



Towards a semantic typology of feelings. The linguistic encoding of emotions across languages, and what it tells us

Maïa Ponsonnet

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Maïa Ponsonnet. Towards a semantic typology of feelings. The linguistic encoding of emotions across languages, and what it tells us. Linguistics. Université Lyon 2 Lumière, 2022. tel-03919642

HAL Id: tel-03919642

<https://hal.science/tel-03919642>

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Université Lumière-Lyon-2

SYNTHETIC REPORT ON RESEARCH RESULTS AND PERSPECTIVES
MEMOIRE DE SYNTHESE SUR LES RESULTATS ET PERSPECTIVES DE RECHERCHE
(Volume I)

Towards a semantic typology of feelings

The linguistic encoding of emotions across languages, and what it tells us

Vers une typologie sémantique des sentiments

L'encodage linguistique des émotions à travers les langues, et ce qu'il nous apprend

submitted for / présenté en vue de l'obtention de
Habilitation à Diriger des Recherches

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Acknowledgements

As I considered what to type on this page, initially the simplest option seemed to thank those friends and colleagues who had been truly key to my progression towards and through my academic career so far. However, mental enumerations of their names, starting with just a few, inevitably kept rising to reach unmanageable numbers. As a matter of fact, many, many people have supported me, encouraged me, and inspired me – professionally or otherwise. I eventually renounced listing them all.

This in turn led me to conclude that I am generally very grateful that the world is so well-supplied with good people, and/or perhaps that I keep stumbling upon them. Less trivially, in the context of this Habilitation à Diriger des Recherches, it is probably fair to note that I have encountered a particularly high density of good people in academia. I realize not everyone shares this experience, and I suspect the disciplines and particular circles I have been involved with so far may be somewhat remarkable in this respect. I certainly feel very lucky and privileged to be part of a number of interwoven networks that together form a vibrant international, multidisciplinary web.

I read somewhere that those of us with a ‘sense of community’ have better chances to live longer, and in healthier condition. If this is true, then science is my best cure. Since I made the relatively abrupt decision to try for an academic career 13 years ago, I have been entirely foreign to the mild yet lingering sense of loneliness I used to be familiar with. I wonder if many academics share this experience. In any case, I am extremely grateful to the hundreds of people who, sometimes unknowingly, form part of what I experience as my academic community.

Abbreviations not include in the the Leipzig Glossing Rules

APPR: apprehensive

comp: compassion

CONJ: conjunction

CONT: continuous

DIM: diminutive

EMPH: emphatic

H: higher in animacy

IMPOSS: impossible

INCH: inchoative

INTJ: interjection

LIM: limitative

MASC: masculine

NPST: non-past

P: patient role

PRES: present

R: realis

RLTN: relational

S: subject role

SEQ: sequential

VLZR: verbalizer

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CHAPTER 1. Introduction

The following report presents my research in Linguistics since 2013, when I completed my doctoral project on the linguistic encoding of emotions in Dalabon (an Australian language). In these nine years, I have continued to investigate the semantic domain of ‘emotions’, which I define as internal states (i.e., not behaviors) with a cognitive and a subjective dimension. Their cognitive dimension differentiates emotions from sensations (such as cold or hunger), and their subjective dimension differentiates them from purely intellectual states (such as knowing or believing). Naturally, this definition does not claim to reflect any ‘quintessential nature’ of emotions, or to be the only plausible one. It simply aims to capture a number of operational criteria that delimit a coherent and practicable field of investigation.

Up to now, my research is mostly positioned within the methodological fields of linguistic description, semantics, semantic typology and anthropological linguistics. This disciplinary anchorage results from a relatively long maturation, since my early training in Philosophy to my current position of ‘Chargée de Recherche’ at Dynamique Du Langage, CNRS. In this introduction I will do my best to present this long and – let’s face it – sometimes tortuous itinerary in the simplest and clearest possible way.

1.1 Itinerary and background training

It wasn’t before I turned 34, in late 2009, that I engaged in formal linguistic training, with a view to becoming an academic. Before that date, I had already garnered meaningful professional experience, as well as training and knowledge in several disciplines. After specializing in sciences (Mathematics) in highschool, I was fortunate to graduate with a Philosophy Major from Université Paris-8-Saint-Denis – the Department of prominent figures such Deleuze and Foucault – in 1997. In this effervescent environment, I absorbed the teachings of renowned scholars such as Alain Badiou, †Daniel Bensaïd, Alain Brossat or Jacob Rogozinsky.¹ Early in my undergraduate years, Jean-Claude Moineau, himself a student of Barthes, introduced me to foundational theories of language and semiotics, from Saussure to Bourdieu, via Peirce, Jakobson, Hemslev and many others. This fed my interest in Philosophy of language and Wittgenstein in particular, which in turn led to a PhD in Philosophy, under the direction of Prof Antonia Soulez (Université Paris-8-Saint-Denis, 2006).

Alongside language and Linguistics, my philosophical itinerary was very much guided by a passion for ‘otherness’ – other individuals and the ‘mysteries’ of their minds; other groups and

¹ I had few female lecturers at the time – but I did undertake a PhD under the supervision of one of them.

their ‘cultural’ differences, onto which my 20 years of age projected relatively unrestrained exoticism. This intellectual fascination tinted my philosophical training, and eventually led me, from the age of 22, to spend 42 months out of six years in the heart of Arnhem Land, a secluded region of northern Australia. This did not reflect any career plan at the time. Instead, I followed a succession of chance opportunities, pursuing childhood dreams inspired, as it happened, by the charismatic Australian Indigenous actor †Balang David Gulpilil. As a result, between 1997 and 2003, I lived and worked – managing an eco-tourism camp – for about 8 months each year near the Indigenous community of Weemol, on the land of the Dalabon ethnic group.

In Weemol, I met a number of people who were to remain key mentors. Bulanjdjan June Jolly-Ashley and †Ngarridjan Maggie Tukumba taught me Dalabon. †Balang Philip Ashley taught me the geography of the land and some of its wildlife. †Balang George Jangawanga inserted me into the local kinship structure by assigning me a ‘skin name’ (subsection category, see Dousset (2012) and McConvell & Ponsonnet (2018)), and taught me local stories and laws. Wamudjan Angela Ashley, Wamudjan Ingrid Ashley, Wamud Junior Ashley, Ngarridj Adrian-Peter Bush, Ngarridjan Alexandra Bush-Martin, Belinj Rosita Tukumba, †Belinj Tamara Tukumba and many of their siblings and cousins taught me Kriol, the English-based creole in use in this part of Arnhem Land. Since then, I have received help and support from many more Indigenous teachers, who I met later, in the 2000s and 2010s: notably Bangarn Quennie Brennan, †Bangarn Lily Bennett, Belinj Nellie Camfoo and Kaminjdjan Michelle Martin.

When my Dalabon ‘up-bringing’ started, in 1997, I did not abandon my academic agenda. Instead, encouraged and supervised by Prof Antonia Soulez, I continued on with a *Maîtrise* (or ‘Master’, 1999), a *Diplôme d’Etudes Approfondies* (DEA, 2001) (both graduate degrees by research), and eventually a PhD thesis (2006) with Paris-8-Saint-Denis’s Philosophy Department. I did not approach these degrees as professional endeavours. My motivations were purely intellectual and I did not aim for an academic career; indeed, for most of my PhD years I was employed outside of academia. Between 1997 and 2003, I dedicated some time to my studies while working in Arnhem Land, and focused on them during the wet-season break (November to March), which I spent in Paris. In 2003, I returned to live in Paris all year round. I then became employed as an editor with the naturalist publishing company Delachaux & Niestlé, and finished my thesis while working full time.

As will be explained in further details in the next section, the above theses (Master, DEA and PhD) were broadly oriented towards philosophy of language and philosophy of knowledge, with a ‘Wittgensteinian’ inspiration, as well as an ‘ethnographic’ angle. I had deliberately avoided any specialized literature before moving to Arnhem Land in 1997, to foster a ‘blank-slate’ ethnographic mindset. In the ten years that followed, I acquired substantial knowledge (albeit no formal qualification) in Ethnography and Anthropology, observing and reading in Arnhem Land; reading, attending seminars and conversing with anthropologists in Paris. In this respect, I was very fortunate to become acquainted with Barbara Glowczewski (CNRS)

and a number of her PhD students, who provided stimulating intellectual exchanges, as well as a lively academic community.

The above account of my background leaves me in Paris in 2006, with ethnographic knowledge acquired first-hand among members of an Australian First Nation, some mastery of their languages, a PhD in Philosophy, and a permanent position in a relatively prestigious French publishing house. How did I, from there, become a linguist? Although working in publishing had appealed to me for many years, over time I developed a sense of dissatisfaction. I longed for an intellectually richer activity where I would make a better use of the unique Dalabon knowledge that had been shared with me. Epistemologically speaking, the study of language gradually gained appeal over the years. Back in 2000, in Arnhem Land, I had met Nick Evans, then a Linguistics professor at the University of Melbourne, who regularly visited Weemol to work with Dalabon speakers. He had mentored my early training in Dalabon, and sat on my PhD defence panel in Saint-Denis in 2005. Nick Evans' growing status and appointment at the Australian National University (ANU) in 2009 made him a relatively safe choice to supervise a professionally oriented PhD. The same year, my publishing company implemented a redundancy plan, which allowed me to leave them under comfortable conditions. As the stars had slowly aligned, I applied and secured a PhD Scholarship at ANU, where I enrolled in early 2010 – this time aiming for an academic career.

Before I move on to the account of my intellectual itinerary in the next sections, I would like to thank all the people who have helped me live such an interesting and fulfilling life – starting with my parents, Annie Claude Lefevre and Jean-Marc Ponsonnet. I have cited a number of names above, but could not possibly give an exhaustive list. For fear of forgetting someone, or boring my reader, I will not attempt to enumerate all those I am indebted to and remember dearly.

1.2 Epistemological and disciplinary orientations

The previous section may have left the reader with an impression of disjunction. Indeed, the circumvolutions of my life itinerary have become a topic of joke among those who know me well. Yet, this surface complexity should not hide a coherent intellectual itinerary, which I have patiently followed since I first joined university in 1993. In the paragraphs below, I pull some of the threads that outline this coherence, leading me to work on the linguistic encoding of emotions and expressivity in language.

I have mentioned above that in this volume, as in the rest of my work, I define emotions as internal states, i.e. private states. While these private states are often associated with behaviors, they are conceptually distinct from them. Focusing on internal states, I distance myself from authors, notably anthropologists and anthropological linguists, who prefer to see emotions (or ‘affects’) as social phenomena (see for instance Massumi 1995; Wilce 2009). It is indisputable that emotions can only be understood if we consider their social context. However, for reasons

that will become clear in the following paragraphs, I am specifically interested in emotions as ‘internal’ phenomena.

1.2.1 *Philosophy of mind and the communication of emotions*

The question of internal states was one of the fundamental drives of my early philosophical interests. Internal states attract philosophical discussions notably because of their unique epistemic status. On the one hand, humans seem to enjoy a ‘privileged’ epistemic access to their own private states; on the other hand, strictly speaking, we have no *direct* access to others’ internal states. Historically, philosophers have articulated diverse responses to this simple observation. Some – like Ryle (1949) for instance – invite us to ‘do away’ with the concept of mind, so-to-speak. Against this behaviorist position, Wittgenstein refuses to deny internal states, and instead adopts a subtle form of agnosticism about them, as famously expressed in §293 of the author’s *Philosophical Investigations* (1953):

“Now someone tells me that *he* knows what pain is only from his own case! --Suppose everyone had a box with something in it: we call it a “beetle”. No one can look into anyone else’s box, and everyone says he knows what a beetle is only by looking at *his* beetle. --Here it would be quite possible for everyone to have something different in his box. One might even imagine such a thing constantly changing. --But suppose the word “beetle” had a use in these people’s language? --If so it would not be used as the name of a thing. The thing in the box has no place in the language-game at all; not even as a *something*: for the box might even be empty. --No, one can ‘divide through’ by the thing in the box; it cancels out, whatever it is.”

One interpretation of these lines is as a warning against assimilating internal states with other ‘things’ we talk about using words. As pointed out by Cavell (1979) following Wittgenstein, when communicating about internal states, humans often use words seemingly similar to those that refer to visible things in the world. For instance, the English noun *pain* can be used in ‘I can see your pain’, just like the English noun *face* can be used to say ‘I can see your face’. For Wittgenstein, projecting the ‘nature’ of ‘pain’ is by analogy with ‘face’ is a mistake. Although ‘pain’ and ‘face’ are both nouns from a grammatical point of view, these nouns are respectively used for entirely different purposes in ‘real life’ context. This sort of linguistic parallelism is a source of metaphysical confusion on the nature of our internal states. Wittgenstein describes as “[m]isunderstandings concerning the use of words, caused, among other things, by certain analogies between the forms of expression in different regions of language [...]” (§90).

A degree of dissatisfaction with Wittgenstein’s position on internal states partly inspired my Philosophy Master thesis (‘Maîtrise’, 1999, supervised by Prof Antonia Soulez) entitled ‘Pain and the argument against scepticism in Wittgenstein’s *Philosophical Investigations*’. Indeed, an alternative stance would be to embrace that humans do what they do, and recognize that many people are prepared to describe pain as something that we have inside us, something ‘internal’ (whatever this means). Philosophically, this can justify the conclusion that human language ‘transcends’, so-to-speak, the epistemic status of internal states, by allowing us to refer to them, for all intents and purposes, just like we refer to other things in the world. This was in a nutshell the argument developed in my Master thesis. Empirically, this suggests that

investigating how humans communicate about internal states could teach us a great deal about language, human nature, and social cognition – i.e. how individual minds, each with their own ‘beetle’, manage to coordinate into groups and societies.

The above is the very initial intellectual underpinning of my current work on the linguistic expression of emotions, defined as internal states. From a linguistic point of view, one of the underlying puzzles is: why do we have emotion words at all? Emotions are not directly observable, and there are reasons to think that in day-to-day life, humans can satisfactorily communicate about emotions without using any emotion-denoting word. For instance, describing an event that caused an emotion, such as seeing a monster, is as effective to communicate my fear as talking about my emotion itself (Préneron & Lambert-Kluger 2010). Likewise, describing someone’s behavior in context, such as running away, will convey their emotional state just fine. Yet, it appears that most languages in the world do have words that denote emotions as internal states (Wierzbicka 1999: 276). Why is it so, and what drives the emergence of such words? Why do so many languages label emotions with nouns, when we experience emotions as states, for which verbs and adjectives are typically well suited? When I express an emotion such as fear with an interjection, what is the relationship between this cry and my internal state? Does my cry represent my fear conventionally, for the purpose of communication with other humans? Or is there a more organic relationship there?

