

8-31-2019

Global Eras and Language Diversity in Indonesia: Transdisciplinary Projects Towards Language Maintenance and Revitalization

James T. Collins
Universiti Kebangsaan Malaysia, Malaysia, jtcukm@yahoo.com

Follow this and additional works at: <https://scholarhub.ui.ac.id/paradigma>



Part of the [Archaeological Anthropology Commons](#), [Art and Design Commons](#), [Fine Arts Commons](#), [History Commons](#), [Library and Information Science Commons](#), [Linguistics Commons](#), and the [Philosophy Commons](#)

Recommended Citation

Collins, James T. 2019. Global Eras and Language Diversity in Indonesia: Transdisciplinary Projects Towards Language Maintenance and Revitalization. *Paradigma: Jurnal Kajian Budaya* 9, no. 2 (August). 10.17510/paradigma.v9i2.302.

This Article is brought to you for free and open access by the Faculty of Humanities at UI Scholars Hub. It has been accepted for inclusion in *Paradigma: Jurnal Kajian Budaya* by an authorized editor of UI Scholars Hub.

GLOBAL ERAS AND LANGUAGE DIVERSITY IN INDONESIA: TRANSDISCIPLINARY PROJECTS TOWARDS LANGUAGE MAINTENANCE AND REVITALIZATION

James T. Collins

Universiti Kebangsaan Malaysia, Malaysia, jtcukm@yahoo.com

DOI: 10.17510/paradigma.v9i2.302

ABSTRACT

Indonesia is immensely proud of its hundreds of regional languages. This amazing diversity occurs because of the social impact in the three global eras: ancient migration from Asian continent, trading intensification and colonial oppression five hundred years ago, and demographical and communication change in the 21st century. However, now we are witnessing the number decrease of the languages in Indonesia. The resistance and preservation of the inherited languages, which are local languages, in the Indonesian archipelago (Nusantara) language network that is indeed complex must be considered as important components in the Indonesia's national identity.

Along with the accelerated loss of the inherited languages, we are also dealing with the ecological crisis happening in Indonesia. In the 19th century linguistics developed in connection with the progress of biology. Hence, in the 21st century, the handling and studies of languages that are endangered are reasonably related to the contemporary focus on the global ecology studies. Nettle (1999) asserted that the world regions with the high biological diversity are also the regions with the high language diversity. Any research on Nusantara's flora and fauna should be correlated with the study of endangered languages and dialects.

In this paper, we review transdisciplinary planning which is capable of producing understanding and comprehension on the ecological system and regional language community as well as the perspective on the role of the knowledge in order for the academicians and members of the community to make more joint efforts to maintain the ecological system and the Nusantara language network.

KEYWORDS

Regional language; dialect; endangered; language diversity; transdisciplinary planning.

ABSTRAK

Indonesia berbangga dengan beratus-ratus bahasa daerahnya. Diversitas yang menakutkan itu muncul karena dampak sosial dalam tiga era global: Migrasi purba dari benua Asia, intensifikasi perdagangan dan penindasan kolonial lima ratus tahun lalu, serta perubahan demografi dan komunikasi pada kurun ke-21 ini. Namun, sekarang

kita menyaksikan penurunan jumlah bahasa di Indonesia. Daya tahan dan pelestarian bahasa warisan, yakni bahasa lokal, di jaringan bahasa Nusantara yang memang kompleks harus dianggap komponen yang penting dalam identitas nasional Indonesia.

Serentak dengan kehilangan bahasa warisan pada kadar cepat, kita juga berhadapan dengan krisis ekologi yang melanda Indonesia. Pada abad ke-19 pengembangan linguistik berkait dengan kemajuan biologi. Maka, pada abad ke-21 ini penanganan dan penelahan bahasa-bahasa yang terancam punah sewajarnya berkait dengan fokus kontemporer pada studi ekologi global. Nettle (1999) menegaskan bahwa justru wilayah dunia dengan diversitas biologis yang tinggi merupakan daerah dengan diversitas bahasa yang juga tinggi. Penelitian apa pun tentang flora dan fauna Nusantara sebaiknya seiring dengan studi bahasa dan dialek yang terancam punah.

Dalam tulisan ini, ditinjau perencanaan transdisipliner yang mampu menghasilkan pengertian dan pemahaman tentang sistem ekologis dan komunitas bahasa regional serta wawasan tentang peran pengetahuan itu dalam merapatkan usaha ahli akademis dan anggota masyarakat untuk mempertahankan sistem ekologis dan jaringan bahasa Nusantara.

KATA KUNCI

Bahasa daerah; dialek; terancam punah; keragaman bahasa; perencanaan transdisipliner.

INTRODUCTION¹

Incontestably, Indonesia stands out as a country of hundreds of languages. Almost twenty years ago, Nettle and Romaine (2000:27) noted that: "...(L)inguists estimate the number of languages in the world to be between 5000 and 7000." Of this estimate, *Ethnologue* (2014) counted 706 languages in Indonesia.² The extraordinary number of languages spoken in Indonesia constitutes more than 10% of the total number of languages in the world. Indeed, among all the 195 countries in the world, Indonesia boasts the second largest number of languages spoken within its borders. Only neighboring Papua-New Guinea has more languages.

This striking diversity of heritage languages has emerged from the social impact of three momentous global eras: Prehistoric migrations out of Asia, Intensification of commerce and conquest six centuries ago and Rapid shifts in demography and communication in this century. Nonetheless, today we are now witnessing a dramatic diminishment of language diversity in Indonesia. Of course, Indonesia's major regional languages, such as Javanese, Sundanese, Bugis and others, are adjusting well to contemporary changes in education, demographics and communication; with their millions of speakers, these languages have continued to maintain their vitality.³ However, other local languages throughout the archipelago are rapidly losing ground, especially (but not exclusively) in eastern Indonesia (Collins 2017b, 2018b). Moreover, apparently some high-ranking Indonesians have disparaged the language diversity of their country! But, the survival and maintenance of heritage languages (local languages) within the context of the archipelago's complex language network is widely recognized as a critical component of the national identity of Indonesia.

In this presentation we will explore how transdisciplinary planning can yield not only broad-based knowledge about our region, its ecological systems and its language communities but also about how this

1 Revised paper presented in the first *International Conference on Transdisciplinary Linguistics* in the Faculty of Humanities, Universitas Indonesia, Indonesia, 10-12 October 2018.

