Abstract

The dynamic process of organizing is a fundamental characteristic of all forms of life. Following in the footsteps of Darwin we seek to build on his ideas, creating new insights that advance our understanding of organizing and how organizations are maintained whilst adapting to their changing environment. In recent years concepts drawn from biological evolutionary theory have enriched our understanding of organisations, and we situate ourselves within a creative theoretical framework inspired by Darwin’s work. We seek to build upon Darwin’s legacy; creating a productive, interdisciplinary, philosophical dialogue through which novel conceptualizations of organizational change can emerge. Our belief is that dialogue and conversations create a living language system. This adaptive and generative social system has the ability to reach across disciplinary boundaries, creating a polyphony of voices allowing for the cross fertilization of ideas from apparently disparate knowledge communities. In consequence, conversations have the potential to create new, dynamic abstractions of organizational change. Novel theories will emerge that provide previously unimaginable articulations of the evolutionary process through which complex social systems change and adapt. Paraphrasing Darwin; as ideas coalesce and re-coalesce new forms will be created that add to our collective understanding. The result of creative conversations will be an increase in variety within the socio-intellectual environment. Variation leading to diversity is essential for the evolution of life, and we suggest, is essential in the creation of a vibrant and productive knowledge community. Whilst honouring Darwin’s contribution to our understanding of the world his ideas need not be preserved in intellectual formaldehyde, rather they should be acknowledged as a speciation event in the evolution of human thought. To build on his legacy we must seek to reveal insights that point us towards new ways of knowing and new ways of organising. These will emerge from creative conversations; for it is within dialogic exchange that we individually and collectively develop new ways of understanding the processes which make organizing possible. We can literally build the world anew through a process of semantic transformation. Darwin’s work points us back towards Heraclitus’ river, and the ever changing flux of the world around us. And it is from within the living stream of language that ideas emerge. This paper will shine a light upon the role of language in the creative evolution of ideas. The intention is to create a shared conversational space in which to enrich the understanding of evolution within organisations.
Introduction

This conference invites consideration of *Institutions that Change the World*. Searle’s (2005, p.11) suggestion that “language is the fundamental social institution” (Our emphasis) provides a focus for our work. We believe that the role of language and speech in the creation and evolution of institutions is worth further elaboration. This work is written as a discussion paper, not a monograph. It is intended as a contribution to an ongoing conversation which will stimulate thought and seed ideas. We want to *engage in talk* with people, creating a productive dialogue in which our collective understanding of institutions evolves. Echoing Elsbach *et al* (1999) we believe that scholars need to listen to the voices of others and we hope that our paper will encourage others to participate in conversations about the nature of organizations and institutions. To do this we look towards Darwin’s work.

Darwin’s intellectual achievements depended upon his ability to make connections between different disciplines, relating “broad areas of one discipline to another” (Barrett, 1974, p.149). A hundred and fifty years on we believe that this same ability to cross disciplinary boundaries is essential to the development of new theory. It is an approach to knowledge creation that embraces the conference organizers’ commitment to *the development of shared understandings that can help promote creative conversations across disciplinary boundaries.*

Whilst we might all agree on the importance of interdisciplinarity; the knowledge we produce is increasingly specialized, and there is increasing pressure on researchers to situate their research within particular academic communities (Alvesson and Sandberg, 2014). Whilst such specialization can bring benefits to individual researchers and to institutions, it can also restrict our world view and leave us unaware of events happening outside of our specialism. We risk becoming isolated, which we argue, limits the potential for the emergence of new and imaginative ideas. We suggest that through dialogical speech, ideas can *migrate* to new intellectual shores. Interdisciplinary conversations create an environment in which ideas can be cross fertilized, allowing the seeds of new ideas to germinate and grow. We refer to these as hybridisation events and if viable, the seeds from such events can lead to the creation of new forms of knowledge, facilitating the ongoing evolution of ideas.

The authors of this paper feel that the legacy of Darwin’s work encourages us to appreciate the role of language and speech in the creation of institutional and organisational forms. We conceptualise language as a complex evolving system that mirrors both biological and social systems. We suggest that language is analogous to DNA - a genotype, whilst words spoken in conversation represent its phenotypic expression. Together these two elements interact, shaping our linguistic environment. It is through this ongoing process that our ideas and understanding of
the world change. By actively engaging in conversations we are participating in this creative and evolutionary process.

**Darwin's Legacy**

Our interest and focus on talk and language is complementary to the legacy left by Darwin, who was interested in the evolution of language and the role it played in the development of human societies. Languages are capable of diverging from one another, mutating, island hopping, and migrating to new shores (Dawkins, 1986); a theme that we will be discussing as this paper evolves. Recognition of the evolving nature of language is made explicit in The Descent of Man “Moreover, no philologist now supposes that any language has been deliberately invented; it has been slowly and unconsciously developed by many steps.” (Darwin 1871, p.67).