My current research is firmly empirical, aiming to describe the world rather than reflect on conceptual articulations. Nevertheless, I remain committed to the philosophical roots of this investigation, and still harbor a hope that it may in fact inform philosophical elaborations at some point.

1.2.2 *Anthropological philosophy?*

Initially, my philosophical curiosity about how humans communicate their internal states translated into an anthropological rather than strictly linguistic interest. I wanted to explore and compare how culturally different human groups talked about mental states, both to communicate for practical purposes, and in meta-conversations about it. While this is of course about language in a sense, the intent was broader and I was not attuned to linguistic technicalities. My DEA dissertation (2001, supervised by Prof Antonia Soulez) argued in favor of such an approach as a philosophical method to answer some of the metaphysical preoccupations identified by Wittgenstein. Even though I eventually distanced myself from philosophical preoccupations *per se*, I very much followed this program in the following years, and still do to some extent.

Philosophy does not have a strong tradition of fieldwork or data collection, and the university where I enrolled as a PhD student in 2001 did not provide any research budget. However, as explained in 1.1, independently of my philosophical studies I had made my own arrangements to travel and subsequently live in Arnhem Land for extended periods of time. This life experience provided observations that informed the Philosophy PhD I completed in 2005

(under the supervision of Prof Antonia Soulez). Yet, this level of observation was hardly satisfying for what I wanted to achieve, and these limitations eventually pushed me towards language and Linguistics.

1.2.3 Language and Linguistics

Along with Philosophy and Anthropology, I had nurtured a linguistic inclination from an early age. I was exposed to semiotics, linguistic theories, and philosophy of language as part of my university curricula (see 1.1). In Arnhem Land, I had quickly become fluent in Kriol, and had initiated myself to Dalabon. Dalabon was of course much harder to learn, not only because of the typological distance with the languages I already knew, but also because it was so scarcely spoken. Nevertheless, I had acquired a good understanding of its grammar, and some conversational abilities.

The above equipped me for reasonably insightful, if occasional, observations about linguistic interactions – as they feature in my Philosophy dissertation. My conversion to Linguistics eventually occurred later, on epistemological grounds. My doctoral experience had convinced me that Philosophy (at least as it was practiced among my circles) was decidedly not a data-based discipline. I had also become aware that the sort of data provided by Anthropology, while extremely valuable, were not ‘firm’ enough to address the questions I was concerned with. Dealing with intangible matters – internal states – I needed tangible data. Linguistic methods offered well-identified data sets with inter-individual regularities, measurable variation, etc. Since I wanted to find out how people manage to verbalize internal states, language was an excellent entry point. My ‘linguistic turn’ first took the form of small language-documentation projects on the semantics of knowledge and emotions in Dalabon and Kriol, funded by the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS, 2007-2009). These grants covered three short field trips to Arnhem Land, while I was still working full time in publishing. During these trips, I built a sizeable corpus with the help of †Maggie Tukumba and †Lily Bennett in particular, and subsequently published two articles on intellectual and emotional subjectivity (Ponsonnet 2009; 2010a).

It may seem curious that it took me so many years to come to this relatively self-evident conclusion: that studying language and Linguistics is a good way to understand how humans communicate about their internal states. My intellectual itinerary was certainly slow, but through its organic developments I acquired deep and intimate understanding of several disciplinary frameworks and epistemological perspectives. These continue to inform, and I believe, enrich, the way I approach my research questions.

1.3 Doctoral research on emotions in Dalabon

Thanks to a PhD Scholarship from the Australian National University, I enjoyed very favorable conditions throughout my doctoral program within the School of Culture, History and

Language's Linguistics Department (2010-2013). Supplementing Nick Evans' invaluable intellectual mentoring, my co-supervisors and advisors Alan Rumsey, Wayan Arka, Francesca Merlan, Ian Keen and Harold Koch contributed precious guidance and support. I was immensely fortunate to belong to a memorably lively cohort who provided additional inspiration. In addition to the ANU Scholarship, I secured an Individual Graduate Scholarship from the Hans-Rausing Foundation's Endangered Languages Documentation Program (ELDP), which covered extensive fieldwork all along my PhD program.

For this three-and-a-half-year research project, I chose to focus on a particular type of internal states, namely emotions. Although I was in principle interested in all internal states, including sensations and intellectual states, the senior female language consultants I had worked with under my first AIATSIS grant (2007-2008), †Maggie Ngarridjan Tukumba and †Bangarn Lily Bennett, had been particularly prolix about emotions. In addition, as further discussed in Chapter 3, the semantic domain of emotions encompasses a diversity of resources (lexicon including figurative representation, grammar, morphology, prosody) with unique semiotic characteristics, which interrogate many different aspects of language. My thesis, entitled *The Language of Emotion in Dalabon* was submitted in July 2013, and published by John Benjamins in 2014. As the first detailed, comprehensive analysis of the linguistic encoding of emotions, it has now become a reference in the field. This monograph has prompted several invitations for handbook chapters about emotional language (3.4 and 4.1.1) and conference presentations. It has also generated interest in applied contexts such as community Language Centres (6.2.4). From the perspective of my own research, it will quickly become evident (in Chapters 3 and 4 in particular) that this work articulated a number of fundamental questions that still feed my scientific program today. c

In this report, in the absence of further qualification, references to 'my PhD' should be interpreted as references to this Linguistics PhD from the Australian National University – not to my earlier Philosophy PhD from Université Paris-8-Saint-Denis.

1.4 Institutions, research management and supervision

1.4.1 Positions and institutions since my PhD

This paragraph summarizes my employment and institutional itinerary since the end of my PhD. Here I will not expand on the detail of the research projects and results corresponding to each position – these will be discussed throughout the volume, in the relevant chapters. Instead, I provide a chronological outline which will help follow the rest of the report.

Just before the end of my PhD, I secured a 2-year postdoctoral position at CNRS, with Dynamique Du Langage (LabEx ASLAN, 2014-2015). My project, entitled *The language of emotions in Barunga Kriol: Towards an Australian typology* led me to study Kriol, and later compare it with Dalabon (see Chapters 5 and 6). In 2015, I successfully applied for a number

of international grants, and subsequently relinquished an ELDP Postdoctoral Fellowship and a University of Sydney Fellowship in favor of an Australian Research Council (ARC)'s Discovery Early Career Researcher Award (2016-2019). Following the extension to Kriol, the DECRA project, entitled *Can the language we speak change the way we feel? Emotions, language and culture in Arnhem Land* proposed to compare Dalabon and Kriol with other languages of the same region.

I started my DECRA Fellowship at The University of Sydney (2016-2017), and transitioned to the University of Western Australian (2017-2019) when the latter offered me permanent employment. I completed my DECRA at UWA in 2017 and 2018, and automatically became a Senior Lecturer (balanced teaching-research contract) when my ARC Fellowship expired. Under this contract, teaching officially represented 45% of my time, to which were added substantial loads of coordination and administration (especially as a Discipline Chair, see below). The rest was available for research activities. I remained at the University of Western Australia until I joined CNRS and returned to Dynamique Du Langage in 2022. I am still an Adjunct with UWA, and have kept affiliations with the University of Sydney, as well as with the pan-Australian Centre of Excellence of the Dynamics of Language based at ANU.

As my perceptive reader will have noted, this institutional itinerary is not particularly simple either. Much time and energy were devoted to moving, adapting to new professional environments, or re-creating eternally new social circles. Apart from being uncomfortable, this was also detrimental to my productivity – which may raise questions about the current global model of research employment, especially as lining up several postdoctoral positions is by no means exceptional. At the same time, as I have maintained relationships, and often collaborations, with colleagues in each of my research units, this succession of positions boosted my scientific network. I experienced academic culture and organisation in a number of institutions, in two countries with two very different models. I fulfilled a range of roles in research coordination and administration, supervision, teaching, and community engagement. The following paragraphs offer an overview of my experience in research coordination, research administration, and supervision, including PhD supervision. Other aspects are summarized in my CV.

1.4.2 Research coordination

I consider communication and discussion between colleagues, students and others, within and across research units, as a crucial aspect of research. In line with this credo, in all my positions, I volunteered to organize seminars. As a postdoctoral fellow at Dynamique Du Langage (2014), I was given the opportunity to convene a thematic cycle of the regular 'Atelier de Morphosyntaxe' ('Morphosyntax Workshop'). The topic was evaluative morphology, and this laid the foundation for further collaborations (see below, and 3.2.3). At the University of Sydney, the Linguistics Department also had a well-functioning seminar series, which I helped coordinate in 2017.

The University of Western Australia's Linguistics Department, due to its small size, did not have regular seminars when I arrived in 2017. Rejuvenating a full-fledge series was a very rewarding experience. When I re-instated bi-monthly meetings in 2018, the audience was non-existent. Perth is a spectacularly isolated middle-size city, and our Department was (and remains) the only Linguistics Department in the State. Yet, I quickly realized that there were in fact many people interested in Linguistics and languages around, scattered across disciplines and institutions, as well as in non-academic positions in Language Centres, translation services etc. I established a suitable 'editorial line' for the target audience by prioritizing presentations around socio-linguistics and Indigenous Australian languages, and slowly built a comprehensive mailing list. From 2020 onwards, most sessions were full, attracting a mix of students from all levels (including undergraduates), colleagues from other disciplines, and linguists from outside our institution (from early 2020 the hybrid delivery mode became the rule whenever possible). The UWA Linguistics Seminar Series offered a vibrant platform of intellectual exchange, which in turn created a community around shared themes and interests. Upon leaving Perth, I received many expressions of gratitude about the positive effect of our Seminar on the local Linguistics scene. Although seminar organisation does not rank very high in academic CVs, I will remember this experience as a meaningful achievement.

In 2015, I organized a workshop on morphology and emotion at *Dynamique Du Langage*. Most of the contributions were then published as a special issue of *Studies and Language*, co-edited with Marine Vuillermet (see 3.2.3). In 2017, I convened a workshop on the role of the body in emotion metaphors in Australian languages at the Annual Meeting of the Australian Linguistic Society (The University of Sydney). This in turn became a special issue of *Pragmatics and Cognition*, co-edited with Isabel O'Keeffe and Dorothea Hoffman (see 4.3). For each joint volume, I positioned myself as an active editor, providing contributors with directions and comments so that the articles converged towards shared research questions. Indeed, as shown in the corresponding sections of this report, both volumes produced significant research results.

1.4.3 Research administration

As fixed-term contracts are not conducive to collective responsibilities, my experience in major 'service' roles began when as I transitioned to a permanent Senior Lecturer contract at UWA. In January 2019, I became the Chair of Linguistics (i.e. Head of Department), a role I left after two years when I became Graduate Research Coordinator for the School of Social Science.

As a Head of Department, I was in charge of workload distribution, recruiting and managing casual staff, organising team meetings, representing the Discipline group at School-level meetings, mediating communication between Linguistics staff and management, overseeing outward-facing events, and generally leading the Discipline group and its developments. UWA Linguistics was a small team (usually 3 on-going positions and 2 or 3 casual staff), yet a lot had to be done when I arrived. Apart from the above day-to-day duties, I initiated systematic revamping of our communication and promotion material, and, in collaboration with Major Coordinator Luisa Miceli, a number of updates to the teaching curriculum. The Discipline

improved on a number of quantitative and qualitative indicators in these years, and in early 2021 Luisa Miceli and I jointly received a Faculty Teaching Award in recognition of these achievements.

Based on my experience as a Discipline Chair, I soon felt inclined to take up broader collective duties. In mid-2020, I successfully applied for the role of Graduate Research Coordinator at UWA's School of Social Science. At UWA as in most Australian Universities, Graduate Research Coordinators oversee the candidature of all postgraduate students in a School – in this case, around 120 students across 50 supervisors from six Discipline groups (Anthropology, Archaeology, Asian Studies, Linguistics, Media and Communication, and Political Studies). The role includes monitoring program-entry and scholarship applications, orchestrating academic reviews and approvals of projects (either directly or by appointing committees), every subsequent milestone until submission and revisions, as well as handling conflicts and other crisis situations. Cross-disciplinary scientific expertise, personal ethics and communication skills are key to orient students, mediate between students and supervisors, and collaborate with the Graduate Research School personnel. I also chaired the School-level High-Degree-by-Research Committee (eight members), who reviewed, revised and created a number of protocols and guidelines in the 18 months I was in the role. At University level, I sat on the Board of the Graduate Research School (15 members), the governing committee for all matters related to High-Degree-by-Research studies. In my first year at CNRS, I have put my experience on these matters to use by representing Dynamique Du Langage in the 3LA Ecole Doctoral selection process for doctoral contracts (Contrats Doctoraux) starting in second semester 2022.

Overall, and notwithstanding the centrality of core research activities, I see collective responsibilities as a deeply meaningful aspect of my academic duties. They represent an excellent way to make good use of the set of skills and inclinations at my disposal – interdisciplinary expertise, organizational abilities, a sense of equity, and a taste for exchange and mediation –, with notable positive impact on entire teams or sometimes broader groups. Accordingly, a few months after joining Dynamique Du Langage I agreed to take over the coordination of the 'Diversité Linguistique et ses Sources' (DiLiS) team, along with the corresponding seminar series, from September 2022. In June 2022, I became the co-Chief Editor (with Jessica de Largy Healy) of the interdisciplinary publication *Journal de la Société des Océanistes*.

1.4.4 Students supervision

In Australia, all academics are allowed to supervise PhD students immediately after completing their own doctorate – that is, there is no 'Habilitation' requirement. I therefore began to supervise PhD students after I signed a permanent contract with the University of Western Australia, in 2017. To date, I have supervised one PhD candidate to completion; two are underway, based in Australia; and I am effectively co-supervising a student from Université de

Paris. Before I give some details about my doctoral supervision below, I will briefly review my experience with Honours/Master-level supervision.