2 The parsimonious estimate of only 442 languages in Indonesia, set forth by Mahsun et al. (2008,15), is certainly incorrect.

3 But see Abtahian et al. (2016) for a different perspective.

knowledge can bridge the gap between academia and society to sustain both social and ecological systems as well as complex language networks. The paper has only two sections:

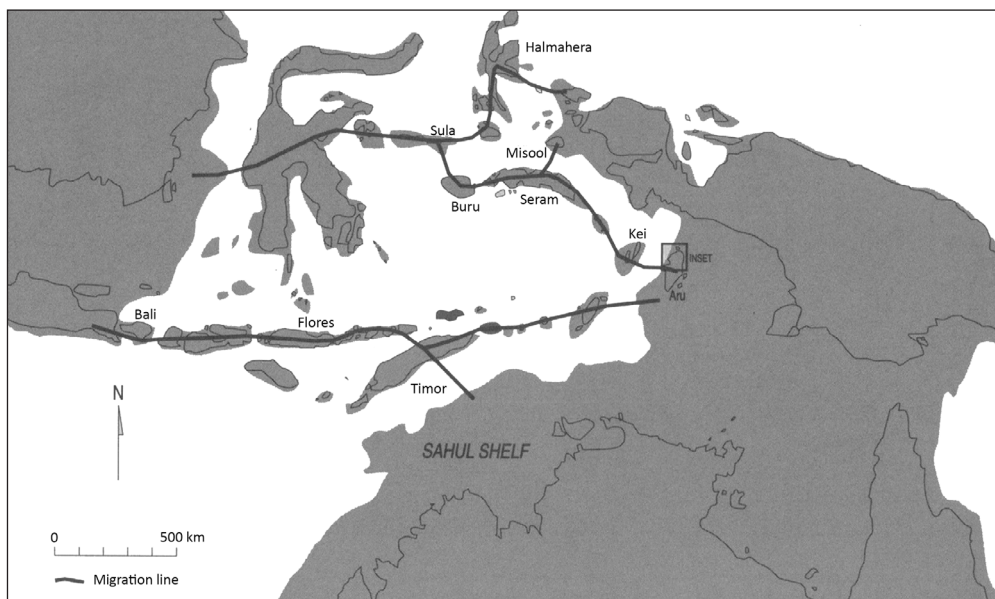
1. Three global eras: language diversity and language attrition; and,
2. Transdisciplinary planning and bridging a social gap.

In the conclusion, we examine the possibilities for transdisciplinary efforts towards language revitalization in Indonesia. Transdisciplinary scholarship must involve more than scholarly connections. We must move beyond academia and connect with communities to resolve social crises.

1. THREE GLOBAL ERAS: LANGUAGE DIVERSITY AND LANGUAGE ATTRITION

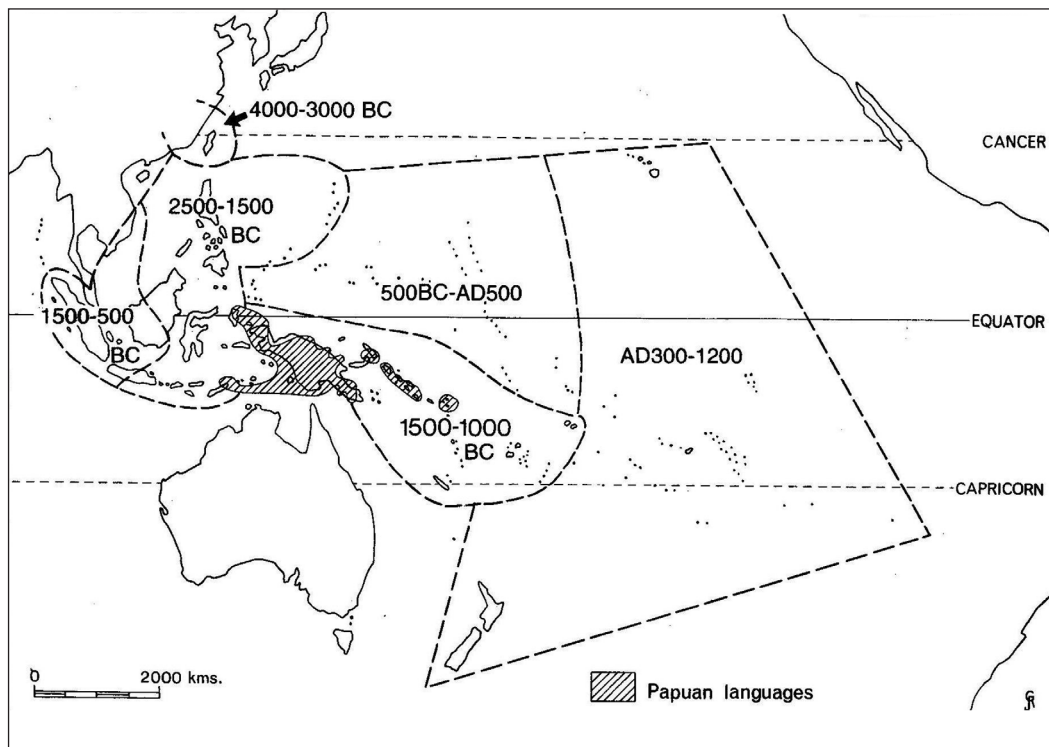
In the introduction, we considered three eras of globalization that have had formative impacts on the language network of today's Indonesia. The underlying basis of such a high level of diversity must rest on the ancient prehistoric migrations of two language families to these islands. Later, the intensification of trade and conquest in the early modern era also influenced the ecology of languages in the region. Finally, recent changes in demography and communication seemingly have influenced contemporary language networks of long standing.

First, **prehistoric migrations out of Asia** to the islands of Southeast Asia set the stage for the complex network of diverse languages in contemporary Indonesia. An overview of these ancient movements was outlined in Collins (2014). We now know that Island Southeast Asia has been inhabited by *Homo sapiens* for at least 40,000 years (Spriggs 1998, Latinis 2002). During the ice age 40,000 years ago, the sea levels were substantially lower than they are now. Today's islands of Sumatra, Java and Borneo formed part of the Asian mainland and the island of Papua was connected to Australia. The islands between those two large land masses (called "Sunda" and "Sahul" respectively) were much closer to each other and in some cases connected by land as well (Bellwood 1997, 7). In that geographical setting, prehistoric humans with limited nautical skills could travel across the vast spaces of the archipelago. As we can see from Birdsell's (1977) map, the islands of contemporary eastern Indonesia formed a geographic transition zone between Asia and Papua-Australia. The humans who took advantage of these routes 30,000–40,000 were part of the Australo-Melanesian migration. See Map 1.