Darwin’s theoretical understandings were nurtured and grew through interaction with contemporary scholars, including Hooker, Sedgwick, Gray, and Henslow (Darwin Correspondence Database, entry 1607; entry 2548; entry 1674; entry 107). Without these interactions it seems unlikely that the *Origin of Species* would have emerged in 1859. This seminal work is seen as a departure from centuries of philosophical and scientific thought, radically altering our knowledge of the development of life on Earth. It is undeniable that the institution of Darwinism has had a profound impact upon our intellectual environment, and as a result it has changed our relationship with our physical environment. However, we do not wish to preserve his theories in intellectual formaldehyde. Darwin’s own ideas about the origins of life on Earth changed during his own lifetime. Similarly our conceptualization of Darwinism is constantly open to revision and debate. If we adopt evolutionary concepts and language; Darwin’s published work can be seen as a speciation event in the ongoing evolution of human thought. It was the result of a series of unfolding events that created the opportunity for the emergence of new species or subspecies of thought. Rather than a sign of ideological division or theoretical immaturity; we believe ongoing dialogues about the role of Darwinian thinking within economic and organizational communities are signs of healthy *institutions*, able to evolve and adapt to our ever changing physical and intellectual environments.

Economic theory has constantly evolved. From the work of Smith ideas have seldom stood still. As many in this audience will appreciate, the classical and neoclassical traditions of economics now compete with new schools. Institutional economics, New institutional economics and a range of other schools, such as the Carnegie School, now populate a diverse theoretical landscape. Hodgson (2007, p.11) emphasises some of the recent changes: “Mainstream economics has changed radically since the 1980s”. Yet the process of change has been continual. Indeed, the influence of Darwinism can be seen in the works of Schumpeter, Hayek and Veblen. And just as in economics, so too within organizational theory. Recently Darwin’s work has been
used to explore the processes of social evolution and the persistence of institutions (Hodgson, 2003). Similarly within organizational theory, Darwin’s legacy can be seen in Michael Porter’s work on Competitive Advantage. In the early 1990s Darwinism became even more explicit as evolutionary theory was applied directly to the conceptualization of organizations. Breslin’s (2011) work details its emergence, whilst Clegg’s (1990) work provides a more general exploration of the variety of ways we have conceptualized organizing and how these have evolved since it emerged as a discipline through the works writers such as Weber, Taylor and Follet. Clegg’s own narrative is itself illustrative of the emergence of postmodern thought within the discipline. Similarly our own narrative’s emphasis on organizing reflects the work of process thinkers such as Karl Weick and Robert Chia. Organizations have been conceptualized in terms of cultures, myths, ceremonies, markets, ideal types, as locations of power and politics, communities of practice, self-organising systems, communication systems and as learning entities. We select language creatively; creating new terms, metaphors and similes to help us propagate our ideas.

Yet whilst economists and organizational scholars may use different concepts, the term organization is in many ways simply a synonym for institution. We acknowledge that some may feel that the two traditions are discrete; but we believe that they represent two intellectual subspecies, perhaps only separated by differing vocabularies. And as with all closely related species; cross fertilization can and does occur. If evidence is required, we hope you will see it at this conference. Variety is fundamental to the ongoing presence and success of life on Earth, and it is fundamental to the ongoing evolution of ideas. Keeping the biological metaphor alive; the rich diversity of thought is, we argue, to be celebrated as something that provides a fertile environment in which novel conceptualizations can generate fresh insights leading to new forms of knowing. Significantly Hahn (1991), referring to economic theories, argues that we need to move away from generalisations and grand unifying theories towards particular histories that are able to convey complexity. This reflects a broader transition that has taken place. Scientific ideas that described the physical world in terms of mechanistic cause and effect, Newtonian fixed laws, regularity and dynamic stability have been challenged by new ideas which embrace uncertainty, unpredictability, change and dynamic instability; presenting radically different images of the world (Toulmin,1977). Institutions and organizations are no longer necessarily seen as monolithic structures that represent an atemporal universal ideal (Toulmin 1990). Lewin’s (1967) conception that organizational change as a transition between frozen states now competes with one that sees an organization as being in a constant state of flux (Chia 1999). Perhaps not surprisingly we now think of theory in evolutionary terms. Our theories, like our institutions, are incredibly diverse and are constantly changing. Like others in our audience, we therefore suggest that the evolutionary processes through which variety is created and propagated are worthy of discussion (Dollimore, 2013).
We are interested in claims by scholars who maintain that Darwinism provides a common framework for understanding processes of social evolution (Hodgson, 2010); including the development of institutions, organisations and economics. Dollimore (2014, p.6.) suggests that “[t]he real issue for social scientists in general and organizational ecologists in particular is whether Darwinian thinking can usefully advance understanding of organizational evolution.” Our response is to suggest that by engaging in conversations with others we may find new pastures of thought, in which we can develop new insights about the nature of organizations and institutions (including the institution of Darwinism). These insights can facilitate the creation of new knowledge about the nature of institutions. Our emphasis on conversing with others echoes both Hodgson (2007) and our conference organizers, who welcome an ongoing interdisciplinary dialogue. We look forward to be able to converse with as many people as possible at the conference.