Standard Australian Undergraduate Degrees are typically comprised of three compulsory years leading to graduation; plus an optional ‘Honours’ year, designed as a transition towards Graduate Degrees by Research. This corresponds to a Master 1 in France for instance. With the support of an individual supervisor, Honours students must carry out a small-scale research project and write a short thesis (roughly the size of a long article). Between 2017 and 2022 I supervised seven Honours students to completion. Honours supervision is extremely intense, given that students usually approach this project without prior research experience. From the start, I endeavoured to propose topics close to my own research interests, offering pathways to publication. So far, two of my Honours students have indeed published a revised version of their thesis (Luk & Ponsonnet 2019, Brown & Ponsonnet 2021), and three other articles are in preparation (Yacopetti & Ponsonnet, Stevenson & Ponsonnet, and Di Toni, Ravichandran & Ponsonnet). An even more meaningful indicator, in my opinion, is students’ motivation to pursue further studies following their Honours year with me. Five of my seven Honours students secured scholarships to enrol in PhD programs upon completing their degrees – three of them in Perth and two in Europe. Another one was delayed due to dire personal circumstances, but meanwhile continued to work on their thesis publication, and they are about to apply for a PhD program as well.

My first doctoral student, Amy Budrikis, completed her PhD in mid-2021. When I joined my colleague Marie-Eve Ritz on Amy Budrikis’s panel in 2017 (upon arriving at UWA) the data collection was complete, but the analysis was in its early stage, and the student had not yet started writing. In mid-2019, as she was getting close to a full draft, she secured full-time employment at Edith Cowen University in direct link with her research on the inter-generational transmission of endangered Indigenous Languages. Well aware that this position represented a unique opportunity, I encouraged and supported Amy Budrikis to apply and eventually get the job, with a plan to handle subsequent delays in PhD completion. She studied part-time from that point, to finish – within the time allocated by the University –, an excellent thesis which she is now aiming to publish. Amy Budrikis is still employed by Edith Cowen University. Working with her was a hugely rewarding supervision experience, during which I learnt a lot from my senior colleague Marie-Eve Ritz, herself a seasoned supervisor.

In 2019, my former Honours student Connor Brown was awarded a UWA Scholarship to enrol in a PhD under my and Marie-Eve Ritz’s supervision. He chose to continue with Kriol, which he had studied during his Honours project using my data. His PhD project investigates the under-described Kimberley Kriol variety, and specifically the equally under-described semantic domain of aspect, the area of expertise of Marie-Eve Ritz. I arranged for Connor Brown to liaise with the Mirima Dawang Woorlab-gerring Language Centre in the Kimberley region (see 6.2.4) for an introduction to speakers of Kimberley Kriol. He has now sojourned with the Centre three times, including a three-month paid-employment period corresponding

to a suspension in his PhD program and Scholarship. This allowed him to gain professional experience while completing data collection at very low cost. In spite of having suffered a pandemic-related interruption of 6-months (while waiting to be able to travel to his field site), Connor Brown has remained in very high spirits. Upon coming back from the field, he faced difficulties with writing, which he is currently overcoming, following my suggestion to always start with an oral presentation of his analyses (be it for himself), in which he excels. With this method, he has published two articles, presented his work in several occasions (conference etc.), and is now on track to submit a series of articles corresponding to the chapters of his thesis-by-publication. Connor Brown chose to maintain our supervision arrangement in spite of my transfer to CNRS. My Adjunct status with my former School allows me to officially remain his supervisor. Online communication through various channels allows for a very functional supervisory relationship, and the thesis progressing well. I anticipate that Connor Brown will complete his PhD within less than four years, which is a reasonable timeframe given the impact of COVID on his trajectory.

Eleanor Yacopetti secured a UWA PhD Scholarship in May 2021, also after an Honours year with me. She works on spatial description on the Kune variety of Kunwok (one of the languages I have worked with, also known as Bininj Gun-Wok or Kunwok, see 2.1.1) as part of the funded project *Landscape, Language and Culture in Indigenous Australia* (3.5). The project offers a substantial research budget, insertion within a vibrant team including five other researchers and two other PhD students, and co-supervision by Lead Chief Investigator Bill Palmer (University of Newcastle). In 2021, Eleanor Yacopetti and I worked very hard to coordinate her first field trip. This was my opportunity to induct her, introducing her to the speakers' community as well as to elicitation methods etc. In spite of an accumulation of complications entirely out of our control, Eleanor Yacopetti made outstanding progress in her first 18 months of candidature, relentlessly demonstrating high motivation and talent. Following my departure from UWA, she has now transferred to Monash University in Melbourne, where other members of the project are concentrated. I remain an official co-supervisor, and currently still the most active one. As I write, Eleanor Yacopetti has begun sketching analyses, is completing another very successful field trip, and is well on track to finish within three and a half years.

In April 2022, I accepted a co-supervisory role with Marie Legentil, a PhD student working under a Contrat Doctoral (i.e. Fellowship) from Ecole Doctorale Sciences du Langage, Université de Paris, supervised by Patrick Caudal at Laboratoire de Linguistique Formelle (CNRS, Paris). An initial plan had been to investigate the aspectual system of the northern Arnhem Land language Gurrgoni (which is quasi-dormant), but could not secure access to sufficient data. I was able to provide data and expertise for Rembarrnga, which is adjacent to Gurrgoni (albeit from a different language family). I shared my data with Marie Legentil in April and met her in person in June. She has experienced a delay due to the difficulties with the Gurrgoni data, but she is hopefully on track to begin analysing Rembarrnga and organize a field session next year.

My supervision experience so far is diverse, including shorter and longer degrees, topics closer or further from my expertise, students working on a personal project or as part of a larger team, writing a traditional thesis or proceeding by publication, etc. I have recently been invited to examine two PhDs, one from France (Eréndira Calderón González, working on spatial cognition with Evangelia Adamou, CNRS Lacito), and one from Germany (Thomas Batchelor, working on Kimberley Kriol verbal morphology with Dany Adone, University of Köln). Combined with my experience in coordination and mediation as a Graduate Research Coordinator (1.4.3), I have acquired a fair understanding of the stakes involved in a PhD, be it for students, supervisors, or institutions. I am also aware of the diversity of pedagogies and skills needed to overcome practical, theoretical or administrative hurdles. I have thoroughly enjoyed each supervision experience so far, and several have led to significant research results (as will become evident in Chapters 2 and 3 below). I look forward to being able to recruit further PhD students in my position at CNRS.

1.5 Overview of the volume

The following report aims to account for my research trajectory and results since I completed my Linguistics PhD in mid-2013. For a meaningful report, I had to exclude those of my outputs, that did not significantly contribute to my core scientific endeavours. As a result, not all my publications are cited or discussed. An exhaustive list is presented in my CV.

The volume is structured around research aims and questions. Chapter 2 begins with my contributions to linguistic description, the subfield of linguistics that grounds and anchors of my scientific approach. In Chapter 3, I introduce my research goals concerning the semantic typology of the linguistic encoding of emotions. In this part of my work I have produced a number of ground-breaking typological studies of linguistic resources such as interjections, evaluative morphology, and body-based figurative metaphors. As I will show, this allowed me to extract a number of generalizations concerning the linguistic encoding of emotions across the world's languages. Chapter 4 explains how I have addressed the question – raised by my PhD thesis on the Dalabon language – of the influence of grammatical architecture upon the linguistic encoding of emotions. Answers to this question came from cross-linguistic comparisons between Australian languages. Apart from comparisons between ‘older’ Australian languages (discussed in Chapter 4), another enlightening case is the comparison between the languages on each side of a language shift, here Kriol and Dalabon. The outcome of this comparison, and the conclusions extracted from the language-shift situation concerning the linguistic encoding of emotions, are presented in Chapter 5. Finally, Chapter 6 details the implications and benefits of my work for the language communities I work with – including discussion of language ideology, language documentation, as well as engagement with speakers and community organisations. The report closes with a brief exposition of future research pathways, in Chapter 7.

CHAPTER 2. Description of Australian languages

In this first, relatively short chapter of this report, I will present an aspect of my work that is perhaps not the most central for my research questions and projects, but nevertheless constitutes a significant anchor of my scientific practice as a linguist: my descriptive publications.

Field-based descriptive linguistics is a foundational subfield of linguistics, to the extent that it gives us access to grammatical analyses for a broad range of languages across the world. As such, it grounds many other subfields, for instance linguistic typology, anthropological linguistics, syntactic theory, psycholinguistics, all depending to some extent upon an understanding of human languages beyond a small number of large varieties. Field-based description is also the scientific tradition in which I was first trained during my PhD in Linguistics at the Australian National University, where it is well represented; it is therefore one of the key bodies of methods and theories upon which my linguist practice relies. Dynamique Du Langage's 'Diversité du Langage et des Sources' (DiLiS) team, to which I belong, also has a strong descriptive angle. And although much of my scientific results so far pertain to typology and linguistic anthropology, descriptive linguists still form an important part of my research network.

In line with the above, and 'in addition', so-to-speak, to my own research pursuits on the linguistic encoding of emotions, since my PhD I have endeavored to contribute to the description of languages of northern Australia, where my field sites are located. I structured this aspect of my work around two principles: on the one hand, I have produced descriptions that were needed to understand my primary object of study (the linguistic encoding of emotions); in addition, I have sought to honor collaborations with colleagues and students so as to address questions of general interest in the descriptivists' community and beyond. Below, I briefly present the works that followed from these principles. Because these results do not sit at the core of my research questions, the analytical discussions will remain succinct, compared to the following sections which will be more detailed. Before I start, I briefly present the languages in focus, the speakers I work with, and the data they provided.

2.1 Language, speakers and data

My descriptive publications deal mainly with two Australian Indigenous languages: Dalabon, an endangered language from the Gunwinyguan family; and Kriol, the English-based creole that has now replaced Dalabon in day-to-day use. Australian Indigenous languages form two blocks: on the one hand, a block that many linguists (albeit not all, see Miceli (2015)) regard

as a family, called Pama-Nyungan; and another set of families, located in the northern part of the continent, commonly labelled ‘non-Pama-Nyungan’ for the sake of convenience. Non-Pama-Nyungan languages are typically prefixing and many are highly synthetic or polysynthetic. The Gunwinyguan languages I study pertain to the non-Pama-Nyungan group.

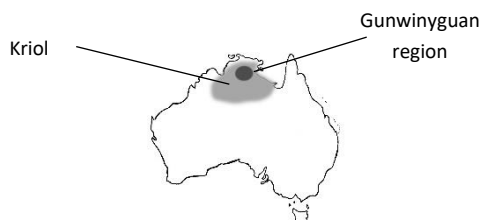


Figure 1. Localisation of Kriol and Gunwinyguan languages

2.1.1 *Dalabon and other Gunwinyguan languages*

Dalabon, the language I studied for my PhD, is a polysynthetic, agglutinative language with nominal case marking of adjuncts and relatively free word order. To date, there exists no full grammar of Dalabon. There is a dictionary (Evans, Merlan & Tukumba 2004), and a number of articles on various aspects of the language, including the verbal template, tense/aspect/mood categories, person prefixes, general morphology (Evans, Brown & Corbett 2001; Evans & Merlan 2003; Evans 2006; Evans 2017), demonstratives (Cutfield 2011) and prosody (Evans, Fletcher & Ross 2008; Ross 2011). The Gunwinyguan family, to which Dalabon belongs, has attracted a fair amount of linguistic attention over the years (Harvey 2003; Alpher, Evans & Harvey 2003). The description of Dalabon grammar thus has potential to contribute to a comparative enterprise.

Dalabon used to be spoken in the centre of a region known as Arnhem Land, in the centre north of Australia. The language is now severely endangered. Having lived and worked in the remote Dalabon community of Weemol between 1998 and 2003 (see 1.1), I began language documentation with Dalabon speakers in 2007 (see 1.2.3). Between 2007 and 2013, I worked intensely with the most proficient speakers still alive at the time. I recorded data with 8 speakers in total – all but two of whom have now passed away. †Ngarridjan Maggie Tukumba, also a co-author of the *Dalabon Dictionary* (Evans, Merlan & Tukumba 2004), was the most active and experienced consultant. †Bangarn Lily Bennett and Bangarn Queenie Brennan also contributed a large amount of data. Repeated field sessions resulted in a 90-hour corpus including narratives, rich stimulus based elicitation (Ponsonnet 2014a), as well as semantic and grammatical elicitations. 60 hours are transcribed (for details regarding corpora and archiving, see 6.2).

I have also carried out first-hand data collection on three other Gunwinyguan varieties: the Kune and Kunwinjku varieties of Kunwok, and Rembarrnga. Kunwok, also known as Bininj Gun-Wok, is genetically closest to Dalabon, and much more vital than other Gunwinyguan languages (probably around 2,000 speakers, and it is still learnt by children). It has been

thoroughly described by Evans (2003), and further discussed in recent work on language change (Marley 2020; 2021) and spatial descriptions (Cialone 2019). I have had the opportunity to work with Bangarn Queenie Brennan, †Bangarn Marie Brennan and †Kelidjan Maggie Jentian on Kunwinjku, as well as with Kaminjdjan Michelle Martin, Kaminjdjan Carol Liyawanga and their family on Kune, collecting a total of 12 hours of speech between 2014 and 2022 (see 6.2). I am currently collaborating with the Kune community on on-going linguistic projects in partnership with the Bininj Kunwok Regional Language Centre (see 3.5).

Rembarrnga is much more severely endangered than Kunwok, albeit a bit less than Dalabon, with perhaps a dozen active speakers as I write. Rembarrnga is genetically more distant from Dalabon than Kunwok, but displays interesting contact-induced resemblances, due to intense interactions between Rembarrnga and Dalabon families since precolonial times. There exist good descriptions of Rembarrnga, including a grammar and a dictionary (McKay 1975; Saulwick 2003a; Saulwick 2003b), however there is little additional literature. My Rembarrnga teachers were Belinj Nellie Camfoo, Belinj Dorothy Cameron, and †Wamudjan June Forbes. Working together mostly between 2014 and 2017, we constituted a 17-hour corpus (see 6.2). I hope to continue to collaborate with Rembarrnga speakers and the Mimal Rangers local organization via Marie Legentil's doctoral project (supervised by Patrick Caudal, CNRS, see 1.4.4).

So far, my descriptive publications on Gunwinyguan languages have mostly focused on Dalabon. Other Gunwinyguan languages usually feature within a comparative approach, and, more generally, enrich my descriptive perspective.