Map 1. The Australo-Melanesian Migration Routes (Birdsell 1977).

About 4,000 years ago, another prehistoric migration swept out of Asia, the Austronesian migration. In that era, sea levels were similar to those of today, so the Austronesians could not take advantage of connected land masses and short voyages; they simply relied on more sophisticated nautical skills, honed on the shores and nearby islands of their homeland, Taiwan. They sailed to the south via the Philippines and eventually filled all the islands of Southeast Asia as well as most of the islands of the Pacific, the southern tip of the Asian continent and Madagascar off the coast of southern Africa (Bellwood 1997, among others). Map 2 summarizes the Austronesian movements in an approximate time frame.



Map 2. Stages in the Austronesian migration from Taiwan (Bellwood 1997, 118).⁴

As (Bellwood 1997, 74–81) observed, the islands of today's eastern Indonesia not only formed a geographical transition from Asia to Papua, Australia and the Pacific, they also comprise a transition zone between Austronesian ("Mongoloid") and Australo-Melanesian populations. The two races of the two major waves of migration meet especially in Maluku, Nusa Tenggara Timur and Papua. In addition to the time depth of settlement from 40,000 years ago, this convergence of two races and two language families accounts for the tremendous language diversity in east Indonesia.⁵

Second, the intensification of **trade and conquest** in the early modern era resulted in the broader and deeper dispersal of the Malay language throughout the archipelago and beyond. Anthony Reid (1988), writing about Malay language and identity in the era he named "The Age of Commerce" (1450–1680), observed: "The

⁴ Interested readers can refer to the DNA evidence (Lipson, M. et al. 2014) that complements this theory of Austronesian migration which is based on solid research in archaeology and historical comparative linguistics. David Reich, one of the co-authors of this scholarly paper, explained the methodology and results in a brief article in the *JakartaGlobe* (Rochmyaningsih 2014).

⁵ This explains the large number of languages in Papua-New Guinea as well because the long period of human occupation in eastern Indonesia and Papua (40,000 years) would in itself yield the emergence of new languages. The arrival of Austronesian speakers (4,000 years ago) has led to borrowing in both directions, not only of vocabulary but of morphological, semantic and syntactic structures--yielding something akin to a *Sprachbund* phenomenon; see Collins (2018).

Malay language thereby became the main language of trade throughout Southeast Asia. The cosmopolitan trading cities came to be classified as Malay because they spoke that language and professed Islam...". Parallel to Braudel's (1972) explanation of the link between coastal and inland communities in Europe, the impact of the Malay language in the archipelago through these networks of trade and culture continues even today to be significant not only in coastal areas but also in upriver communities (Collins 2017a).

Beginning in the middle of the sixteenth century, the intensified spread of Malay as the language of commerce and Islam was rivalled by the use of Malay as the language of Christianity first by Catholic missionaries and in the seventeenth century by Protestant ministers. All of the earliest print texts of Malay were in roman script and most were related to Protestantism (Collins 2008, 2018a). In central Maluku, the diffusion of these Malay language print materials, especially through the church-connected schools maintained in most Protestant villages, and the exclusive use of Malay in the village churches were among the factors that led to the loss of local (indigenous) languages beginning in the early 18th century (Collins 2003).

However, the impact of the VOC was not limited to its choice of Malay as the language of the church and school. Genocide and forced population removals had deleterious effects on language vitality. The conquest of the Banda islands in 1621 "... ended in the death, banishment or flight of almost all of the indigenous people of the Banda Islands" (Collins and Kaartinen 1998, 521,525). Some have estimated that the population of Banda before the VOC campaign was 15,000, but less than 1,000 after it was completed (Hanna 1978, 55); see Collins (2003). The Banda language survives among some of inhabitants in two refugee villages 400 km from their homeland islands. In the same century (1651–1656), the VOC undertook a massive campaign against the villagers of western Seram, known as the Hoamoal war. "By the end of that war, 12,000 people of Seram and its western islands were removed from their villages by the directive of the victorious VOC (Keuning 1956)"; see Collins 2003, 251). Over time the languages of some of the displaced villagers became extinct, for example the Kelang language; others are extremely endangered, such as the Manipa language.

Thus, we can conclude that the long-lasting impact of the two major prehistoric migrations laid the basis for Indonesia's indisputable language diversity. Nonetheless, trade and conquest in the early modern era energized the dispersal of a single influential language, albeit in many new, diverse dialects, for example, Ambonese Malay, Larantuka Malay, Makassar Malay and others (Collins 2018c). On the other hand, the spread of Malay coupled with colonial policies, such as genocide and forced population movements, as well as other factors has led to historic language loss, a diminishment of the inherited language diversity of Indonesia.

Third, **changes in demography and communication** that we are witnessing in today's global era are rapidly influencing language choice in Indonesia. In the last fifty years the percentage of Indonesia's population living in cities has risen dramatically. Note:

"...[F]rom 1971 to 1990 the percentage of the population living in urban areas rose from 17 percent to nearly 31 percent nationally".

(<http://countrystudies.us/indonesia/33.htm>).

Indeed, in 2017 Indonesia's urban population grew to 55.18 percent of the total population of the nation (Statista 2018).

