminism and the Mastery of Nature*. Taylor and Francis, Hoboken. Online. Downloaded 6 April, 2014. http://reader.eblib.com.au.ezproxy.lib.monash.edu.au/(S(lb04foiredimzhwzlbh0kb43))/PrintProcess.aspx?p=52&m=2&c=52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80
- Robbins, P. (2007). *Lawn people: How grasses, weeds, and chemicals make us who we are.* Philadelphia: Temple University Press.
- Robbins, P., & Sharp, J.T. (2006). Turfgrass subjects: The political economy of urban monoculture. In *In the nature of cities: Urban political ecology and the politics of urban metabolism*, ed. Neynen, N., Kaika, M., & Swyngedouw:110-128. London and New York: Routledge.

Tacey, D. (2006). How to read Jung. Granta Books. Great Britain.

The Weed's Network website. http://invasivespecies.org.au/traction

- Thompson, T. (2012). War on weeds loses ground. The rise of herbicide-resistant varieties drives a search for fresh methods of control. *Nature, International weekly journal of science*. Downloaded 5 February, 2013. http://www.Nature.com/news/war-on-weeds-loses-ground-1.10691
- Weed Warriors Newcastle website. http://www.newcastleweedwarriors.org/. Download 23 March 2014.
- Witzany, G. (2006). Review. Plant communication from biosemiotic perspective. Difference in abiotic and biotic signal perception determine content arrangement of response behaviour. Context determines meaning of meta-, inter- and intra- organismic plant signaling. Plant *Signaling and Behavior 1:4;* 169-178, July/August 2006. www.landesbioscience.com. Downloaded 15 April, 2014.