2.1.2 *Kriol*

The descendants of Dalabon and Rembarrnga speakers have now shifted to Kriol, a creole spoken by 20 to 30,000 speakers in the centre north of Australia (Sandefur 1986; Schultze-Berndt, Meakins & Angelo 2013). This figure makes it the largest First Nations language in Australia by far. Kriol bears many resemblances with other Pacific Creoles (Meakins 2014). Like most English-based creoles, it is relatively isolating, and has adopted the SVO word-order of its superstrate. There exists a good sketch grammar of the variety spoken in central Arnhem Land communities (Sandefur 1979); as well as a number of theses and articles on sociolinguistic aspects (Rhydwen 1995; Ponsonnet 2010b; Angelo 2021) or, often, substrate influence (Nicholls 2009; Nicholls 2013; Dickson 2015). However, there is no full, detailed grammar of the language, and few specific descriptions (but see Phillips 2018). Further clarification of the many complexities of Kriol is particularly needed, because Kriol is a key language of communication in cross-cultural contexts such as health, education, welfare and other state services. Due to surface resemblances with English, many L2 learners are at great risk of introducing misunderstandings in sensitive contexts. Thorough descriptions of certain aspects of Kriol grammar are therefore direly needed.

As Kriol is spoken among Dalabon and Rembarrnga communities, I naturally collected some Kriol data while documenting Dalabon, and later while documenting other Gunwinyguan languages. In 2014 and 2015, I dedicated two field trips to Kriol specifically, visiting speakers in remote Indigenous communities in and around the township of Barunga, to the east of the town of Katherine, working with around 20 (mostly female speakers) between 12 and 80+ years of age. Among the most active consultants were †Bangarn Lily Bennett, Bangarn Queenie Brennan, †Kelidjan Maggie Jentian, and Wamudjan Ingrid Ashley. These field trips resulted in a 25-hour corpus including narratives, rich stimuli-based elicitation, as well as semantic and grammatical elicitation (see 6.2).

2.2 Grammatical descriptions in relation with the encoding of emotions

2.2.1 Possession classes

In 2015 I published a detailed description of the system of nominal subclasses in Dalabon. Unlike systems of purely morphological classes and grammatical genders, based largely on morphology, the Dalabon nominal subclasses derive correspond to different patterns of behavior of nouns in a range of morphosyntactic contexts including primarily noun incorporation and boundedness, possessor raising, as well as possessive constructions. While morphological and gender classes have been extensively described in Australian languages, systems like the Dalabon one have typically been overlooked, and my contribution aims to address this gap.

Ponsonnet, Maïa. 2015. Nominal subclasses in Dalabon (South-Western Arnhem Land). *The Australian Journal of Linguistics*, 35(1):1-52.

This article offers a description of the morphosyntactic behavior of each subclass, which in turn sheds light upon the constructions that define these classes. These include noun incorporation, double possession marking, and the distribution of the ubiquitous third singular possession suffix *-no*, which had not been fully explained elsewhere (Evans 1996; Evans & Merlan 2001). As illustrated in Figure 2, based on differentiated behavior in each context, six classes of nouns can be established in Dalabon: Natural Kinds (NK), Generic (GEN), Kin terms (KIN), Parts of Animates (PA), Parts of Inanimates (PI), and features of the Landscape (LAND).

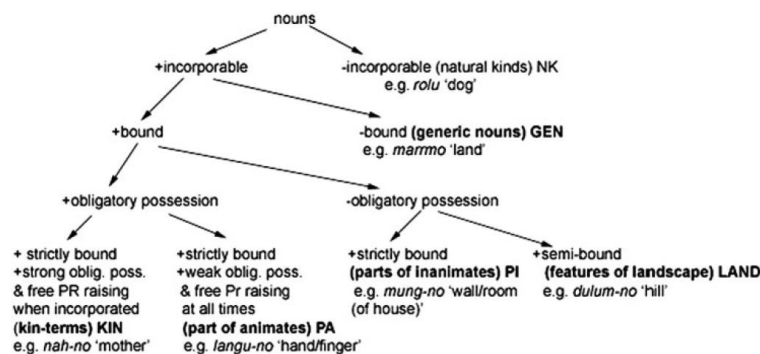


Figure 2. Dalabon nominal subclasses: overview.

This system can be construed as an expanded version of what has been called ‘possession classes’, in languages where two distinct possessive constructions are assigned to two different classes of nouns. Such classes are generally labelled ‘alienable’ and ‘inalienable’, as inspired by their respective semantic tendencies (see for instance Nichols 1988; Lichtenberk 2009). In Dalabon, additional morphosyntactic criteria come into play to define a larger number of nominal subclasses, yet the principle remains the same and some of the classes indeed qualify semantically as more or less ‘alienable’ or ‘inalienable’. As in many other languages across the world, kin terms and ‘parts of animates’ – including body parts and products, as well as abstract attributes of the persons such as one’s shadow, name, spirit, feelings etc., – qualify for ‘inalienability’ to the extent that they cannot be expressed outside of a grammatical construction denoting a form of possession. In other words, such nouns never appear independently of the linguistic allusion to a ‘possessor’ (relative for kin terms, animate whole for attributes of the person).

The data-collection and analysis for this 2015 publication took place during my doctoral program, however I wrote up and published this work in the years that followed. The above account makes it clear why I proceeded to describe this aspect of Dalabon as part of my study of the linguistic encoding of emotions in this language. Dalabon emotion nouns (of which there are few, see 3.1.2), affiliate with the Part-of-Animates ‘inalienable’ class (on a par with body parts and other attributes of the person), and understanding the morphosyntax of this class was important for that reason. In addition, clarifying the morphosyntactic status of body-part nouns (also Part-of-Animates nouns) was equally important, since in Dalabon the linguistic description of emotions is often achieved by figurative compounds featuring a body-part noun. Understanding the behavior of these nouns relative to incorporation and possession was necessary to understand the grammatically defined affordance of figurative representations of emotions in the language (see 4.2, which reports on some of the analyses in Ponsonnet (2015)). In addition, my analysis shed light upon the linguistic treatment of land and land-tracts, a theme I have tackled in collaboration with colleagues in anthropology (Travési & Ponsonnet 2015) and more recently with linguists working on the typology of spatial descriptions (see 3.5).

In addition, as pointed out above, the analysis of Dalabon nominal subclasses addresses a gap in our understanding of Australian grammars. Australian languages are known for their morphological noun classes and gender systems,² which have been abundantly described and analyzed (e.g. Evans 2003; Dixon 1972). Binary possession classes have also been identified in Pama-Nyungan languages (Hale 1981; Ponsonnet in press-a), but the more complex systems of morphosyntactic subclasses reported in some non-Pama-Nyungan languages (Harvey 1996; McGregor 1996; McKay 1996) have rarely been thoroughly explored and understood. Occasionally, they seem to have been mistaken for gender classes, which further obscured their description.

Thus, Ponsonnet's (2015) relatively comprehensive analysis of a full system offers an example that may inspire future descriptions. Flowing from this language-internal description, I have also produced a pilot typological study of possessive constructions in Australian languages, including a discussion of possession classes, to appear in the Oxford handbook of Australian Languages (Bower in press). For the sake of thematic coherence, I briefly present this work here rather than in the Chapter on semantic typology (Chapter 3).

Ponsonnet, Maïa. In press-a. Possession, in Bower, C. ed., *Oxford Guide to Australian languages*. Oxford: Oxford University Press.

The study covered a geographically balanced sample of 30 Australian languages, 17 from the Pama-Nyungan family, and 13 from non-Pama-Nyungan families. Unsurprisingly, we observe a relatively clear split between the Pama-Nyungan family and the non-Pama-Nyungan group. Pama-Nyungan languages follow a relatively unified 'prototypical' pattern, where two different adnominal constructions specialize for alienable and inalienable possession respectively. The 'inalienable' construction is usually limited to parts of wholes, and often labelled as 'part-whole' construction in the literature. Non-Pama-Nyungan languages exhibit less consistent patterns – also in line with their genetic status (since 'non-Pama-Nyungan' refers to a group of several distinct families). Few non-Pama-Nyungan languages have a part-whole construction as such. However, some have traces of it, and others have clausal constructions (e.g. possessor ascension) that contrast alienable vs. inalienable classes of nouns. In a number of languages, possessive constructions delineate more than one class, with some relatively complex systems (including relatively clear cut system as in Dalabon, or someone vestigial ones as in Gooniyandi for instance, McGregor (1996)). Interestingly, across the Pama-Nyungan/non-Pama-Nyungan divide, inalienable classes tend to delineate very similar sets of 'attributes of the person', including body parts and products as well as immaterial attributes as described above for Dalabon.

² Famously, Lakoff's (1987) title *Women, fire and dangerous things* is inspired by one of the gender groupings of Dyirbal, a Dyirbalic Pama-Nyungan language of Cape York described by Dixon (1972).

2.2.2 Reflexive constructions

Reflexive constructions are another aspect of the grammar of Australian languages (and perhaps languages in general) bridging with the linguistic encoding of emotions. In a notable number of languages across the world, lexicalized reflexive constructions target emotional meanings – as in *enjoy oneself* in English, or *s’ennuyer* (‘to get bored’) in French for instance. This phenomenon was briefly flagged by Kemmer (1993: 18–19) in her seminal study on the middle voice. In recent years, I have myself been working on a typological study of such lexicalized reflexive constructions, as will be discussed in 3.1.3. With this typological endeavor in mind, in a 2016 publication I clarified the distribution of the reflexive and reciprocal markers in Kriol as spoken in the region of Barunga, where my data-collection took place. This research was undertaken as part of the postdoctoral fellowship funded by LabEx ASLAN at Dynamique Du Langage (2013-2015).

Ponsonnet, Maïa. 2016. Reflexive, reciprocal and emphatic functions in Barunga Kriol. In Meakins F. and O’Shanessy C. eds., *Loss and renewal. Australian languages since contact*, 297-332. Berlin: Mouton de Gruyter.

The Kriol reflexive and reciprocal markers, *mijelp* (<Eng. ‘myself’) and *gija* (<Eng. ‘together’) are interesting because their distribution has evolved in recent years, resulting in further and neater distinctions. Former functions of *mijelp*, attested in earlier documentation and texts such as the *Kriol Baibul* (1991), used to align with that of its English etymology and marked reflexive clauses exclusively; whereas *gija* used to mark reciprocal clauses. In more recent data, the contrast between the two markers has changed. *Mijelp* can now mark some reciprocal constructions as well as well as all reflexive ones, and a contrast between two types of reciprocals has emerged. In this typologically rare pattern, transitive and semi-transitive verbs each receive distinct reciprocal marking. The evolution of the distribution of *mijelp* and *gija* is represented in Table 1 below, and their use illustrated in (1) and (2). Both examples contain reciprocal clauses, where the verb *lib* ‘leave’ (<Eng. ‘leave’), which accepts direct objects, combines with *mijelp*, while the verb *tok* ‘talk’ (<Eng. ‘talk’), which only takes indirect objects introduced by a locative preposition (*la*), combines with *gija*.

- (1) KRIOL
Dei bin lib-um=mijal na,
 3PL.S PST leave-TR=REFL/RECP now
oni tubala miself gone.
 only 3DU EMPH gone
 ‘They have left each other now, only these two keep going, by themselves
 (without the other one).’ (20140328a_003_LB_ND 018)
- (2) KRIOL
Dat mob darrei, dei bin tok gija bla samding.
 DET group DEM 3PL.S PST talk RECP DAT something
 ‘These people there, they talked together about something.’ (20140408a_002_LB 85)

In addition, the reflexive and emphatic markers, which share the same English etymology (*myself*) and were originally quasi-identical, have evolved to become well-differentiated items, *mijelp* (reflexive) vs *miself* (emphatic). This difference is illustrated in example (1) above, where *miself* in the second line has an exclusive function.

	Reflexives	Recip: Transitive	Recip: Semi-Transitive	Recip: Intransitive
Former Alignment (functional)	<i>mijelp</i>	<i>gija</i>		?
New Alignment (selectional and functional)	<i>mijelp</i>		<i>gija</i>	?redup+bat
Western Varieties (see below)	<i>jelp/mijelp</i>			?jelp/mijelp

Table 1. Realignment of reflexive and reciprocal categories in the Kriol (Barunga variety).

Following the description of these markers, Ponsonnet (2016a) examines the ways in which a creole can develop new categories, and explores the principles plausibly underlying these developments. Contact with neighboring varieties of Kriol, as well as late substrate reinforcement, appear to have played a role in these innovations. In addition, this case study confirms that even beyond early genesis, Kriol varieties can be influenced not only by their immediate substrates, but also by other Australian languages within a broader contact area, via on going contact between varieties.

Beyond the intrinsic interest of the grammatical features it highlights, this article is important for several reasons. Firstly, descriptive clarifications like the one proposed here have significant applied value in Kriol, which many non-Indigenous second-language learners use for cross-cultural communication in Australia. Secondly, the article inspired further research, including descriptive publications (O’Shannessy & Brown 2021) and sociolinguistic research (Dickson & Durantin 2019).

2.2.3 Reduplication

As part of the investigation of the linguistic encoding of emotions in Dalabon, my PhD thesis and the resulting volume offer a detailed analysis of Dalabon evaluative morphology, namely diminutives (Ponsonnet 2014b: 81–109). Turning to the linguistic encoding of emotions in Kriol during my ASLAN postdoctoral project (2014–2015), I considered whether it featured any linguistic tools conveying comparable expressive values as diminutives do in Dalabon. Kriol does not have morphological diminutives, which is unsurprising given that as is typical of creoles, it has relatively little morphology. However, like Dalabon and most Indigenous languages in Australia, Kriol does make extensive use of reduplication, and the expressive values of Kriol reduplication are more prevalent than those of Dalabon reduplication. Ponsonnet (2018a) clarifies these expressive values, and in order to do so, the article also describes the behavior and functions of Kriol reduplication more generally.

Ponsonnet, Maïa. 2018. Expressive values of reduplication in Barunga Kriol (northern Australia). *Studies in Language* 42(1):226-255.

The article explores Kriol reduplication across word classes. Like in many Australian languages (Fabricius 1998), the reduplication of nouns is mostly limited to hypocoristic functions, as illustrated in (3). It may be noted that this type of reduplication, while not highly productive in Kriol, is more frequent than in Dalabon.