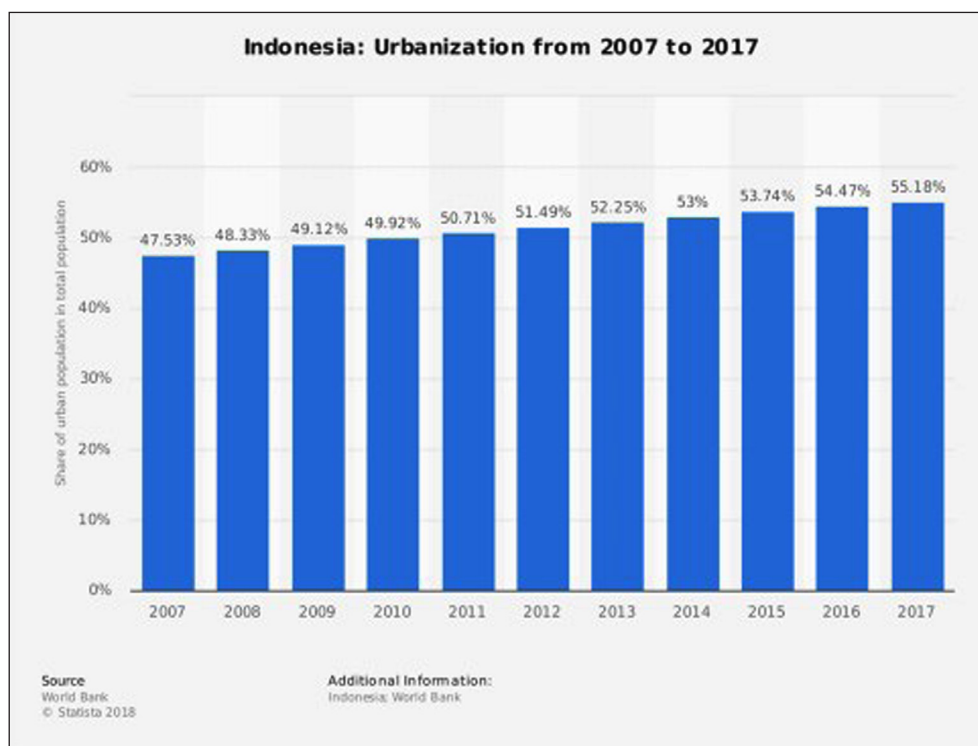


Figure 1: Annual increase of urban dwellers in Indonesia (2007-2017) from Statista 2018.

In less than 50 years (1971–2017), the percentage of Indonesians living in cities has more than tripled, from 17% to 55%.

At the same time, nationwide communication services have rapidly improved. In Collins (2012a), a personal glimpse at the extent of these communication patterns was presented:

“[A]ccording to reliable websites⁶, of the 750 million active users of Facebook in the world today, more than 40 million are in Indonesia. After the United States (where this social network was developed), Indonesia has the largest number of active users of Facebook; so, by their estimate, more than 16.5% of the total population of Indonesia uses Facebook. Based on my limited personal experience, this is not surprising at all. In the last few weeks I have received Facebook messages from major urban centers in Indonesia, including Jakarta, Surabaya and Makassar, but also from remote locations where internet connections are not even reliable: West Kalimantan 350 km upriver from Pontianak, the north coast of Sulawesi, 45 km north of Gorontalo city, and even the interior of central Seram in Maluku. Indonesia has a global profile in the world-wide network of electronic information and communication, and, conversely, global communications is embedded—even in rural Indonesia.”

While urbanization has grown dramatically, the gap between urban and rural population is not as sharp as some authors (Mulyana 2008, Marshall 2018) have suggested. While it is true that ‘...[i]n Indonesia there are major indicators that the chief language used in Facebook communications is Indonesian, ... scores of the nation’s minority languages also appear on [Facebook] walls and messages’ (Collins 2013, 48). The language situation in today’s Indonesia is complex. On the one hand urbanization strengthens the role of the national language and local Malay dialects; on the other hand, electronic communication enables the use of heritage (local) languages.

⁶ For this brief essay, I used www.socialbakers.com/facebook-statistics/ and www.facebook.com/press/info.php?statistics.

Nonetheless, all of us must acknowledge that the Indonesian nation is at a crossroads of language choice and language loyalty. The situation is all the more critical in eastern Indonesia. If, for consistency, we rely again on *Ethnologue* (2014), a clear pattern emerges. In Indonesia, as we move eastward, the population density declines but the number of heritage languages increases. More than half of the 706 languages enumerated by *Ethnologue* (2014) are spoken in Maluku and Papua.⁷ See Table 1. But the population of this eastern region constitutes less than 5% of the population of Indonesia. Fifty per cent of Indonesia's languages are spoken by five per cent of the population!⁸

Region	Number of Languages
Sumatra	49
Jawa	17
Kalimantan	74
Nusa Tenggara	73
Sulawesi	114
Maluku	128
Papua	256

Table 1: The geographic distribution of heritage languages in seven regions of Indonesia (Source: *Ethnologue* 2014).⁹

The eastern Indonesian region, characterized by this dazzling diversity of heritage languages, is the region of Indonesia where languages are most endangered or already on the edge of extinction. Marshall (2018) cited “UNESCO’s “Interactive Atlas of the World’s Languages in Danger”, which classifies 144 of Indonesia’s languages as “Vulnerable” or worse.” In this map almost all of the vulnerable and endangered languages are in eastern Indonesia. For example, Collins (2012b) wrote of the 1978 language setting in western Seram (Maluku):

Thirty-five years ago in Eti, for example, there were only two or three persons who could still remember their indigenous language, a variant of Kaibobo. The two elderly speakers that I worked with were 78 and 81 at that time. In Waesamu, where another variant of Kaibobo was spoken, only one person, aged 78, could actually speak the language. In Hatusua there were said to be as many as 10-20 persons, all over 50 years old, who still remembered their local variant of Kaibobo. In Piru, although several persons claimed to be speakers of that variant of Luhu, after I pre-tested them, only one grandmother could work through my wordlists with me and answer my queries. In Kelang-Asa’ude, a village of about 600 people in 1978, fewer than ten people remembered the language. Those “few speakers were all 60 years old or more. Young people and children knew nothing of the Kelang language; the language of daily use was Ambonese Malay” (Collins 2003, 253).

7 That is the four easternmost provinces of Indonesia: Maluku, Maluku Utara, Papua and Papua Barat.

8 We assume that the large number of languages in eastern Indonesia reflects the two prehistoric migrations noted above. First, the length of time that Australo-Melanesians occupied Papua, that is 40,000 years, allowed for the emergence of differentiated languages. Second, the interaction between speakers of Papuan languages with speakers of Austronesian languages led to convergence and, ultimately, the emergence of languages that reflect that interaction. As noted above, DNA research reported in Lipson, M. et al. (2014) supports this assumption.

9 These data are taken from *Ethnologue* for consistency. The number of languages in Sumatra and Java in this source includes numerous Malay and Javanese dialects; in fact the number of languages in these two regions is smaller than *Ethnologue*’s estimate (Collins 2014).

Languages and dialects in eastern Indonesia are disappearing with rapidity. Very few, if any efforts, by local and national governments have been undertaken to revitalize Indonesia's patrimony languages. Some so-called revitalization projects are merely language documentation projects that simply archive language materials for the perusal of the linguists of the future, but these archives do not connect actively with the language communities themselves.