Biological Analogies

Evolutionary theory comes from the realm of biology and biological analogies have long been used in relation to economics, competition and the survival of firms. (Penrose, 1952). Analogies are useful because they help us to make sense of events by drawing from other areas. By applying ideas from different fields in which seemingly comparable phenomena are studied, (but conceptualized in different terms) our collective understanding can develop across disciplinary boundaries. Concepts drawn from evolutionary theory have contributed to our understanding of organizations, and, the authors of this paper are intrigued by ideas articulated by Generalized Darwinist scholars, organizational ecologists and advocates of ecological economics.

One criticism that has been laid at the door of biological analogies within the social sciences is the reduction of change to something determined by external forces or principles and thus minimising the role of human choice and intentionality. This criticism is not unreasonable but it might be unfair. Within the life sciences there is acknowledgement of the role played by the conscious and often deliberate behaviour of living organisms. One notable example is the evolution of favoured physical and behavioural traits through sexual selection. This is particularly noticeable in species of birds such as Hummingbirds, Birds of Paradise and Bower Birds. In the latter case, male birds construct elaborate and complex structures adorned with brightly coloured objects or treasures, including leaves, flowers, beetle casings and nuts, with the aim of attracting a mate. Sexual selection is a curious phenomenon and there is uncertainty as to the reasons why females have particular preferences. The dazzling colours, patterns, ornamentation, display behaviours and vocalizations of the male come at huge cost; drastically reducing the individual bird’s chance of survival whilst dramatically increasing his chance of being predated. One theory offered to explain the huge risks taken by the male is that the female has a sensory
bias or a particular preference, especially towards what Futuyma (2005, p.333) refers to as “supernormal stimuli”, or that which is not normally encountered by the female: a novelty. If the male is able to offer these novel stimuli then he has a greater chance in convincing a female to respond positively to his advances. We can imagine this as the avian equivalent of marketing. Thus, the natural world contains many instances of deliberation, choice and decision making which are instrumental to the future course of evolution. Survival may appear to be random and dependent upon complex interactions within a constantly changing environment, but this does not make it independent of choice and intentionality. The problem may not be that theory drawn from biology is inadequate to describe complex social systems; but that biological theories do not fully capture the complexity of the phenomena they describe and help us to understand.

Such insights suggest that concepts should not necessarily be dismissed or discarded based upon assumptions or because they are viewed as simplified analogies. As Sutton and Staw (1995, p. 378) indicate “Theory is about the connection among phenomena, a story about why acts, events and structure and thoughts occur”. Echoing Weick (1995) we would argue that it is the process of theorizing that is more important than the precise details of the theory. Popper’s (1976) Unended Quest reminds us that all theory is incomplete and open to revision. Perhaps our theories need a bit of “disciplined imagination” (Weick 1989)? Theories are not empirical generalizations (Merton 1967), they are narratives that enable us to explain the patterns and associations that we observe. We concur with Scholz and Reydon (2013, p.997) who assert that the construction of “theories of evolution which go beyond the biological domain should be welcomed in principle”. There may be lessons from biology which can be applied to processes of social evolution, including how we organise. Whilst Dollimore (2014, p.4) points out that as scholars we do not need a “[s]lavish adherence to biological analogy”, the authors of this paper suggest that criticisms of biological analogies can be assuaged by developing evolutionary theories that reflect our awareness of human intentionality and social interaction in the process of organizational evolution. Hodgson (2003) acknowledges that Darwinism does not exclude human intentionality, whether situated at an individual or collective level. Collective intentionality (Searle, 2005, p.6), is a form of cooperative, purposeful behaviour seen within social groups. Evolutionary theories which reflect the social aspects of intentionality may lead to new understandings of how we organise our economies and institute our business firms (Penrose, 1952). In particular it may shed light on how the shared values and beliefs (Searle, 2005) of individuals shapes the institutions and organizations they create and maintain.

The significance of human intentionality and agency has been considered by organizational writers including proponents of evolutionary theories. Aldrich (1999) describes how knowledge within an organization can be reproduced through the everyday social interactions of individuals. Within this context, organizations are defined as being “socially constructed systems of human activity” (ibid., p.2).
Similarly, New institutional economics, Neuroeconomics, and the Freshwater School place emphasis on the role of individual and collective behaviours, and social interactions in the evolution of social, legal and political institutions. Evolutionary theories can incorporate the intentional behaviours (such as choice and decision making), which are central to the creation of organizations and institutions. Thus we argue, theories derived from the realm of biology are not necessarily overly deterministic or reductionist. Such theories are capable of articulating voluntaristic, and complex social dynamics that express the “indeterminacy of social life” (ibid. p.14).