- (3) KRIOL
Munlait taim tu!
 moon.light time too
Komon sonson yu labta wok!
 come.on son:REDUP 2SG OBLIG walk
 ‘And the moon was up then! Come on my son you must move on!’
 (20140327c_003_ND_LB 10 (ND))

By contrast, verbal and adjectival reduplications primarily have aspectual functions, normally occurring on durative predicates:

[Characters in a movie slowly walking back home.]

- (4) KRIOL
Tubala gobakgobak la kemp na.
 3DU return:REDUP LOC home EMPH
 ‘They (two) are going back home now.’ (20140409a_001_TM_LB 007 (LB))

In terms of distribution, they are widespread, albeit not fully productive either. My corpus analysis allowed to establish that Kriol reduplicable verbs and adjectives form a small, yet open class. Usually, only intransitive predicates of two syllables or less can reduplicate. However, not all the items that fulfill this criterion accept reduplication, and there seems to be some purely lexical limitations. Overall, a relatively low number of predicates account for a large proportion of the reduplicated items in the corpus, while some predicates never or rarely reduplicate. To express duration with the latter, speakers use aspectual morphology, namely the *-bat* or *-ing* suffixes, which Ponsonnet (2018a) briefly describes as well.

Activities (intransitive verbs)	
<i>bogi</i>	'swim, bath'
<i>jingat</i>	'shout'
<i>krai</i>	'cry'
<i>kraul</i>	'crawl' (baby)
<i>laf</i>	'laugh'
<i>plei</i>	'play'
<i>ran</i>	'run'
<i>slip</i>	'sleep'
<i>smail</i>	'smile'
<i>tok</i>	'talk'
<i>wardu</i>	'rock a baby'
<i>weit</i>	'wait'
<i>werk</i>	'work'
<i>wok</i>	'walk'
Accomplishments (intransitive verbs)	
<i>gobak</i>	'go back'
	'go away'
<i>jump</i>	'jump'
<i>kombak</i>	'come back'
<i>kis</i>	'kiss'
States (intransitive verbs or adjectives)	
<i>jendap</i> v.intr.	'stand up'
<i>kol</i> adj.	'cold'
<i>sheim</i> adj.	'be in fear of and avoid social interactions'
<i>sori mijelp</i> v.intr. with middle marker	'feel miserable' (→ <i>sorisori mijelp</i>)
<i>wail</i> adj.	'angry'
<i>warl</i> v.intr.	'feel strong desire for'

Table 2. Kriol predicates exhibiting productive reduplication in the Barunga variety (occurring more than once in my corpus).

As the aim of this publication was first and foremost to shed light upon the expressive dimensions of Kriol reduplication, its purely grammatical description did not aim to be exhaustive. It nevertheless brought significant clarity into a phenomenon that is widespread in the language, and had so far only been very succinctly broached in grammatical overviews (e.g. Sandefur 1979: 119). As such Ponsonnet (2018a) has served as a basis for further work on aspect and reduplication in creoles (see also Brown & Ponsonnet in preparation). And once again, for a language of cross-cultural communication like Kriol, baseline grammatical descriptions are a precious source of information for L2 learners and their teachers.

2.2.4 The Kriol modal system

Semantically, modality intersects with the domain of emotion to the extent that it covers the expression of wishes (volitional modality), fears (apprehensive modality, Palmer (2001: 131)), or even surprise (mirativity, DeLancey (1997)). More generally, modality is used to convey information about internal states such as knowledge and beliefs about possible worlds, all at the core of my research interests (see 1.2.1).

My opportunity to describe the modal system of Kriol presented itself in 2015 (during my postdoctoral fellowship funded by LabEx ASLAN at Dynamique Du Langage), when Prof Eva

Schultze-Berndt (Manchester University) approached me for a collaboration, together with Kriol specialist Denise Angelo (Australian National University). Our respective data collections are complementary: Schultze-Berndt's expertise covers Kriol varieties to the west of the Kriol-speaking area, while I work on the eastern side, and Angelo's data comes from the town of Katherine, the urban epicentre of the Kriol region. This configuration offered a unique opportunity to join forces in the description of a vast and complex modal system, based on rich first-hand data from three different field sites, with a potential to assess regional variation. Given the scope of the task, the descriptions and analyses exceeded the size acceptable for an article. We now have a very advanced draft of a monograph that should be submitted for publication in 2022 (Language Science Press has approved the project in principle, pending peer review).

Schultze-Berndt, Eva, Maïa Ponsonnet & Denise Angelo. In preparation. The semantics of modal markers in Northern Australian Kriol. To be submitted to Language Science Press.

The volume discusses all major Kriol modals, including independent modal particles, which in this language happen to be assigned to epistemic modality; and preverbal modal markers, which cover root-modality categories. Apart from shedding light upon subtle aspects of the language that can create difficulties and misunderstandings for language learners in cross-cultural communication contexts, our analysis highlighted that the Kriol modal system is better understood as an entirely new system than a combination of superstrate and substrate features (see Winford & Migge 2007; Essegbey, van den Berg & van de Vate 2013, regarding Caribbean creoles). Kriol modal forms come from English, and some semantic traits are clearly inspired from either English or Australian languages. We can cite for instance the apprehensive *bambai* (<Eng. 'by and by') (see also Angelo & Schultze-Berndt 2016); the epistemic-evidential marker of illusion *gemen* (<Eng. 'gammon'); the scope of the volitional/irrealis marker (*w*)*ana* (<Eng. 'want')). Yet, the internal semantic organization of the Kriol system can only be understood if we step away from inherited properties, tuning in to its own categories, structure, and logic.

Among cross-linguistically notable properties of the Kriol system are the above-mentioned formal split between epistemic modality (expressed by free particles) and root modality (expressed by preverbal markers); as well as the collapse of the negation of possibility across all modal grounds under one single marker *kan* (<Eng. 'can'). Normally, Kriol modal markers do not take negation, and therefore when stating that some event is not going to happen – whatever the reason – one uses *kan*. The same form *kan* is used to negate participants' abilities (5), deontic and teleological possibilities (6 and 7), along with any future events.

- (5) KRIOL
“Mami mi bratin. Mi bratin ba dis stori
 mum 1SG.P scared 1SG scared DAT DEM story
yu bin dal-im-bat mi. Ai kan silip” im latha.
 2SG PST tell-TR-PROG 1SG.P 1SG.S IMPOSS sleep 3SG like.that
 “‘Mum, I’m scared. I’m scared about this story you were telling me.
 I can’t sleep.” he (was) like that.’ (Angelo, Binjari; MH_T11_ l. 60)
- (6) KRIOL
En im lat “na yu kan teik-im, na”
 and 3SG like.that no 2SG IMPOSS take-TR no
 (When trying to borrow a rake from a relative:) ‘And he goes “no, you can’t take it, no.”’
 (20140326b_002_IA 205)
- (7) KRIOL
ai kan go if ai got no mudiga...
 1SG.S IMPOSS go if 1SG.S have NEG car
 ‘I can’t go if I don’t have a car...’ (20140328d_002_ABM 55)

While the English etymon of *kan* ‘can’t’ also allows to negate possibility across modal grounds, specific modal markers can readily be negated in English (e.g. *must not*, *should not*), and clauses in the future can be negated as well (*will not*). In Kriol, modal markers generally do not attract negation. Importantly, the future marker *gada* does not occur with negation either. We see in (8) that while it is not categorically rejected as ungrammatical, it is judged inappropriate, and indeed does not occur spontaneously in my corpus collected in the Barunga region. This collapse of non-events derives interesting pragmatic and interactional correlates, and offer an interesting avenue for investigation in future research.

- (8) KRIOL
 MP *im nomo gada kom garra mi?*
 3SG NEG FUT/OBLIG come with 1SG.P
 [repeated after several iterations of the above:]
 IA *im nomo gada kom garra yu*
 3SG NEG FUT/OBLIG come with 2SG
im kan go yu lakijat, dat shotwei na mmm.
 3SG IMPOSS go 2SG like.that DET short.way EMPH INTJ.approb
 MP ‘She will not [*nomo gada*] come with me?’
 IA ‘She will not [*nomo gada*] come with you, she won’t [*kan*] go you say, that’s the straightforward way, mmm.’ (20150823a_000_IA_PA 038 IA)

The scope and collaborative nature of this work on Kriol modality has made its publication somewhat slow, and in fact some of our analyses have been cited although the volume had not yet appeared. Meanwhile some Kriol markers have been the focus of conference presentations (such as Ponsonnet & Angelo’s (2020) analysis of *gemen* at the annual meeting of the Australian Linguistic Society), some of which will lead to publications as articles or chapters in addition to the monograph.

2.3 Other themes

Beyond the description of aspects of language related to the linguistic encoding of emotions (and other internal states), my first-hand corpora are well suited to produce grammatical descriptions with no direct relation to these semantic domains. This part of my research has taken place via collaborations, either with colleagues (work on benefactive applicative, 2.3.1) or with students. As my corpora are well-curated and structured (see 6.2.1), it is relatively easy for students to use them in short-term projects.³ This provides an excellent opportunity for them to work with actual linguistic data and, where applicable, contribute a scientific publication (see 1.4.4). It is also a very good way to shed light upon interesting linguistic phenomena, as illustrated with Dalabon optional ergativity (2.3.2) and Kriol subject elision (2.3.3).

2.3.1 Applicative construction in Dalabon and other Gunwinyguan languages

Ponsonnet, Maïa. 2021. Transfer and applicative constructions in Gunwinyguan languages (non-Pama-Nyungan, Australia), in Bouveret, M. ed., *Give constructions across languages*, 121-143. Amsterdam: John Benjamins.

This chapter forms part of a collection edited by Myriam Bouveret (Université de Rouen, Laboratoire Lattice) on the semantics of gift and transfer, and inspired by construction semantics (Fillmore 1977; Goldberg 1995). My contribution describes and analyzes typologically unusual semantic extensions of comitative constructions attested in the Gunwinyguan family. Apart from addressing the theme of the volume – namely, the structure of constructions expressing transfer, here malefactive transfer –, the chapter supplements descriptions of applicatives found in Evans (2003: 427–437) for Kunwok, as well as McKay (1975: 151–154; 261–282) and Saulwick (2003b: 208–236) for Rembarrnga. This advances our understanding of applicatives, a pivotal syntactic tool in Gunwinyguan grammar. In particular, I show how comitative semantics bridges to the notion of transfer in certain constructions, with certain verbs.

In order to explain these constructions and their semantics, the chapter first presents the syntax and functions of benefactive and comitative constructions in Dalabon. After having explained the respective subcategorization operations and meanings of each of these constructions, I show that the criterion for using benefactive constructions is the animacy of the benefactive participant, whereas the criterion for using comitative constructions is the semantic role of the argument. The Dalabon comitative marker selects arguments with typical comitative meanings, such as accompaniment and instrument. This analysis of applicatives is an adjustment compared to some previous descriptions of Gunwinyguan languages, where benefactive applicatives were defined by the semantic role of the introduced argument (Evans 2003: 427–437).

³ Naturally, students work with the portion of my corpora that does not fall under privacy restrictions.

In Dalabon and neighboring languages, with verbs of attainment (‘get’, ‘pull’, etc.) comitative constructions encode ‘malefactive transfer’ (removing, stealing etc.), as in (9). Further, the Dalabon comitative constructions can also express the transfer of abstract themes in communication, as in (10). Contrary to the malefactive transfer construction, the communication transfer construction is unattested in other Gunwinyguan languages.

- (9) DALABON
Wurhwurrungu ngorr bula-h-ye-ma-ng,
 old.person 1PL.INCL 3PL/1-R-COM-get-PRS
ngorr bula-h-marnu-ngu-yan.
 1PL.INCL 3PL/1-R-BEN-eat-FUT
 ‘They take it [food] from us old people, they eat it on us [they eat our food].’
 (20120706a_001_MT 113)
- (10) DALABON
Kanh dawo nol nga-h-woh-ye-woka-n.
 DEM story 2PL 1SG/2-R-a.little-COM-tell-PRS
 ‘This is the small piece of news I’m telling you.’ (20110601_003_MT 53)

The presence of the comitative marker in example (10) is not justified by the meaning of the verb ‘tell’; and the transfer reading of the clause does not result compositionally from the combination of ‘comitative’ and ‘tell’ either. Instead, the sense is conveyed by the applicative comitative construction itself, an extension that had not been reported for comitative markers so far.

2.3.2 Optional ergativity in Dalabon

Luk, Ellison & Maïa Ponsonnet. 2019. Discourse and pragmatic functions of the Dalabon ‘ergative’ case-marker. *Australian Journal of Linguistics* 39(3):287-328.

This publication originated in Luk Ellison’s Honours thesis, which I supervised in 2017 at the University of Sydney (see 1.4.4). It is based on Dalabon data collected during my PhD project.

Australian Indigenous languages are well known for hosting ergative alignment, including syntactic ergativity (e.g. Dyirbal, Pama-Nyungan, Dyirbalic, Dixon (1972)), split ergativity (e.g. Warlpiri, Pama-Nyungan, Ngumpin-Yapa, Legate (2003)) and optional ergativity (e.g. Gooniyandi, Bunuban, non-Pama-Nyungan, McGregor (1992; 1998); Warrwa, Nyulnyulan, non-Pama-Nyungan; McGregor (2006); Umpithamu, Pama-Nyungan, Paman, Verstraete (2010)). Dalabon illustrates the latter, realized by what is traditionally called an ‘optional ergative suffix’, *-yih*, with formally identical cognates in neighboring languages such as Kunwok (Evans 2003: 139–141) and Rembarrnga (McKay 1975: 256). The parameters conditioning optional ergativity had not been thoroughly investigated in any of these languages prior to Luk & Ponsonnet (2019); the article discusses the distribution and functions of the Dalabon ergative marker *-yih* based on my first-hand data.

Mainly, *-yih* optionally occurs on A arguments of multivalent clauses. In addition, like other ergative markers around the world, it also appears with significant frequency on sole arguments of monovalent clauses, particularly with the verb *yin* ‘say, think, do’ (Rumsey 2010). As is also common cross-linguistically (McGregor 1998; 2006; DeLancey 2005; Hyslop 2010), discourse and pragmatic functions explain this distribution, with slightly different functions according to the valence of the clause. With multivalent clauses, *-yih* occurs on non-topical A arguments. This includes A arguments which are not established topics but incidentally take discourse prominence for a short time; as well as full-fledged topic shifts, when a previously marginal A argument raises to a more salient discourse-position and subsequently becomes an established topic. This is illustrated in (11), where the established topic is Ryan, but Bangardi stands as a transitory topic in the bolded utterance.