Facing the imminent extinction of dozens of Indonesia's ancestral languages, how can linguists work with other scholars and with local communities to ensure the continuing maintenance and enhancement of heritage languages in Indonesia?

2. TRANSDISCIPLINARY PLANNING AND BRIDGING A SOCIAL GAP

In Indonesia and in Island Southeast Asia in general, linguistics is often linked to philology—as if the study of language were inextricably linked to the study of texts, preferably manuscript texts. In this view of the world, even more desirable would be the study of language through texts with an uncommon writing system! That esoteric model may have been based on the study of languages in the middle ages or the Renaissance. But times have changed; rather, times changed two hundred years ago! Since the nineteenth century, modern linguistics as a field of study has developed side by side with rapid advances in the life sciences, especially botany and zoology. Terms like morphology, innovation, retention, diversification, speciation, reconstruction, indeed the possibility of extinction discussed above, all arose because of perceived parallels between the study of languages and biology. The basic linguistic notion of a family tree or dendrogram to image the relationships of related languages draws its strength from the strength of evolutionary theory. Thus, it is appropriate to continue to see contemporary language phenomena through the perspective of life sciences.¹⁰

Parallel to the rapid loss of Indonesia's heritage languages is the ecological crisis that is impacting the seas, the rivers, the forests and mountains of Indonesia. Just as in the nineteenth century the scientific articulation of modern linguistics was linked to the parallel development of the biological sciences, the contemporary study of endangered languages must be linked to the contemporary, international concern about global ecology. Along with the biological heritage of Island Southeast Asia, is its language heritage. Twenty years ago, Nettle (1999) pointed out that those areas of the world with the **highest biological diversity** are also the same areas with the **highest language diversity**. Any study of endangered flora and fauna in this region should go hand in hand with the study of endangered languages and dialects.

This realization of the links between the study of language ecology and biological ecology leads us to the keyword of this essay's title: Transdisciplinary. Harvard University's prestigious School of Public Health includes The Harvard Transdisciplinary Research in Energetics and Cancer Center (TREC). This Center provides a definition (TREC 2018) we can consider here, that is:

“Transdisciplinary Research is defined as research efforts conducted by investigators from different disciplines working jointly to create new conceptual, theoretical, methodological, and translational innovations that integrate and move beyond discipline-specific approaches to address a common problem.”

We can contrast and compare this TREC definition to McGregor's (2004) discussion of the differences between multidisciplinary and interdisciplinary research below:

¹⁰ Erwin (2015), for example, abounds with terminology and research problems that will be familiar to sociolinguists and historical comparative linguists alike. Readers may be interested in Keim's (2008) discussion of the evolution of language.

“...[M]ultidisciplinary refers to work that remains grounded in the framework of one discipline, [whereas] interdisciplinary concerns the transfer of methods from one discipline to another either for (a) new applications, (b) new analyses, or (c) the generation of entire new disciplines.... It involves integrating several disciplines to create a unified outcome or perspective that is sustained and substantial...”

In a comparison of TREC’s definition of transdisciplinary and McGregor’s description of interdisciplinary, the occurrence of indicators such as “new”, “create”, “integrate” in both statements as well as the shared semantics of “work jointly” and “unified” suggests that transdisciplinary and interdisciplinary research are quite similar. Equally striking is that in both renderings this research is exclusively the work of scholars/investigators of various disciplines.

The description of transdisciplinary research as “...as research efforts conducted by investigators from different disciplines working jointly...” overlooks a significant component in contemporary research. The TREC definition is perhaps too narrow, possibly too ‘bookish’, maybe even elitist. In fact, a completely different understanding of transdisciplinary research emerges in numerous other sources. Toomey et al. (2015) view transdisciplinary research as a more encompassing endeavor:

“Trans-disciplinary work moves beyond the bridging of divides within academia to engaging directly with the production and use of knowledge outside of the academy. In this approach, societal impact is laid out as a central aim of the research at hand. Solutions that emerge from the research may additionally be put into place through an action-oriented process built on direct collaboration with the groups involved...”

The key concept here is **Move Beyond Academia**. Moreover, with respect to collaboration and action-oriented processes, McGregor (2004) wrote:

Indeed, transdisciplinary research is being conceptualized as both: (a) a specific kind of interdisciplinary research involving scientific and non-scientific sources or practice; and (b) a new form of learning and problem solving involving cooperation among different parts of society, including academia, in order to meet the complex challenges of society. ... Out of the dialogue between academia and other parts of society, new results and new interactions are produced...”

In this perspective transdisciplinary research is not only about a diverse range of scholars creating integrative ideas. Rather this research and the research plan must be broader encompassing scholars, practitioners and local community members.

In the long history of research in Indonesia, there are numerous examples of investigators working closely with local community members. In his books, both in *Het Amboinsch Kruid-boek* (1690) and *D’Amboinsche Rariteitkamer* (1698), Georg Rumphius, the renowned German-born botanist, recorded the local names of the plants and animals in two or three heritage languages of Ambon and the adjacent islands side by side with the scientific Latin nomenclature he was inventing; see Collins (2016). These Maluku terms were provided by the language resource persons he worked with. As Leuker (2010, 152; 156) demonstrated this knowledge transfer through these collaborators enabled Rumphius (1701, 1999) to provide not only objective and exact descriptions of plants and animals but also reports on the cultural functions of these plants and animals in the Maluku communities.

Although we do not know anything about the impact on the Maluku community members who contributed to Rumphius’s research, two hundred years later the collaboration of Hermann von de Wall, another German scholar working in the East Indies, with Raja Ali Haji in the Riau islands yielded very straightforward results.

Collins (1996, 274) discussed their “almost symbiotic relationship...; If much of von de Wall’s Malay dictionary depended on information from Raja Ali Haji, the very inspiration for Raja Ali Haji’s encyclopedic dictionary, *Kitab Pengetahuan Bahasa*, rests on the stimulation inherent in von de Wall’s dictionary project”.