How ideas are shared within institutions and organizations appears an important question and one that has led the authors of this paper to consider the conceptualization of replicators and interactors. It is an abstraction taken from the realm of biology, and it might be a mistake to take the analogy too far when considering how knowledge is passed on or inherited. Social institutions do not breed or produce offspring in the same way that we believe biological organizations do. The issue of heritable characteristics has been a source of considerable debate. Reydon and Scholz (2013) claim that biological and organizational evolution are disanalogous. They point out that there is a serious flaw in the Darwinist logic since there is no satisfactory account to explain how adaptive behaviours are transmitted between organizations. Dollimore (2014, p.2) vehemently disagrees asserting that replicators and interactors enable the “conceptualization of the replication and transmission of routines and capabilities over organizational generations”. Within this unfolding narrative Dollimore (2013, p.1) also claims that replicators and interactors are a useful abstraction for Darwinists as they enable the “inheritance mechanism” through which knowledge is shared within and between organizations to be identified, allowing the Darwinian project to move ahead. The nature and expression of these replicating ‘entities’ is believed to be critical to understanding how organisations evolve (Breslin, 2014). Thus there is a lively ongoing and productive debate about whether Darwinian principles can enhance our developing knowledge of organisational evolution.

**Linguistic Interactors: Talking about Genotypes and Phenotypes**

As we have acknowledged, writers have drawn from biology to introduce the pairing of replicator and interactor to our understanding of organizational and institutional evolution. A number of entities have been suggested to fulfill these two roles, but rather than seek to cover well-trodden ground, we have decided to look to other conceptualizations. Interestingly the rhizomatic analogy offered by Deleuze and Guattari (1987) draws from biology but allows us to understand organizational evolution without the requirement for transmission between generations. Whilst this might have potential given that genetic inheritance can seem problematic within a social context, we have decided to draw on a more traditional evolutionary concept.
which is closer to the main thrust of Darwinist thinking. Specifically we want to
explore how speech interacts within a linguistic and conceptual landscape. By
conceptualising language and speech in this way we are taking an interdisciplinary
approach, drawing inspiration from evolutionary biology and linguistic philosophy.

We suggest that language is analogous to a genotype whose expression is
articulated through the phenotype of speech. In biology “the criterion for selection is
not the genes themselves, but the bodies whose shape the genes influence”
(Dawkins, 1986, p.56). Applying this to language, the phenotypic expression is
speech, which through interactions within its sociolinguistic environment is selected.
We feel that this is complementary with Hull’s (1988, p.408) definition of an interactor
as being “an entity that directly interacts as a cohesive whole with its environment in
such a way that this interaction causes replication to be differential” (Our emphasis).
This suggests that the genotype and phenotype are different manifestations of a
single entity engaging in replication and interaction. In this context, replication is
facilitated by the form of communication that we select. Instinctively we choose to
communicate in a way that is well adapted or suited to the environment; such as
dialogue or monologue. Such phenotypic expressions continue to replicate as they
interact within a complex, adaptive, sociolinguistic environment. The type of speech
that we select transforms the environment in different ways. Monological speech is
“finalized and deaf to other’s responses” (Bakhtin, 1984, p.162). It interacts with its
environment in a manner that reinforces existing structures, promoting rigidity and
resistance to change. In contrast in dialogue our words exist in relation to the spoken
words of those around us. Thus speech modifies its linguistic surroundings, whilst
the environment also modifies and transforms speech. In this process the
interactions change our language, our ways of speaking and ultimately the way we
see the world. The form of speech that we choose shapes the linguistic environment.

As already mentioned, Darwin acknowledged the evolutionary nature of language.
The analogy between language and the genetic ‘code’ has been recognised by
several thinkers, including Watson (2003), who along with Crick transformed our
understanding of the processes of biological inheritance, with the discovery of DNA.
Conceptualising DNA as a biological language which gives expression to the many
diverse forms of life, allows us to imagine that words are equivalent to the molecules
or codons that make up DNA. Codons build strands or sentences of DNA that can be
organised in various ways, producing a variety of larger molecules, organs and
eventually whole organisms. Similarly words, collectively configured form sentences
enable us to express emotion, intention and create meaning through spoken and
written language. Sentences can be organized or sequenced in different ways to
produce narratives that can describe complex series of events, establishing
relationships and providing meaning. Individual narratives are themselves joined and
adapted to create new narratives, which collectively constitute a discourse within a
language community. It is through these complex evolving interactions that we
collectively create and maintain institutions and organizations. Such phenotypic
interactions allow us to conceptualise reality in a range of ways. It is speech that dynamically interacts with this linguistic environment, facilitating the transmission and replication of concepts of organising, allowing our “cognitive labours” (Dennett, 1995, p.381) to be shared. Vygotsky (2012) draws our attention to the close relationship between thought and language. This paper does not offer the space to explore the precise relationship between the two. Whether it provides a cloak to dress our thoughts or a mould to shape them (Bruner, et al., 1956); is not central to our narrative; save to highlight that our thoughts or conceptualizations of the world cannot be expressed and shared without the common institution of language. Complex theoretical ideas can only emerge if we have the linguistic capabilities to express them. Hodgson (2002, p.270) highlights the importance of communication in creating and maintaining our institutions: “…the propensity of human beings to communicate...making the replication of inheritance of customs, routines, habits and ideas a key feature of human socio-economic systems.” Hodgson (2007, p. 12) goes further, arguing that “We cannot understand the world without concepts and we cannot communicate without some kind of language”. It appears that our institutions can be envisaged as part of a self-organising system in which our language helps create a particular social landscape rich in customs, habits and behaviours (Price and Shaw, 1996). The authors of this paper speculate that we construct institutions through the use of language.