- (11) DALABON
mak mahkih kanh na-Ryan buka-yam-i kanh Bangardi
 NEG CONJ DEM MASC-proper.name 3SG/3SG.H-spear-IRR DEM subsection
mak buka-yam-i kahke
 NEG 3SG/3SG.H-spear-IRR NEG.EMPH
 ‘Ryan didn’t spear this Bangardi (his rival), he didn’t spear him.’
kanh buka-h-kirdikird-djirdm-e Bangardi-yih
DEM 3SG/3SG.H-R-woman-steal-PFV subsection-ERG
 ‘He stole his wife, the Bangardi.’
nunh mak buka-yam-i kahke
 DEM NEG 3SG/3SG.H-spear-IRR NEG.EMPH
mak mah-- barra-h-dja-bu-rru-ni kardu bah mak--
 NEG CONJ 3DU-R-FOC-hit-RECP/REFL-IRR maybe CONJ NEG
 ‘He didn’t spear him, no. But he didn’t-- they just had a fight, but he didn’t...’
 (20100722b_003_MT 426)

These functions have several pragmatic correlates. One is that *-yih* often marks arguments that occur in A role when they are not expected to do so; further, this extends pragmatically to A arguments that act contrary to expectations. Another pragmatic correlate is that *-yih* often occurs where two participants with comparable significance compete for topichood, and *-yih* is then used in disambiguation. In the following example, the speaker describes a photo with two human characters, both laughing; one of them is also her present interlocutor.

- (12) DALABON
narra-h-rewo-rru-n, dja-h-rewo-n yibung-yih
 2DU-R-laugh.at-RECP/REFL-PRES 3SG/2SG-R-laugh.at-PRES 3SG-ERG
 ‘You’re both laughing at each other, (but) he’s laughing at you.’ (20110525a_004_MT 21)

The distribution of *-yih* in monovalent clauses derives from the pragmatic functions described above for multivalent clauses. Firstly, the marker occurs as a disambiguation tool, where the context does not make it clear enough who does the action. This is particularly frequent with the monovalent verb *yin* ‘say, think, do’, which often involves several animate participants.

This is illustrated in (13), where the ergative marker helps identify who is speaking. Other monovalent verbs occasionally attract *-yih* as well, as we see in (14).

(13) DALABON

djila-h-ngabb-uyan *djila-h-berbb-uyan*
 3PL/2SG-R-give-FUT 3PL/2SG-R-spouse.promise-FUT

‘‘You will be given (a wife), you will be promised one’’.

bah *yibung* *ka-h-yi-ninj*
 CONJ 3SG 3SG-R-say/do-PFV
mhmh *mak* *ke* *mynguyh* *djadmud* *nga-d-angiyan*
 INTJ NEG EMPH always single.boy 1SG-stand-FUT

‘But he (the young one) thinks, ‘‘Nuh-uh, I can’t remain single all that time’’.’

Kirdikird *ke* *ngey* *mah* *nga-h-lng-djare*
 woman EMPH 1SG CONJ 1sg-R-SEQ-desire
ka-h-yi-ninj ***yawor-no-yih***
 3SG-R-say/do-PFV **little.one-fill-ERG**

‘‘A wife, well that’s what I want!’’ he thinks, the young one.’ (20120710b_003_MT 34)

(14) DALABON

nunda *ka-h-ko-ye-bawo-n* *ka-h-ye-ni*
 DEM 3SG-R-flower-COM-leave-PFV 3sg-R-COM-sit/be:PRES
yibung-karn-- *wali* *ka-h-dje-yerrkm-inj* *ka-h-ru-yan* ***duway-no-yih***
 3SG-EMPH in.turn 3SG-R-nose-release-PFV 3SG-R-cry-FUT **husband-3SG.POSS-ERG**

‘This one (the woman) rejected his flowers. So this one in turn [gestures to man on screen], he is ?shedding tears, he’s crying, her husband.’ (20120705b_001_MT 120)

Luk & Ponsonnet’s (2019) analysis of optional ergativity in Dalabon aligns well with descriptions available in other languages, in Australia and elsewhere. As such, it offers an important descriptive reference-point for a Gunwinyguan polysynthetic language on a phenomenon of typological interest.

2.3.3 Subject elision in Kriol

Brown, Connor & Maïa Ponsonnet. 2021. Constraints on subject elision in northern Australian Kriol: Between discourse and syntax. *Australian Journal of Linguistics* 41(3):287-313.

Brown & Ponsonnet (2021) is another output based on a collaboration with a student. The article reflects Connor Brown’s Honours thesis, which I supervised at the University of Western Australia in 2018 (see 1.4.4). It is based on a data set extracted from Kriol corpus I collected in 2014 and 2015 under my ASLAN postdoctoral project at Dynamique du Langage. Like Luk & Ponsonnet (2019), Brown & Ponsonnet (2021) explore the distribution and functions of an optional way to express clausal argument, leading to investigating information structure.

Subject elision is relative frequent in the Kriol data from the Barunga region, and certainly more prevalent than in Standard Australia English. The phenomenon also anecdotally surfaces in examples in published data from many English-based contact varieties in Australia. Yet, subject elision in Kriol had barely been mentioned in the linguistic literature prior to Brown & Ponsonnet (2021). Our article thus sheds light upon a distinctive grammatical feature of Kriol which also seems to be gaining grounds in the language: in our data set, younger Kriol speakers tend to elide subjects more than older speakers. Subject elision thus raises interesting questions regarding the recent development of Australian-like features in Kriol.

The first part of the article describes the contexts in which Kriol subjects are omitted. A bit more than half (54%) of the 120 elided subjects in our 20-hour corpus are based on syntactic anaphora, whereby elision is licensed through antecedent relations across coordinated clauses – just as it happens in English in clauses with ‘and’ for instance.

The other half of the elided subjects in our corpus (about 46% of them, or 55 tokens) are not supported by syntactic anaphora under strict clause coordination. Among these, some tokens occur in what we called ‘extended coordination’, defined by a pause of at least one second between coordinated clauses:

- (15) KRIOL
*yowei im brabli bin gud-bala blak-bala brabli **blak-bala**_i*
 yes 3SG really PST good-NMLZ black-NMLZ really black-NMLZ
 [1.5 second pause]
Ø_i shom-bat mi au dei kuk-um keingguru,
 show-CONT 1SG.P how 3PL.S cook-TR kangaroo
Ø_i shom-bat mi au dei kuk-um imyu
 show-CONT 1SG.S how 3PL.S cook-TR emu
 ‘A good Aboriginal man, a proper Aboriginal man. [1.5 second pause] He showed me how to cook kangaroo, he showed me how to cook emu.’ (20140325a_000_QB 267)

Departing more clearly from direct English influence, the data also revealed elision based on ‘distant anaphora’, where the antecedent occurs in a distant syntactic domain, which excludes strict clausal coordination. This is illustrated in (16). In addition, we also identified cases we labelled ‘co-constructed anaphora’, where one speaker’s elided subject finds its antecedent in the speech of an interlocutor.

- (16) KRIOL
 JJA ***dubala**_i bin laflaf gija*
 3DU PST laugh:REDUP RECIP
 MP ***dei**_i bin dedlaf*
 3PL.S PST dead-laugh
 [3 second pause, with laughing]

JJA	<i>Øi hepi</i> happy
‘JJA	These two were laughing with each other
MP	They were really laughing
JJA	They are/were happy.’
(20140408b_003_JJA_MJo 103)	

The ‘non-syntactic’ patterns of subject elisions identified above are not imposed but optional, and the second part of the article explores the factors that favor or block it. To do so, we compared the elided tokens in our data with 90 overt subjects randomly selected from our corpus. This revealed a number of non-categorical discourse factors favoring elision. Namely, elided subjects must be established topics; their referents must be unambiguous; and the clause should not occur at the start of a new phase in the episodic structure. In other words, non-syntactic subject elision marks referents as well-established, expected, and therefore backgrounded.

This is similar to the functions reported for elided arguments in some Australian languages such as Garrwa (Pama-Nyungan, Garrwan Mushin 2005) and Warlpiri (Pama-Nyunga, Ngumpin-Yapa Swartz 1991). This suggests that the seemingly growing prevalence of subject elision in Kriol results both from an initial superstrate influence (syntax-based elision); and from later adstrate influence (discourse-based elision gaining ground amongst younger Kriol speakers). This actually echoes Ponsonnet’s (2016a) findings on the recent evolution of reflexive/reciprocal marking in Kriol. While Brown & Ponsonnet’s (2021) suggestion on this matter can only remain tentative, it paves the way for further research into the developmental paths of Kriol.

CHAPTER 3. Semantic typology

My research in the field of semantic typology, particularly regarding the linguistic encoding of emotions, represents a significant share of my contribution to our understanding of human languages. I have already explained the conceptual underpinnings of my interest in emotions as ‘private, internal states’ in the introduction to this volume, where I also stated how I define emotions. Throughout my work, I approach ‘emotions’ as internal states (i.e., not behaviors) with a cognitive and a subjective dimension. Their cognitive dimension differentiates them from sensations (such as cold or hunger), and their subjective dimension differentiates them from purely intellectual states (such as knowing or believing). Naturally, like most criteria posited to guide research, these are partly arbitrary, and do not overrule alternative definitions that other researchers may find helpful for their own purposes. Although my criteria do not eliminate all borderline cases, in practice they have revealed both operational and meaningful, in that they isolate a coherent set of phenomena suited to my research endeavours.

As I mentioned in the introduction, defining emotions as internal states aligns with the definitions typically adopted by psychologists, while social scientists prefer to highlight the social (i.e. inter-personal) dimension of emotions. In spite of this ‘psychological allegiance’, I do not subscribe to the universalist view of ‘primary’ emotions defended by many psychologists following Ekman’s (1992a; 1992b) foundational work. I will occasionally rely upon the notion of primary emotion as a heuristic methodological concept, but I depart from Ekman’s canonical position on several points. Without embracing the view that emotions are entirely relative to a cultural context, I recognize a degree of cultural variation (Harré 1986; Levy 1984 among many others, and see introduction to Chapter 4), as also acknowledged by ‘constructivist’ psychological theories of emotions (Russell & Feldman Barrett 2009; Boiger & Mesquita 2012; Scherer 2013; Lindquist & Gendron 2013). The question of the influence of language on how we construe emotions is discussed in Chapter 4.

Some of my work on the semantic typology of the linguistic encoding of emotions expands upon foundational authors like Wierzbicka (1999)⁴ on lexical semantics, or Kövecses (1995, 2002, 2005) on metaphors. With respect to what may be called ‘non-denotational’ resources (I explain this expression below), my work has broken new grounds, investigating linguistic resources that had so far not been tackled from a typological angle. The dichotomy between ‘denotational’ and ‘non-denotational’ resources has also been expressed in terms of ‘descriptive’ vs ‘expressive’ resources by linguists who studied the encoding of emotions (for instance Irvine (1982:31–32) Besnier (1990: 419), Bednarek (2008), Foolen (2012: 350), Majid

⁴ See also Ogarkova (2013).

(2012: 432), Ponsonnet (2014b: 21–22), among many others). ‘Descriptive’ linguistic resources (mostly the lexicon, e.g. ‘she is *impressed*’) operate on the basis of conventions (i.e. they are symbols in Peircian terms (1955)) to denote the world’s states of affairs. ‘Expressive’ linguistic resources on the other hand (for instance evaluative morphology, prosody, interjections, e.g. ‘*wow!*’), are construed as ‘indices’ in Peirce’s (1955) sense:⁵ they are understood to result causally from a state experienced by the sender.

Naturally, this overly simple contrast between denotational/non-denotational or descriptive/expressive resources calls for deconstruction, and I intend to question it in future research as part of my CNRS project (see Chapter 7). Yet, it is heuristically helpful to guide and organize empirical linguistic investigation. As a matter of fact, non-denotational resources have long been marginalized in linguistic research, largely because they do not intertwine very closely with the rest of grammar (Dingemanse 2017: 198). For instance, interjections are defined as lexical items that can form an utterance on their own (Wilkins 1992: 124), and as such can function independently of the rest of the syntax and morphology of the language. Another disincentive for linguists to examine expressive resources is that they are supposed to index internal events – whether cognitive or emotional. As such, these linguistic resources relate to less observable states of affairs, which renders their interpretation particularly daunting. Consequently, many semantic typologists prefer to focus on domains with observable, discrete denotata – such as body parts or kinship for instance (see McConvell & Ponsonnet (2013) for a discussion).

In this context, however, some researchers seek to rehabilitate neglected resources and domains. Dingemanse (2017; 2020)(2017, 2020) calls attention to onomatopoeia, interjections and what he calls ‘liminal signs’, i.e. elements such as clicks, sighs and so on, which contribute to construct the expressive dimension of any stretch of speech in real life (see also Lahaussais & Colombat 2019)). Majid and collaborators also investigate the linguistic descriptions of less observable events and states across languages, including emotions as well as smells (Majid 2012; 2021; Majid et al. 2018), which offer some insights into how humans communicate about less visible aspects of their lives.

Combining these perspectives, my typological work investigates the linguistic tools that humans use to communicate about internal states, with a view to understanding how these tools pervade language and inflect linguistic communication more broadly. My interest lies both in language itself, and in human cognition (see 1.2.1). With respect to language, the typology of expressive resources tells us how grammars realize expressive features, and how humans manage communication about less visible phenomena. With respect to human cognition, it tells us about human categorizations of emotions, i.e. which of types of emotions are more often (or even universally) lexicalized or grammaticalized across the world, or how sensitive to cultural variation these preferences are. To answer these questions, I embrace an empirical, bottom-up

⁵ Bühler’s (1934) notion of ‘symptom’ also applies.

approach: I start with the description of the actual resources available across the world's languages, so as to identify which semiotic mechanisms and semantic categories are the most indispensable to human communication, and/or the extent to which they vary across language groups. Key research questions revolve around the potential pairing of certain linguistic tools with certain emotions rather than other. Explaining these pairings may in turn involve investigating how these resources emerge, and the contexts in which they are used.