Elyazar et al. (2011, 22) reported on ground-breaking research in the Mandailing highlands of Sumatra. One hundred years ago, the German microbiologist, Wilhelm Schüffner, trained the villagers, “including school children to recognize the adult mosquitoes of this species [*A. sundaicus*]. Village leaders from selected villages delivered captured anophelines to the local malaria laboratory.... This represents a superb early example of community participation in malaria control.” Indeed, the success of this project was not simply based on catching mosquitoes but, more importantly, on the community members with their “detailed and accurate knowledge of local vectors” Both training **and** local knowledge yielded scientific success and a reduction in malaria cases in the area; thus, they produced scholarly products with a significant social impact.¹¹

So we note that in the colonial era sometimes there was significant collaboration between western scholars¹² and indigenous community members that produced remarkable contributions to international scholarship. However, none of these projects, even the “symbiotic” projects of von de Wall and Raja Ali Haji, can be considered transdisciplinary. It is true that there was local collaboration with scholars but not across disciplines. In the post-colonial era, however, one project stands out as an exceptionally well-planned and carefully executed transdisciplinary project—although at the time the project apparently was referred to as interdisciplinary.¹³

The Culture and Conservation Research Program in East Kalimantan was a six-year project (1991–1997) with funding from the Ford Foundation as part of the Kayan Mentarang Conservation Project of World Wildlife Fund Indonesia. The project was originally envisioned as an oral literature project but the planning was revised to fit in with the World Wildlife Fund’s plans to develop a management plan for the Kayan Mentarang conservation area. From the beginning one of the characteristics of this project was the comprehensive training conducted for the project team, including “Indonesian, particularly Dayak, researchers in field research techniques” (Eghenter, Sellato and Devung 2003, 2). In 1990–1992 alone there was training “bridging ecology and anthropology, the natural and social sciences”. Subsequent field studies (1993–1994) focused on “linguistics and oral literature; land tenure and traditional legal systems; and regional history of societies and the forest.... These were carried out by about thirty scholars and students, most of whom were Indonesian....” In the final phase of the (1995–1997), “[r]ecruiting and training continued to target Dayak researchers from communities in and around the Kayan Mentarang area...” A small team of core researchers and research assistants was formed (Eghenter, Sellato and Devung 2003, 3).¹⁴

From the abbreviated description above, we note that at an early stage oral literature and narratives about land tenureship were the focus of the program proposal. However, as funding was sought and plans proceeded, this truly remarkable transdisciplinary project shifted to a program primarily aimed at improving

11 There was familiar (?) bureaucratic interference. “Unfortunately, after only 1 year of such success, the central government declared the practice an illegal forced labour” (Elyazar et al. 2011, 22).

12 In the three examples cited here, the three scholars were Germans working for the VOC or the Dutch colonial government,

13 The 573-page Indonesian language book (Eghenter and Sellato 1999) that appeared as a collection of twenty-five essays about this project included *penelitian interdisipliner* in its title; but the foreword used the phrase *penelitian lintas disiplin*. In another, English language book (Eghenter, Sellato and Devung 2003)—partially based on the first—the word *transdisciplinary* was used in the preface and *interdisciplinary* in the executive summary.

14 In this presentation only a very brief overview of a few of the details of this historic project is attempted. Readers are advised to read Chapter 1, Introduction written by Eghenter and Sellato to explore the intensity of planning, revising and conceptualizing that yielded the successes of the Culture and Conservation Research Program. Eghenter, Sellato and Devung (2003) is available on-line. I am grateful to Antonia Soriente who directed me to this on-line resource.

the planning and management of a nature reserve in which oral literature played a role. The success of this program was reflected in the empowerment of local participants and collaborators who were motivated “to lead conservation and development activities in their own communities” (Eghenter, Sellato and Devung 2003, 3). This program and its achievements are a remarkable example of the potential of transdisciplinary projects that **move beyond academia**. Now the challenge for us, as transdisciplinary linguists, is to plan and participate in projects in which the primary aim is managing language “conservation and development activities”; we mean **language revitalization**.

Returning to the observation that those areas of the world with the **highest biological diversity** are also the same areas with the **highest language diversity**, we linguists need to devise plans to strengthen language diversity through transdisciplinary projects that embrace environmental ecology and the biological sciences. However, we must propose projects in which language revitalization and the empowerment of heritage language communities is the focus of the project. In many previous projects, language and oral literature were only parts or subsections of larger projects focusing on managing nature reserves and encouraging sustainable development; see Collins (2011) for a critique of the manipulation of culture and language in development projects throughout the world. But now it is indisputably clear that we are facing the rapid loss, let us say, in fact, the destruction, of language diversity in Indonesia. We need projects in which **language is the priority**, in which environmental and biological sciences can be channelled to facilitate the sustainable development and revitalization of heritage languages.

Crossing back and forth from linguistics and language study to botany and zoology is not unusual. For example, in 2009, P. Derani completed his MA thesis that studied a long oral narrative, *Mamakng Bulatn Jadi Macatn*, recorded in the Benawas language of west Kalimantan. His analysis drew on oral literature, linguistics and the nuances and cycles of swidden rice cultivation (agriculture). In 2009 as well, Herpanus submitted his MA thesis, *Etnolinguistik Dayak Desa: Zingiberaceae dan masyarakat*, which studied the various species of zingiber (all plants closely related to ginger) known and used by the Desa ethnic group of west Kalimantan. Using botany, linguistics and anthropology, he collected specimens in villages and the forest to identify the various species of *Zingiberaceae* and worked closely with village elders and shamans to explore the material and spiritual functions of these plants in Desa society. In these two cases, both scholars worked across disciplines to gain new conceptualizations of their data. And in both cases they had to work closely with local community members that spoke these two languages and lived their lives within these cultures. Although neither of these cases was transdisciplinary because in each case only one scholar was involved, they do indicate the close and complementary connections across a range of disciplines as well as the importance of collaborating with members of the local community.

So what we linguists need are projects that have the breadth of experience of many scholars in diverse fields, the criss-crossing of these many disciplines and the strong linkage to the language community’s speakers and specialists but most importantly projects in which linguistics and language are the starting point and core focus.

CONCLUDING REMARKS

Indonesia’s languages are disappearing. Forty years ago (1977–1979), I collected materials in central Maluku for my doctoral dissertation (Collins 1983). Since then, three of those languages, Naka’ela, Hulung, Paulohi, have become extinct. Languages that formerly were spoken in four or more villages, such as Kaibobo, Amahai and Manipa, are now remembered only by the oldest generation in one or two villages. Numerous other languages which in 1978 boasted thousands of speakers are no longer being transmitted to

the youngest generation; see, for example, Musgrave and Ewing (2006). This should be the most pressing task for us as transdisciplinary linguists. What can we and our colleagues in many other fields do to revive endangered languages?

Let us briefly consider procedures in a recent project aimed at language revitalization. What do we need to do?