Language as Genotype

Language creates a framework for us to understand the world and share ideas. As Goodman (1978, p. 6–7) indicates “we can have words without a world, but not a world without words or other symbols”. The worldmaking that Goodman alludes to is achieved “by the application of labels: names, predicates, gestures, pictures etc.” (ibid.). It is this process of linguistic structuring (Bosma and Fouweather 2013) that enables us to make sense of things, creating “models of the mind by which we cope in a fluid world” (Bakken and Hernes 2006, p.1609). Our intellectual theories and frameworks are manifestations of the models we create and perpetuate through language use. It is, we feel, important to acknowledge the influence that these models of the mind have on our view of the world. Through our language use these models or abstractions tend to become fixed: the categorisations and generalizations we create with words, define how we understand and interpret reality. We assume that our representation of the world is an accurate depiction of it; rather than a mirror of nature (Rorty 1979). Whitehead’s (1956, p.169) fallacy of misplaced concreteness alludes to this; describing the situation when we fail to recognize that our theoretical abstractions never completely capture the world around us and are always open to revision. Additionally, our language contains implicit and taken for granted assumptions which create a landscape in which “our representations may well come first, allowing us to see selectively what we have described” (Van Maanen, 1995, p.134). What organizations or institutions are, is defined by language. How we make
sense of our world is predicated on existing conceptualizations that often remain unexamined: what Sellars (1963) termed the Myth of the Given. Our understanding of the physical world is dependent upon existing linguistic concepts which we use to define the world. As a result, how we organize ourselves and our environment is to some degree defined and limited by the language available to us.

This reliance upon language means that if linguistic diversity diminishes our ability to interpret the world also diminishes. The importance of biodiversity has been well established, but we might face comparable risks if we lose linguistic diversity. This parallel was identified by Darwin, who believed that the spread of a dominant language would diminish the variety of linguistic expression, eventually leading to the exclusion and extinction of other languages warning that: “A language, like a species, when once extinct, never as Sir C. Lyell remarks, reappears” (Darwin, 1871, p.71). When our language expresses a single, narrow view of ‘reality’ it reduces conceptual diversity and excludes alternative views, limiting the possibilities for new understandings. We need to avoid what Alvesson and Sandberg (2014, p.1) refer to as “boxed-in research,” which can promote a myopic view of the world in which much can be assumed and taken for granted. Toulmin (1977) suggests that high levels of specialization and the adoption of well-established methods, producing reliable and trustworthy results are often assumed to be the hallmarks of good academic practice. By these standards interdisciplinary, creative and ground-breaking research appears ill defined, unreliable and to some, may lack intellectual rigour. Rather than consensus we may find polyphony, many voices all clamouring to be heard. Thus, interdisciplinary research can appear messy and distinctly grey; lacking prescription it may appear that ‘anything goes’.

However, faced with the truism that we live in times of unprecedented change and uncertainty, which itself is incredibly messy (Ackoff 1981) this might arguably be just the type of research that is vital in the evolution of our understanding of the world around us. Randomness, change and impermanence are central tenets of Darwin’s dangerous idea (Dennett, 1995). Perhaps not always appreciated, Darwin’s work upended centuries of Platonic thought and changed how we think about our world. Darwin describes a complex open system in which the future unfolds and as it does, entities adapt to a changing environment and in so doing the system itself changes. We find that all biological life is part of a dynamic iterative self-referencing system. Unlike Lamarckian evolution, there is no sublime author and no sense of progression or advancement towards a decontextualized ideal (Toulmin 1990). Contemporary scientists (typified by Herschel) rejected Darwin’s ideas (Depew and Weber, 1995). For many an explanatory theory dependent upon chance variation was unsatisfactory. Herschel and others were wedded to a Newtonian conception of the world. There was ultimately, a true cause (Verae Causae) for all events and this was determined by universal laws. Herschel did not deny that chance was important, but it remained a secondary mechanism, creating complications or perturbations leading to variation. Only in the 20th century with the evolution of quantum physics did the
indeterminate nature of the physical world become widely accepted. Darwin was a revolutionary, despite the prevailing orthodoxy he offered us new insights into the natural world. He points us away from a deterministic world of apparently immutable or essential forms and natural order; towards a Heraclitean world of flux in which “Everything flows and nothing abides; everything gives way and nothing is fixed”. (Cooper and Fox, 1990, p.576).