In this spirit, I have investigated a number of understudied linguistic resources, either at the scale of the Australian continent (figurative language (3.1.1), emotion nouns, (3.1.2), interjections (3.2.1)), or across the world (reflexemes (3.1.3), evaluative morphology 3.2.2). At the end of this section, I present collaborative projects on the semantic typology of kinship and spatial descriptions (3.5).

3.1 Descriptive encoding of emotions

3.1.1 Body parts in figurative representations of emotions in Australian languages

As part of the analysis of the linguistic encoding of emotions in Dalabon, my PhD research and subsequent monograph offered the first comprehensive analysis of figurative representations of emotion in an Australian language (Ponsonnet 2014b: Chap 7-9). Among other results, this highlighted the central role of the body in Dalabon descriptions of emotions. The use of body parts in emotional compounds had long been 'known' among researchers acquainted with First Nations Australian groups (linguists and others), and had previously been partially described for a couple of languages across the continent (see Turpin (2002) and Gaby (2008). Building upon these early insights, Ponsonnet (2014b) offered the first comprehensive and systematic account of the phenomenon (see also Ponsonnet 2014c; 2014d).

Beyond Australia, the linguistic 'embodiment' of internal states is a matter of interest in cognitive linguistics (Zlatev 2007; Sharifian et al. 2008) and in psychology (see for instance Nummenmaa et al. 2013). The semiotic salience of body parts also informs interpretations in disciplines such as anthropology and archaeology (e.g. grounding analyses of visual symbolism in rock art, see Bednarik (2014) Brady & Taçon (2016)). As presented below, the comparative and typological work I have produced following my work on Dalabon sheds considerable light on these phenomena for the Australian continent, and opens clear avenues for future research.

Following the language-internal description of Dalabon, I first carried out cross-linguistic and typological comparisons of emotional tropes in neighboring languages. My Australian Research Council's Discovery Early Career Researcher Award funded data collection in two other Gunwinyguan languages, Kunwok and Rembarrnga (see 2.1.1). The use of the same elicitation methods previously trialled with Dalabon speakers (Ponsonnet 2014a) resulted in highly comparable corpora across the three languages, all of them rich in expressive features, emotion vocabulary, and emotion metaphors. A broader comparison including the additional

Gunwinyguan languages Kunbarlang and Anindhilyakwa is in progress, in collaboration with Isabel O’Keeffe (Macquarie University) and James Bednall (Charles Darwin University) (preliminary findings presented at the Fifteenth International Cognitive Linguistics Conference, Ponsonnet, Bednall & O’Keeffe (2019)).

Under the same ARC Award, I produced a broader typology of body-based emotion metaphors in a genetically and geographically balanced sample of 67 Australian Indigenous languages. The results of this study were published in 2020 in *Pragmatics & Cognition* in an article co-authored with Kitty-Jean Laginha, who provided invaluable support to the project as a research assistant. This 60-page piece is the first continent-wide typological study of the figurative role of body parts in descriptions of emotions. The results significantly advance our understanding of the role of body parts in figurative representations of emotions, and lend themselves to further worldwide comparison in future studies.

Ponsonnet, Maïa & Kitty Laginha. 2020. The role of the body in descriptions of emotions. A typology of the Australian continent. *Pragmatics and Cognition* 27(1). 20–83.

We investigated 80 individual published and unpublished sources covering 67 languages, harvesting ~800 individual body-based emotional expressions⁶ featuring around 30 individual body parts.⁷ The belly dominates, accounting for about a third of the ~800 tokens. A dozen body parts exhibit significant productivity across languages in the data. These include the heart, throat, liver, chest, abdomen, eyes, nose, face, ear, head and forehead. Three important findings emerged from the close analysis of the data for these prevalent body parts.

Firstly, in the process of coding our data to understand the systemic organization of body-based tropes, a useful typology of tropes emerged, informed both by a bottom-up empirical approach and by existing theories and analysis of figurative language (among many others, see Lakoff & Johnson 1980; Kövecses 2002 on metaphors; and Barcelona 2000; Radden 2000 on metonymy; Ponsonnet 2014b; 2014c on Dalabon). This typology, presented in Table 3, has been applied in other studies of emotional figurative language in Australia (O’Keeffe, Coleman & Singer 2020; Bednall 2020). It will be interesting to test it in other parts of the world.

⁶ It is not possible to give an exact figure, due to occasional difficulties in determining what counts as a distinct expression (e.g. in case of minor variation, grammatical derivations such as causatives, etc.).

⁷ It is not possible to give an exact figure, because some languages group body parts that others split, e.g. terms for ‘belly and abdomen’, ‘heart and chest’, etc.

PURELY METONYMIC EXPRESSIONS
<p>Generic metonymies: the body part is described as ‘good’ or ‘bad’.</p> <p>Experiencer-of-emotion metonymies: contain an emotional term e.g. be ‘sad from the belly’.</p> <p>Experiencer-of-responses-to-emotions metonymies: an emotional response is attributed to body part, e.g. ‘cry from liver’.</p> <p>Body-part-for-emotion metonymies: the body part itself represents the emotion, e.g. ‘becoming throat’ for ‘desire someone’.</p> <p>Somatic metonymies: a physiological state of a body part represents an emotion, e.g. ‘numb belly’ for ‘surprised’.</p> <p>Behavioral metonymies: describe a behavior involving a body part – for instance ‘bend one’s back’ for ‘sulk’.</p>
METAPHORICAL EXPRESSIONS
<p>Physical-properties metaphors: destruction, (broken, cut, split, divided...), alteration (several, different...), resistance (hard, soft...), mobility (stuck, still, going, turning...), posture and position (low, sitting, vertical...), color</p> <p>Perception metaphors: e.g. ‘liver hear/feel’ for ‘dread’</p> <p>Patientive metaphors: e.g. ‘chest hitting itself’ for ‘feeling sorry’</p> <p>Agentive metaphors: body part is described as acting, e.g. eating, biting, hitting, throwing...</p>

Table 3. Types of metonymies and metaphors used to classify the emotional body-based expressions found in our sample of 67 Australian languages.

Secondly, the study identified a number of plausible origins and motivations for body-based emotion tropes. These are pragmatic bridges, semantic shift, and innovation by analogy.

Pragmatic bridges occur when a linguistic expression describing a bodily state comes to designate an emotion because the event being denoted – say, goose bumps – tends to associate with an emotional state ‘in the real world’ – in this case, being afraid. Due to this pragmatic association of the two events, the expression describing one can easily be reinterpreted as referring to the other (Evans & Wilkins 2000). With respect to body-based expressions, it is useful to distinguish three types of pragmatic bridges. The ‘goose bumps’ case illustrates a *somatic* bridge, because having goose bumps is a physiological response to fear. *Behavioral* bridges occur when an expression associates an emotion with a corresponding behavior, for instance when an expression meaning ‘follow with the eyes’ (i.e. watch) is reinterpreted to mean sexual desire. The bridge is *intellectual* when a body part is primarily associated with an intellectual function, which in turn associates pragmatically with an emotion (e.g. obsession resulting from thinking too much).

Another possible drive for the linguistic association of a body part with emotions is via a **semantic shift**, based on a body-part term already associated with emotions. For instance, in a language that has a number of emotional expressions involving the term for ‘belly’, this term may come to shift metonymically from ‘belly’ to ‘liver’ (Wilkins 1996), resulting in an association between the liver and emotions. Indeed, based on our data this scenario is the best explanation for the association of the liver with emotions in some Australian languages.

Once a body part is linguistically associated with emotions, further emotional expressions can be created on the basis of **innovation by analogy**. This scenario is a bit longer to explain.

Consider a language where the expression ‘sick belly’ also means ‘be in a bad mood’ – based on a somatic pragmatic bridge. From there, speakers may innovate further figurative expressions using ‘blocked belly’, ‘hard belly’, ‘flowing belly’, and so on. In addition, some body-based expressions may emerge where the word for belly is replaced by another body-part noun. Let’s assume the language in question has a large set of belly-based expressions, including for instance ‘cut belly’ for ‘being angry’, in line in with a number of belly-based destruction metaphors. Imagine that the same language also has a small set of head-based expressions, mostly denoting emotions linked to intellectual states. This set exhibits little abstract metaphorical elaboration, but includes ‘head cut’ for ‘angry’. If this is the only destruction metaphor within the head set, a likely scenario is that speakers have constructed this expression by analogy with the belly set, where this destruction metaphor is anchored. This process is difficult to identify based on typological data, but the above situation is attested in Dalabon (Ponsonnet 2014b: Chap 10).

The third key finding of Ponsonnet & Laginha (2020) concerns the specific relation of each body part with the semantic domain of emotions, as summarized in Table 4. The study determines the most common mappings between specific body parts and specific emotions in Australian languages. Further, it shows that these mappings tend to co-vary with the types of tropes body parts instantiate, and with the nature of their figurative link with emotions (i.e. whether this link is underpinned by pragmatic bridges, semantic shift, etc.). On this basis, the 12 body parts that most frequently associate with emotions in Australian languages can be grouped under four different profiles, as presented in Table 4 below

Some body parts feature prevalent somatic bridges. This applies to two internal organs, the belly and heart, as well as to the throat. These body parts frequently express emotions about other people such as anger, compassion or love. Another set of body parts is associated with emotions via behavioral bridges. This is the case with visible parts of the head, namely the eyes and nose. The semantic foci of visible body parts are motivated by the particular bridges that link them to emotions. The eyes are associated with desire, surprise and fear; the nose with negative feelings for others. A third set of body parts is primarily associated with intellection (in Australian languages, this includes the ears, see Evans & Wilkins (2000)). These naturally map onto emotions with an intellectual dimension, which in Australian languages typically relate to social interactions (e.g. obedience, selfishness, shame etc). Finally, in a fourth group of body parts, none of these types of bridges is prevalent, and the body-part words involved are often polysemous with body parts for which we do find prevalent bridges. This suggests that for some languages at least, the body parts in this fourth category became associated with emotion via semantic shift, based on expressions featuring another body part. The semantic foci with these body parts tend to resemble those of their ‘parent’ body-parts.

Profile	Body part	Emotions
Internal organs with prevalent somatic bridges	Belly	Generic emotions (feel good/bad). Other-oriented emotions: anger, love, compassion, grief... Fear, desire, jealousy. Many other marginal occurrences.
	Heart	Love, fear. Anger.
	Throat	Desire and love (dominant in Central Australia). Anger (dominant in Western Desert).
Visible body parts with behavioral bridges	Eyes	Desire, jealousy or love. Surprise and fear. Secondary: anger, shame and respect, as well as compassion.
	Nose	Resembles head and forehead. Primarily negative, mostly social. Other-oriented emotions: being angry, sulky... Social dispositions: selfish, stubborn, greedy...
Visible body parts with intellectual bridges	Ear	Attitudinal emotions: compliance, agreeableness; stubborn, ungenerous... Obsession and related emotions.
	Head	Resembles nose and forehead. Primarily negative, mostly social. Negative social dispositions: (non)compliant, stubborn, irresponsible, selfish, socially distant...
	Forehead	Resembles head and nose. Primarily negative, mostly social. Mostly negative social dispositions: (non)compliant, stubborn, selfish, inconsiderate, socially distant. Other negative: shock, sadness or jealousy.
Abdominal body parts sensitive to semantic shift	Liver	Compares with the belly. Empathetic: compassion, grief. Violent other-oriented: anger and jealousy.
	Abdomen	Combines the semantic foci of belly and heart. Anger and other negative other-oriented emotions (belly). Fear and related emotions (heart). Desire, love, and other empathetic emotions (heart and belly).
	Chest	Combines the semantic foci of belly and heart. Anger, fear, love.

Table 4. Semantic foci per body part in our sample of 67 Australian languages. The most prevalent foci are listed first.

Ponsonnet & Laginha (2020) presents the result of this typological study of body-based metaphors in details and in relatively technical terms, with a linguists' audience in mind. In addition, a shorter, less technical article written for an interdisciplinary audience (psychologists, anthropologists, archaeologists, etc.) was published with *Ethos* (Ponsonnet 2022). For the broad audience, including speakers of Australian languages willing to revitalize their own languages (see 6.2), I created the website www.emotionlanguageaustralia.com. These free-access online pages explain in simple terms which body parts map onto which emotions, via which metaphors. An even simpler summary can be found in The Conversation's Friday Essay: [My belly is angry, my throat is in love — how body parts express emotions in](#)

[*Indigenous languages*](#) (April 2021). The Conversation piece has more than 10,000 reads, and the website receives an increasingly high number of visits (currently around 250 per month). This work has inspired the art piece *Nijiniji*, by photographer Martine Perret with dancer Dalisa Pigram, presented as part of the *Belong* exhibition at the Museum of Western Australia (Perth, Dec 2021-Apr 2022). Altogether, these outputs on the role of the body in descriptions of emotions illuminate a phenomenon that had long peaked the curiosity of speakers, researchers, and many others, about Australian languages and the way they depict emotions.

3.1.2 *Emotion nouns in Australian languages*

Another important insight from Ponsonnet's (2014b) monograph regards the scarcity of emotion nouns in Dalabon: the only two full-fledged ones are *yolh-no* 'peps, feelings' (Ponsonnet 2014b: 281–282, 446), and *yirru* 'conflict, anger' (Ponsonnet 2014b: 298–299, 439–440). Note that *yolh-no* is not a hyperonym referring to 'emotions' as a category; instead, it means 'feeling' in the sense of a generic emotional experience. It can also mean 'inclination', 'drive', 'enthusiasm', 'life energy', 'life spirit' etc., with 'boredom' as an antonym. As for *yirru*, it is used for both anger and aggression, as well as associated behaviors (conflict, argument, trouble).

Elaborating upon these observations, shortly after my PhD I conducted a pilot survey of emotion nouns in a small sample of 10 Australian languages, including Pama-Nyungan as well as non-Pama-Nyungan languages, published in 2016 in a volume edited by Peter Austin, Harold Koch and Jane Simpson.

Ponsonnet, Maïa. 2016. Emotion nouns in Australian languages. A case study and a preliminary survey, in Austin P.K., Koch H. & Simpson J. eds., *Language, Land and Story in Australia*, 228–243. London: EL Publishing.