First, we need to identify the problem. In 2016 a proposal for an outreach program was submitted with the objective of surveying “the rift in language choice among the oldest generation, their children and the youth under 25 in Maluku (Indonesia), Indonesian Borneo (west Kalimantan) and Malaysian Borneo (Sarawak) at select village communities. Working with villagers we plan to find ways of bridging the intergenerational gap” (Chong 2016). This was the working hypothesis.

Second, if we organized a project with a similar hypothesis, we should consider potential scholarly partners. Because the focus is language and language choice, among the team there should be linguists, especially sociolinguists, anthropological linguists, local language specialists as well as anthropologists, sociologist, scholars of ecology, botany and zoology (for example, in order to gauge age differences in local environmental knowledge). Language choice can be examined by psychologists, community development experts and, of course, educationalists. In today’s social context, we will need the advice and assistance of media technology experts as well.

Third, we can narrow our transdisciplinary team membership, if we consider who the target members in the community should be. We need to decide who will ‘consume’ our ‘products’ so that there will be an impact on language attitudes in the community as a whole. What age cohort or cohorts will be most effective in this project? At this point we also must reflect on connecting, not just with scholars in other disciplines, but also with non-scholar team members in the community. The community is not only the target of our endeavors but it is from the community that the chief agents of change in the project will be identified.

Fourth, what are the products appropriate to our target community members and what activities will our colleague community members need to empower them to produce them? Do we need coloring books for pre-kindergarten play groups? What kind of videos should we upload to YouTube for secondary school students? Will t-shirts have an impact on the ‘middle generation’? What activities are relevant: training for play group (*PAUD*) teachers? Should we plan fieldtrips for primary school students, led by a village elder, to nearby forests to identify plants? How effective are group discussion for parents of young children to talk about education and multilingualism?

When we have settled basic issues such as these, we can consider the path and the schedule of the project. For example, the 2016 project cited above included:

1. Training workshops
2. Collecting data through intergenerational interaction
3. Organizing and formatting the collected data
4. Producing products aimed at specific consumers
5. Distribution of the through diverse and appropriate channels and media.

A transdisciplinary linguistic outreach project has many components; a few have been sketched out here. Monitoring results, follow-through and evaluation are among the topics that have not been discussed here. However, we must remember that the basic issue in language revival projects is neither research results for the consumption of other scholars nor text products that will enhance our scores in academic ranking. What we face is a critical human crisis: the contemporary loss of language and, through that loss, history-amnesia, culture attrition and blurred identity.

A year ago, an Indonesian physicist at Universitas Syiah Kuala (Aceh) posted an observation on Facebook:

“Ilmu kita terpenjara dalam ruang ruang kelas dan ruang laboratorium. Tak keluar dari pintu pintu ruang belajar” (Suhra Ilyas, Facebook posting, 23 September 2018).

Transdisciplinary linguistics should not simply enhance scholarly connections across disciplines—however fruitful and exciting that may be. Our real job, indeed our responsibility, is to choose the model of transdisciplinary linguistics that moves beyond academia and links our diverse fields of study to society and its problems. We must open those classroom doors and connect with the communities shattered by the inexorable juggernaut of social change and language shift.

REFERENCES

- Abtahian, M., A. Cohn and T. Pepinsky. 2016. Modeling Social Factors in Language Shift. *International Journal of the Sociology of Language*, 242: 139–170. <https://doi.org/10.1515/ijsl-2016-0036>.
- Bellwood, P. *Prehistory of the Indo-Malaysian Archipelago*. Honolulu: University of Hawai'i Press, 1997.
- Birdsell, J.B. 1977. The Recalibration of a Paradigm for the First Peopling of Greater Australia. In *Sunda dan Sahul: Prehistoric Studies in Southeast Asia, Melanesia and Australia*. Edited by J. Allen et al., 113–167. London: Academic Press.
- Braudel, F. 1972. *The Mediterranean and the Mediterranean World in the Age of Philip II*. New York: Harper & Row.
- Chong Shin. 2016. Attitudes Towards Language Choice and Ethnicity: Multigenerational Divergence and Rapprochement. Toyota Foundation D16-N-0074.
- Collins, James T. 1996. Di Dalam Berkekalan Persahabatan. In *Everlasting Friendship*, by J. van der Putten and Al Azhar (Editors). *Malay Literature* 9, no. 2: 271–278.
- . 2003. Language Death in Maluku: The Impact of the VOC. *Bijdragen tot de Taal-, Land- en Volkenkunde* 159: 247–289.
- . 2008. Terjemahan Belanda-Melayu Abad ke-17: Usaha Perintis yang Diabaikan, In *Kelana Bahana Sang Bahasawan: Persembahan untuk Prof. Soenjono Dardjowidjojo, Ph.D. dalam Rangka Ulang Tahunnya yang Ke-70*, 517–541. Jakarta: Penerbit Universitas Atma Jaya.
- . 2011. Maluku Development and Locality: Culture and Language in the Islands. In *Seminar Internasional: Peran Program Pascasarjana dalam Pembangunan Masyarakat Kepulauan secara Berkelanjutan*, 8–19. Ambon: [Universitas Pattimura].
- . 2012a. Indonesian Dictionaries and the On-line Profile of Indonesian. *Jurnal Linguistik Indonesia* 30, no. 2: 113–128.
- . 2012b. The Languages and Dialects of Piru Bay, Seram: Endangered and Extinct. In *Dari Menapak Jejak Kata sampai Menyigi Tata Bahasa: Persembahan untuk Prof. Dr. Bambang Kaswanti Purwo dalam rangka ulang tahunnya yang ke-60*, Bahren Umar Siregar, P. Ari Subagyo and Yassir Nasanius (editors), 149–183. Jakarta: Pusat Kajian Bahasa dan Budaya, Universitas Katolik Indonesia Atma Jaya.
- . 2013. *On Malay Manuscripts: Lessons from the Seventeenth Century*. Siri Kertas Kajian Etnik UKM, 25. Bangi: Institut Kajian Etnik, Universiti Kebangsaan Malaysia.
- . 2014. Keragaman Bahasa dan Kesepakatan Masyarakat: Pluralitas dan Komunikasi. Makalah Undangan yang Disampaikan di Seminar Internasional Pendidikan Berbasis Keragaman Budaya:

Sumbangan Bahasa dan Sastra Indonesia. Universitas Islam Negeri Syarif Hidayatullah, 5 November 2014.