If we exist in a Darwinian world of complexity, chance mutations and ongoing adaptation, then an openness to changing how we conceptualize the world around us seems essential. As in the biological world, diversity improves a systems ability to cope with change. We need more ideas, not less and we should be encouraging diversity. Therefore we argue, it is advantageous to reach across disciplinary boundaries in an attempt to avoid isolation and too much specialization. One of the dangers posed by specialism or intellectual speciation is that we remain unaware of research that is being carried out beyond our familiar academic habitat or area of interest. Alternatively, we may dismiss developments in other fields as being irrelevant to our own endeavours, excluding the possibility of innovation. Our ideas become isolated from one another, they are cut off on islands separated from each other, reducing the dynamic flow of ideas and limiting diversity. As we become increasingly specialized we risk becoming constrained, routinized by the language we use, seeing the world in a particular way and thinking about our research in predefined terms. Whitehead’s (1956, p.81) assertion that “the history of thought is a tragic mixture of vibrant disclosure and of deadening closure” reminds us of the danger of the risk of specialization whilst pointing towards an alternative.

In order to increase the diversity of languages within academia we need to avoid becoming too focused, narrow and specialised in our research. For conceptual and linguistic diversity to flourish; it is imperative that we involve ourselves in “interrupting conventional language patterns.” (Price and Shaw, 1996, p. 1). To do so and free ourselves from intellectual islandisation, we need to travel outside of our specialised habitats. How might we escape these islands? Using a Darwinian analogy, do we possess a metaphorical Beagle to transport us to strange new lands, teeming with unfamiliar and exotic concepts?

Talking Bridges

Later in the paper we consider the use of metaphors, but at this stage our narrative might be helped by switching, or mixing our metaphors. Rather than voyaging upon the high seas, we want to build bridges. We argue that through conversation we can create a land-bridge or isthmus, connecting isolated continents of academic thought, enabling previously isolated communities to interact. Voloshinov (1986, pp.83-98) articulated this in his exploration of verbal interactions. He suggests that; “A word is a bridge thrown between myself and another” (ibid. p.86). Bohm (1998, p. 20) also
uses a bridge metaphor, one that “helps us bridge the increasing diversity found within modern organizations”. In order to share our ideas we need a means capable of conveying them: “People can speak to us only in a language which we already understand” (Merleau-Ponty, 1962, p.178). Implicit within Merleau Ponty’s assertion is the social aspect of speech, which is made explicit by Bakhtin’s (1981, p.295) assertion that “verbal discourse is a social phenomenon — social throughout its entire range”. Similarly Harré (1983, p. 58) suggestion that “the primary human reality is persons in conversation”, stresses the importance of speaking to one another.

Bakhtin (1986a, p.95) uses the term addressivity to capture the social aspect of speech: “An essential (constitutive) marker of the utterance is its quality of being directed to someone”. The sensitivity of the speaker towards others in conversation is why talking with others across disciplinary boundaries is so important. In conversational speech we consider the requirements of the listener and how they will interact with our words; “When Speaking I always take into account the appreciative background of the addressee’s perception of my speech” (ibid.). Through dialogue we connect with others; the ‘rules of engagement’ require that we respect each other. We understand intuitively that we are engaged in a process which is “inherently responsive” (ibid. p.86) and we remain alert to our addressee. Inspired by the works of Buber (1947), dialogue has been widely used to build trust in conflict situations, whether between communities (Head, 2011) or within personal relationships (Scott et al. 2009). It is addressivity that allows us to transcend interdisciplinary or ideological divides. Our vocabularies may be different, but in conversation we find a common ground.

In contrast to more formal communication, acts of speech (which we conceive as a form of phenotypic expression) are adaptive and evolve within social groups and communities of practice. The linguistic genotype may be well defined, but the phenotypic expression is manifest uniquely depending upon the environment. Speech is “much more flexible, plastic and free” (Bakhtin, 1986a, p.79) than other forms of communication. We continually adapt it to the particular habitat we occupy within the wider linguistic environment. In conversation “the participants fit their own acts to the ongoing acts of one another and guide others in doing so” (Blumer 1986, p.66). In dialogue we manage polyphony, there may be many voices seeking to be heard, but an order is maintained, we take turns, we allow others to speak or seek permission to continue. Multiple voices are “combined but not merged” (Shotter 2008, p.516) in conversation. In contrast to communication through monologue, dialogues are not homogeneous, but they are negotiated.

As a result, in conversation we can bridge semantic divides. We may conceptualize the world in different ways, with different vocabularies defining different theories; but in dialogue we are all able to skilfully negotiate the divide, using shared words, intonations and body language such that we are able to communicate our thoughts.
Language is made malleable to a particular reality (Bakhtin 1984, p.71) and we instinctively use it to create engagement and interaction.

Yet the addressivity and negotiation that is inherent within conversation does not guarantee understanding or agreement. We are not suggesting that it leads to consensus; nor that it should. Voloshinov (1986, p.68) differentiates recognition from understanding, and in conversation whilst we establish the former, the latter is not essential. Importantly however, “[i]n attempting to understand the other in dialogue, we potentially alter our own understanding” (Tsoukas 2009, p.943). By entering into productive dialogue with others we build not just a social bridge, but also a bridge for our ideas. By crossing the bridge we gain access to unfamiliar theoretical landscapes with which we can interact. Just like Darwin visiting foreign lands, such journeys can call into question our existing worldview and stimulate the creation of new theories. We already appreciate that “[..the migration of a group to another area” (Hodgson, 2010, p.706) is important for the ongoing evolution of life; fostering adaptation and creating diversity. The migration of ideas across disciplinary boundaries allows for cross-fertilization and hybridisation, resulting in the emergence of new intellectual species, or the revision of our conceptual schemes (Quine 1976, p.88). Thus we are not suggesting that in conversation ideas are simply transmitted; as we speak with another, our ideas interact, and all are changed to some degree. Thus we benefit from engaging in conversations which transgress disciplinary boundaries. They can “plant, nurture and cultivate” (Van Maanen, 1995, p.140), new and novel ideas.

Nevertheless, we do acknowledge that dialogue can break down; bridges can tumble and ideas may become entrenched. Yet when engaging in interdisciplinary conversations we encounter different ways of thinking that expand our conceptual landscape. If we heed Elsbach et al.’s (1999, p.628) assertion that “scholars need to think differently” we suggest that one way that this can be achieved is through dialogue. Dialogue is not essential, our ideas will change without it, but we argue that dialogue creates a fertile and nourishing medium for new ideas to emerge. The fruits of our dialogic labours are the creation of variety, with the emergence of hybrid and mongrel ideas. Such hybrids can increase the fecundity and richness of our conceptualisations of organizations and institutions. Thus we argue that the fertility of our ideas increases when we bridge disciplinary divides with conversation. In the next section we explore the sort of linguistic hybrids that can emerge and transform our conceptual environment when we engage in talk with others.

**Linguistic Hybrids and Semantic Transformations**

Toulmin (1977, p.154) proposes that “[w]e must look and see a fresh”. Our encounters with unfamiliar words, through interdisciplinary, creative conversations; promotes the out-breeding of ideas, encouraging cross fertilization and the
conception of novel hybrids. Our spoken words interact with and alter the linguistic landscape producing a hybrid zone in which the intercrossing of unrelated species is encouraged through the introgression of new ideas and speech forms. As in nature, this process improves fitness and enhances survival, avoiding the problems associated with inbreeding (Mayr, 2001). Semantic hybridization between academic communities allows us to think differently, leading to the development of new abstract ideas and theories.

This process of intercrossing ideas, vocabularies and meanings is the semantic equivalent of gene flow. We tentatively describe this process as one of idea flow. This process promotes diversity and heterogeneity in our population of ideas. It is a generative process. As ideas evolve we create more semantic hybrids, which are analogous to Pizzlies and Grolars (the hybridised offspring of Grizzly Bears and Polar Bears), Labradoodles (the result of crossbreeding Labradors and Poodles), Beefalo (the offspring from pairing domestic cattle with Bison), and Dzomo (which are the product of mating Yak with domestic cattle). In the latter case, the hybrid is fitter and more resilient than either of its parents. Similarly through idea flow, we argue that the overall health and fecundity of our knowledge communities increases. Idea flow generates variety and innovation, fostering imaginative research and transforming our understanding of the world. Importantly this also extends our vocabulary and enriches the conceptual environment. Toulmin (1977, p.148), proclaims that “all really profound changes in scientific thought and theory have brought with them correspondingly profound changes in the basic vocabulary of scientific terms and concepts” . We suggest that changes in our language use and vocabularies have a significant impact on our theory. Bakhtin (1986b, p.165) describes this process as one of semantic transformation. For Bakhtin, whilst words cannot change the physical world, the way that we use language changes the contextual meanings we attach to events. Thus language changes our experience of reality and how we conceptualize it.

Pinker (2007, p.238) suggests that our minds are metaphor mongers; “TO THINK IS TO GRASP A METAPHOR - the metaphor metaphor.” (Capitalization in the original). We believe that the role of metaphor is fundamental to our understanding of reality. Metaphors are a sophisticated part of the language games that Wittgenstein (1958) argues we play. Metaphors allow us to be creative, to express things that otherwise seem to defy current language. With metaphor we can express the inexpressible. If we build a bridge through conversation, then metaphor provides an incredibly flexible material with which to build that bridge. We do have other linguistic materials to hand, but metaphor typifies a form of creative language that we often use in conversation and which facilitates our semantic transformations.