- _____. 2017a. Malay Identity in Southeast Asia: Understanding the Cultural and Linguistic Phenomena. *Advanced Science Letters* 23: 9932–9934.
- _____. 2017b. Diversitas, Dokumentasi dan Pelestarian Bahasa Daerah di Kalimantan. Barat. In *Prosiding International Congress 1: Dayak Culture*. Bengkayang 2017, edited by R. Masri Sareb Putra, 226–242. www.an1mage.org.
- _____. 2018a. *Malay: World language: A Short History*. Third, revised edition. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- _____. 2018b. *Penelitian Bahasa di Maluku*. Ambon: Kantor Bahasa.
- _____. 2018c. *Bibliografi Dialek Melayu di Indonesia Timur*. Second Printing. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- _____ dan T. Kaartinen. 1998. Preliminary Notes on Bandanese: Language Maintenance and Change in Kei. *Bijdragen tot de Taal-, Land- en Volkenkunde* 154, 521–570.
- Country studies. 2018(?). Urbanization. <http://countrystudies.us/indonesia/33.htm>
- Derani, Petrus. 2009. Cerita Lisan dan Siklus Pertanian Padi Bukit: Kajian Etnolinguistik Dayak Benawas di Sejaong, Kalimantan Barat. Master's thesis, Universiti Kebangsaan Malaysia.
- _____ and B. Sellato, eds. 1999. *Kebudayaan dan Pelestarian Alam: Penelitian Interdisipliner di Pedalaman Kalimantan*. Jakarta: WWF Indonesia.
- _____, B. Sellato and G. S. Devung, eds. 2003. *Social Science Research and Conservation Management in the Interior Borneo: Unravelling Past and Present Interactions of People and Forests*. Bogor: CIFOR.
- Elyazar, Iqbal, R.F. Simon, I. Hay and J. Kevin Baird. 2011. Malaria Distribution, Prevalence, Drug Resistance and Control in Indonesia. *Public Health Resources*, 342. <http://digitalcommons.unl.edu/publichealthresources/342>.
- Erwin, D.H. 2015. Novelty and Innovation in the History of Life. *Current Biology* 25, no. 19: R930–R940.
- Ethnologue. Languages of the World*. 2014. <http://www.ethnologue.com/>.
- Lewis, M. Paul. 2009. *Ethnologue: Languages of the World*. Sixteenth Edition". Dallas: SIL International.
- Hanna, Willard Anderson. 1976. *Indonesian Banda; Colonialism and its Aftermath in the Nutmeg Islands*. Philadelphia: Institute for the Study of Human Issues.
- Herpanus. 2009. Etnolinguistik Dayak Desa: Zingiberaceae dan Masyarakat. Master's thesis, Universiti Kebangsaan Malaysia.
- Keim, B. 2008. Evolution of Language Parallels Evolution of Species. *Science* 02/01/08. <https://www.wired.com/2008/02/evolution-of-la/>
- Keuning, J. 1956. Ambonnezen, Portugezen en Nederlanders; Ambon's Geschiedenis tot het Einde van de Zeventiende Eeuw. *Indonesia* 9: 135–68.
- Latinis, D.K. 2002. Protohistoric Archaeology and Settlement in Central Maluku, Eastern Indonesia. PhD. diss., National University of Singapore.
- Leuker, Maria-Theresa. 2010. Knowledge Transfer and Cultural Appropriation: Georg Everhard Rumphius's 'D'Amboinische Rariteitkamer' 1705. In *The Dutch Trading Companies As Knowledge Networks*, ed. Siegfried Huigen et al., 145–170. Leiden: Brill.
- Lipson, M. et al. 2014. Reconstructing Austronesian Population History in Island Southeast Asia. *Nature* 5. <https://www.nature.com/articles/ncomms5689>.
- Mahsun, ed. 2008. *Bahasa dan Peta Bahasa di Indonesia*. Jakarta: Pusat Pembinaan dan Pengembangan Bahasa.

- Marshall, Brendon. 2018. Local Language Vitality in Indonesia: Assessing and Intervening Using Makassarese as a Case Study. Paper presented at Kongres III Bahasa-Bahasa Daerah di Sulawesi Selatan, Makassar, 24–27 September 2018.
- McGregor, S. L. T. 2004. The Nature of Transdisciplinary Research and Practice. <http://www.kon.org/hswp/archive/transdiscipl.pdf>.
- Mulyana, Deddy. 2008. Peran Komunikasi dalam Pengembangan dan Penerapan IPTEK di Indonesia. *Jurnal Sosioteknologi* 15, no. 7: 468–480.
- Musgrave, Simon and M.C. Ewing. 2006. Language and Religion: A Case Study of Two Ambonese Communities. *International Journal of the Sociology of Language* 179: 179–194.
- Nettle, Daniel. 1999. *Linguistic Diversity*. Oxford: Oxford University Press.
- _____ and Suzanne Romaine. 2000. *Vanishing Voices: The Extinction of the World's Languages*. Oxford: Oxford University Press.
- Reid, Anthony. 1988. *Southeast Asia in the Age of Commerce 1450–1680. Volume One: The Land Below the Winds*. New Haven and London: Yale University Press.
- Rochmyaningsih, D. 2014. Out of Sundaland Assumption Disproved. *Jakarta Globe*, October 28 2014, jakartaglobe.id/news/sundaland-assumption-disproved/.
- Rumphius, G.E. 1701. *Het Amboinsch Kruid-boek*. Amsterdam: Meinard Uytwerf.
- _____ . 1999. *The Ambonese Curiosity Cabinet*. Ed. E.M. Beekman. New Haven, London: Yale University Press.
- Spriggs, Matthew. 1998. Research Questions in Maluku Archaeology. *Cakalele* 9, no. 2: 51–64.
- Statista. 2018. Indonesia: Urbanization from 2007 to 2017. <https://www.statista.com/statistics/455835/urbanization-in-indonesia/>.
- Toomey, A.H. et al. 2015. Inter- and Trans-disciplinary Research: A Critical Perspective. GDSR 2015 Brief. <https://sustainabledevelopment.un.org/content/documents/612558-Inter-%20and%20Trans-disciplinary%20Research%20-%20A%20Critical%20Perspective.pdf>.
- TREC. 2018. The Harvard Transdisciplinary Research in Energetics and Cancer Center. <https://www.hsph.harvard.edu/trec/about-us/definitions/>.