There are many conceptual metaphors to be found in the world of science. Pinker (2007) points out how we imagine the structure of an atom to be like that of our solar system, with a solar nucleus orbited by planetary electrons. Similarly in biology we visualise a pathogen as a lock and an antibody as the key (ibid). Thus metaphor has
an established place within science, but one that is often overlooked. The terms *physical laws* and *scientific laws* emerged in the 16th century when the scientific method called for a new vocabulary of explanation. Previously scientific explanations had relied upon teleology principles that can be traced back to Plato. The term *natural law* does predate these terms, but it only emerged with the establishment of the highly codified legal and religious pronouncements that defined social behaviour in the Roman Empire (Lehoux, 2012). The development of the idea of societal laws provided the metaphor that transformed our understanding of the natural world.

One of the most profound semantic transformations was achieved by Darwin’s *The Origin of Species*. Darwin drew upon metaphors and analogies; including warfare, the tree of life and the tangled bank; to communicate his radical theories in language which his audience could comprehend. Darwin was aware of this, stating that: “I should premise that I use the term struggle for existence in a large and metaphorical sense” (Darwin, 1859:1998, p.50).

Darwin’s work illustrates how our ideas are constructed through interactions with ideas already present in our sociolinguistic environment. All words are predicated on other words, and all ideas are built on existing ideas (Vygotsky 2012). Viewed from a wider perspective, Darwin’s own body of work illustrates how ideas evolve through interaction. For Darwin, this included interaction with established ideas from the natural sciences, ideas emerging from those around him and his direct experience of the physical world. Dennett (1995, p.73) points out that had Darwin not lived in the “mercantile world” of the early 19th Century England; rich in the ideas of Thomas Malthus and Adam Smith, his ideas might not have emerged. *The Origin of Species* was the product of Darwin’s ability to rearrange the pieces of an existing theoretical jigsaw and create a new picture that had previously been unseen. Many of the pieces were visible, but Darwin brought them together and made connections that no one had previously noticed. Most importantly he was able to communicate his ideas to the scientific community, and in doing so, he successfully transformed our collective understanding of the world. Through such interactions existing ideas and language forms are hybridised.

Just such a conceptual revolution occurred when Darwin used language in novel ways. By juxtaposing and combining previously unrelated terms he changed the linguistic environment. The process of *natural selection* draws analogies from the contemporary economic landscape. He suggested that natural selection is “continually trying to economise in every part of the organisation. If under changed conditions of life a structure before useful becomes less useful, any diminution, however slight, in its development, will be seized upon by natural selection, for it will profit the individual not to have its nutriment wasted in building up a useless structure” (Darwin, 1859:1998, p.114). Within this extract, Victorian economic (possibly moral) values of efficiency, prudence and thrift are apparent. Darwin hybridizes these to communicate his radical new conceptualisation of life on earth to his audience. Note too that Darwin anthropomorphises; the process he describes
‘tries’ and ‘seizes upon’ individuals within the population. Whilst there is no conscious agent actively doing the selecting; Darwinian evolutionary theory uses language creatively to produce a meaningful narrative. But arguably perhaps what is most interesting is the emergence of the term natural selection. Darwin drew his term from animal husbandry, where the artificial selection of physical traits through selective breeding was well understood. By conjoining two previously unrelated words he created a revolutionary new description that has transformed our understanding of life. It is a form of conceptual metaphor; in today’s vocabulary a ‘mash-up’: a hijacking of existing terms to express something new. It is not simply an addition, but a creative extension, the whole expresses more than the sum of the parts.

Arguably it is the creation of suitable terms that enables our ideas about nature to evolve. Or, reversing the direction of travel, metaphor and analogy are used to plug the intellectual gaps, filling the linguistic holes in our vocabulary which become apparent as our ideas evolve. Metaphor allows us to express things that would be “otherwise inexpressible” expanding our intellectual horizons (Pinker, 2007, p.241). Such linguistic mutations enable us to provide coherent explanations for what had previously been unnoticed or unexplained. Importantly they also allow us to adapt our knowledge to physical and social worlds that are in a state of constant flux. Intellectual hybridization enables our ideas to evolve quickly to a changing environment.

The rise of the internet has led us to adopt new terms to describe a new reality. Our computers become infected with viruses, they are attacked by Trojan Horses and we quarantine suspect emails. Yet this mutation of language is not a new phenomenon, our everyday language is surprisingly rich with metaphors. Life is a journey, history follows a course, time flows, societies blossom, institutions flourish. We bite the bullet (or the dust), we shoot down arguments, lock horns in disagreement. Disagreeable and unpalatable ideas are beyond the pale. Our language is constantly mutating and evolving. It seems to be infinitely creative; almost without realising we use the imagery of an artist, the aesthetic of a poet, the irony of a satirist and the wit of a comic. Through these devices we connect socially and we connect intellectually. Our institutions evolve as our language evolves and vice versa. As our world changes our words change.

Darwin’s work illustrates that through the ongoing combination and recombination of words; “endless linguistic forms most beautiful and wondrous have been, and are being evolved” (Darwin, 1859:1998, p.369). In this ever changing world, we suggest that it’s good to talk. We hope that this paper keeps the conversation alive.
References