As reflected in Table 5, Ponsonnet (2016b) confirms that Australian Indigenous languages often have small emotion-noun inventories. Pama-Nyungan languages exhibit slightly larger numbers than languages in the non-Pama-Nyungan group, yet the figures remain far smaller than in French or English for instance. The study also suggests that two emotion categories/concepts lexicalize as nouns more frequently than others: 'generic feelings', and anger. The corresponding nouns in this language sample resemble the meanings of the two Dalabon emotion nouns, as outlined above.

	Pama-Nyungan				Non-Pama-Nyungan						TOTAL languages
	Gur	Kay	Kuu	Yol	Jam	Maw	Bin	Dal	Jaw	Rem	
generic feelings	2	1	2	4			1	1	1	1	8
generic emotions	1	1									2
affection (compassion)		1	1								2
anger (or conflict)		1	1	1	1	1		1	1	1	8 4 strict
desire		1		1			1				3
dissatisfaction				1						1	2
fear			1	1							2
jealousy		2							1		2
joy, happiness		1									1
love		2	1	1							3
resentment (hatred)							1				1
shame						1	1			1	3
sorrow (grief)				1		1					2
surprise			2								1
TOTAL	3	10	8	10	1	3	4	2	3	4	

Table 5. Documented emotion nouns in a pilot sample of 10 Australian languages. The left column gives approximate labels rather than precise translations. Blank cells indicate that the category is not lexicalized by a noun (it may be lexicalized in another word class).

Based on this pilot study, my research questions around emotion nouns thus became:

- (1) Will the lower prevalence of emotion nouns in Australian languages confirm in a larger and more balanced sample?
- (2) Do emotion-noun inventories exhibit a degree of semantic coherence across the continent? Are some emotion categories or concepts more regularly lexicalized by nouns than others, and if so, which? Specifically, will the prevalence of nouns for generic feelings and anger confirm in a broader sample?
- (3) Assuming a degree of semantic coherence, how can we explain the propensity of a given emotion category to lexicalize as a noun more than another emotion category? Is this a property of emotion categories themselves, perhaps linked to the primacy of certain ‘basic’ emotions (Ekman 1992a)? Is this influenced by local factors such as the cultural prevalence of a particular emotion among a given language group? And/or is the semantic distribution of emotion nouns driven by ‘linguistic affordance’, if certain types of emotions lent themselves more readily to semantic extensions from words with non-emotional, concrete meanings?

In recent years, I have progressed these research questions thanks to a collaboration with Eleanor Yacopetti, currently a PhD candidate under my supervision at the University of Western Australia (see 1.4.4). Yacopetti’s Honours project, which I also supervised, was a typological study of emotion nouns in a genetically and geographically diverse sample of 57 Australian languages. The data came from published and unpublished lexical sources, where we systematically harvested emotion nouns, glosses for all their senses (including non-emotional senses where applicable), definitions, and accompanying examples. In addition to

Yacopetti's Honours thesis (Yacopetti 2020), the results have been developed into joint seminar and conference presentations (Yacopetti & Ponsonnet 2021), and are being written up for publication and submission to *Cognitive Semantics*.

Yacopetti, Eleanor & Maïa Ponsonnet. In preparation. Where do emotion nouns come from? Insights from Australian First Nations languages semantic typology. To be submitted to *Cognitive Semantics*.

This study confirms several insights from Ponsonnet (2016b). We found just under 300 nouns across 57 languages. Regarding research question (1) above, this confirms the scarcity of emotion nouns in Australian languages: our sample contains around five emotion nouns per language. This represents between six and seven for Pama-Nyungan languages, and just under three for the non-Pama-Nyungan group.

Table 6 shows the number of nouns per emotion 'categories' in our sample. In spite of the English labels used for convenience, these categories do not reflect English lexical categories, but instead emerged from our initial qualitative inspection of all the nouns and accompanying material in our data. The distribution confirms anger (usually combined with aggression and conflict) as the emotion category most frequently expressed with a noun across the sample; followed by 'generic feelings'. The table also answers research question (2): emotion categories – even the most 'basic' ones – are far from evenly represented among Australian emotion nouns: instead, some emotions are more frequently lexicalized as nouns than others.

	Total	ANG	FEE	SHA	LOV	FEA	SOR	JEA	HAP	ANX	HAT	GRE	SUR	CAL	COU	Oth
Nouns	299	46	39	29	50	37	30	19	16	12	6	5	4	3	3	8
Langs	57	28	24	24	23	23	19	16	13	10	5	5	4	3	3	5

Table 6. Number of documented emotion nouns, and languages in which they occur, per emotion category. ANG: anger, aggression; FEE: generic feelings, spiritual energy; SHA: shame, shyness; LOV: love, desire, affection; FEA: fear, fright; SOR: sorrow, sadness, sorry; JEA: jealousy; HAP: happiness; ANX: anxiety; HAT: hatred; GRE: greed; SUR: surprise; CAL: calm; COU: courage

Research question (3), concerning what drives certain emotion categories to lexicalize as nouns more frequently than others, cannot be fully answered on the basis of this study alone, but our results step in the right direction. First, we can observe that while some 'primary' emotions (Ekman 1992a) are well represented among Australian emotion nouns (e.g. anger), others, like surprise or disgust, are not; and some prevalent categories, such as shame, are complex social emotion. Thus, emotion nouns do not target primary emotions particularly. As for whether the propensity to attract a noun is a property of certain types of emotions (whether primary or not), this is something we will be able to find out by comparing the Australian emotion noun distribution with other continents, when further studies become available. If languages across regions and genetic groupings exhibited similar distributions, then the drivers of such distributions would probably pertain to the emotion categories themselves. If trends differ, as

is relatively probable, then the lexicalization of emotions by nouns is likely to be determined, at least partly, by local factors such as cultural preferences.

Our study also sheds light onto the linguistic underpinnings of the emergence and distribution of emotion nouns. The examination of the colexifications of emotion nouns in our data offered insights into the semantic pathways via which nouns can gain emotional meanings. Table 7, presents and illustrates three major semantic grounds for the emergence of emotional meanings in nouns. The first is interactional behavior metonymies, whereby words alluding to a behavior involving another person gain an emotional sense. With somatic metonymies, words related to physiological processes attract an emotional sense. Finally, we found evidence for seat-of-emotion metonymies, whereby a noun for a body part treated as a main seat of emotion in a given language develops an emotional sense. We may note a resemblance between these semantic pathways to emotion nouns, and the pragmatic bridges identified by Ponsonnet & Laginha (2020), to the extent that (unsurprisingly), behavioral and somatic responses to emotions play a key role. At the same time, there are also differences. In particular, the role of seats of emotions as a source for emotion nouns has no equivalent with respect to body-based tropes. With respect to behaviors, the semantic pathways to nouns seem to focus on clearly interactional behaviors, whereas behavioral bridges to figurative collocations are less specific.

The semantic pathways along which emotion nouns travel in turn inform us about the ‘linguistic affordance’ of different emotions. That is, certain properties of emotions will make them more likely to be lexicalized by a noun, if they open up access to one of these semantic pathways. In other words, emotions have better chances to lexicalize as a noun in Australian languages if they associate with behaviors involving other people; with certain somatic responses; or with a body part stands as a major seat of emotions in the language in question (and we know from Laginha & Ponsonnet (2020) that only a short list of body parts are treated as such). While the semantic pathways we identified in our sample may plausibly be universal, future cross-linguistic research in other parts of the world is needed before we can more comprehensively explain what drives the lexicalization of emotion concepts as nouns, in Australia and elsewhere.

PATHWAYS	ATTESTED COLEXIFICATIONS	ILLUSTRATIONS
INTERACTIONAL BEHAVIOR FOR EMOTION metonymies	anger/aggression and conflict	Dalabon <i>yirru</i> ‘conflict, anger’
	shame/shyness and avoidance	Gamlaraay/Yuwaalaraay <i>burin</i> ‘shield, cover, shame’
	love/desire and sexual behavior	Kaytetye <i>mpwenye</i> ‘love, sex, romance, promiscuity, mating behaviour’
SOMATIC RESPONSES FOR EMOTION metonymies	desire and hunger	Gumbaynggirr <i>biliirr</i> ‘greed, lust, excessive desire, hunger’
	sorrow and weakness	Alyawarr <i>alpwely</i> , ‘sad, sadness, weak’
SEAT-OF-EMOTION FOR EMOTION metonymies	generic feelings for belly or chest	Ngarluma <i>ngarlu</i> ‘belly, feelings’
	sorrow for belly	Kunwok <i>kun-kange</i> ‘heart, sorrow, compassion’
	love/desire and throat or heart	Nyungar, <i>goor-doo</i> , ‘heart, desire’

Table 7. Frequent colexifications and corresponding semantic pathways in the ~300 emotion nouns of our sample.

3.1.3 ‘Reflexemes’: reflexive expressions with emotional meanings

In her typology of middle voice, Kemmer (1993: 18) flagged the existence of ‘emotion middle’ constructions, i.e. emotion verbs featuring a middle marker. She cites the German *sich fürchten*, MID/REFL+‘be afraid’, and several other examples from Europe (Latin, Hungarian), America (Mohave) and Australia (Guguu Yimidhirr). These occurrences are unsurprising, since many emotional predicates fall under Kemmer’s (1993: 8) definition of the middle voice, encompassing monovalent predicates with an experiencer as a single argument. However, in German, as well as in many other Indo-European languages, the middle marker was originally a reflexive marker, the function of which later extended to middle. And in some languages across the world, some emotion verbs occur with a purely reflexive marker. English has *enjoy oneself* for instance; for a more exotic example we can cite Wirangu (Pama-Nyungan, South-West), from southern Australia, where *dyarda-ngandha-ri-rn* ‘belly’+‘bad’+REFL means ‘feel bad’.

The broad distribution of such lexicalized reflexive constructions across the world, with impressionistically comparable semantics in distant languages from entirely different genetic stocks, naturally raises the question of how and why they emerge. Before we solve this overarching problem, two prior research questions can serve as stepping stones:

- (1) How widespread are reflexemes in the world’s languages?
- (2) Do reflexemes exhibit coherent preferences, cross-linguistically, for certain types of emotions against others? If so, what motivates these preferences?

Alexander Stephenson made these reflexive constructions with lexicalised emotional meaning the topic of his Honours thesis under my supervision at the University of Western Australia (Stephenson 2020, see 1.4.4), and coined the term ‘reflexeme’ to capture their profile. His project shed light upon some of the above research questions based on a typological comparison between European, Australian and Asian languages. The thesis was submitted in late 2020. Alex Stephenson and I then worked on consolidating the data, and joined forces with Marc Allasonnière-Tang (CNRS, MNHN) to prepare the study for publication. An article is currently being written up.

Stephenson, Alexander, Maïa Ponsonnet & Marc Allasonnière-Tang. In preparation. “Reflexemes”: Typology and motivations of reflexive expressions with emotional meanings in languages of Australia, Europe and Asia. To be submitted to *Linguistic Typology*.

For this study, a total of 59 languages were considered. These were distributed across three continents and eight language families, so as to be able to compare regional as well as genetic trends. We selected language families where we expected to find reflexemes – Romance and Germanic in Europe, as well as Australian languages. We chose Asia as a third point of comparison, based partly on accessibility of the data and Alex Stephenson’s knowledge of the languages in question. This small yet strategic sample does not ambition to ground a full-fledged typology of reflexemes, but it enables enlightening triangular comparisons, as

appropriate for a first cross-linguistic study of reflexemes. We systematically investigated published sources (mostly dictionaries) from all 59 and harvested a total of 455 reflexemes, which we then checked with native speakers.

Table 8 presents the languages investigated and the number of reflexemes attested in each of them. A first observation, contributing to answer research question (1) above, is that reflexemes are by no means evenly spread across families and continents. Proportions differ drastically between European and Australian languages, and none of the four Asian languages we considered have reflexemes in the strictest sense of our definition. Yet, we found some germane forms originating from Mandarin, which are reported between brackets in Table 8 for the sake of exhaustivity, and discussed in more details in the article.

Family/Group	Language	Reflexemes
EUROPE (6 languages)		
Romance (3)	French	95
	Italian	88
	Spanish	102
Germanic (3)	Dutch	21
	English	9
	German	75
AUSTRALIA (49 languages)		
Pama-Nyungan (30)	Alyawarr	3
	Arabana	3
	Gupapuyngu	3
	Guugu Yimidhirr	3
	Kayardild	2
	Kaytetye	3
	Nyangumarta	1
	Walmajarri	1
	Warlpiri	3
	Wiradjuri	3
	Wirangu	3
	19 others	0
Non-Pama-Nyungan (19)	Wambaya	2
	Nunggubuyu (Wubuy)	5
	Nyulnyul	2
	Kriol	6
	15 others	0
ASIA (4 languages)		
Sino-Tibetan (1)	Mandarin	(42)
Other families	3 others	0

Table 8. Languages surveyed and number of reflexemes found in each of them.

While language families differ sharply in sheer numbers of tokens, there are no such clear contrasts in the semantic distribution of reflexemes. For the purpose of semantic comparison, we extracted a system of emotion categories based on qualitative inspection of the data and prior familiarity with the semantic field of emotions. Coding each token using this system allowed us to quantify the ‘semantic distance’ between pairs of languages, i.e. assessing which languages were more or less ‘alike’ when it came to reflexemes. Notwithstanding the possibility to see trends emerge from a larger language sample in the future, this statistical testing did not reveal clear contrasts. Languages within families appear somewhat more similar to each other than across families, yet the pattern is not strong. Importantly, European languages across families are not closer to one another than to Australian languages (e.g., French is not closer to German than to Pama-Nyungan languages); in other words, there are no areal trends either. In other words, with respect to research question (2), our sample suggests that reflexemes do attract relatively comparable emotional meanings across the world’s languages.

In terms of what motivates the semantics of reflexemes, the range of emotions they most frequently encode suggests that two types of pressures may be at play. First, we see from Table 9 that a significant proportion of the ‘top five’ categories for each family are among those typically listed as ‘primary’ emotions (Ekman 1992a) – to feel good/bad feelings (i.e. sadness and joy), anger, fear (concern), verbs meaning ‘feel’ in the generic sense (‘feel something’). Importantly, these categories also resemble those encoded by frequent lexemes, at least in some Australian languages (Ponsonnet 2014b: 178–184; 2020: 42–44). In this respect, the semantic distribution of reflexemes may be characterized as ‘neutral’, i.e. it reflects what may be called a ‘default’ distribution observed in other aspects of the language.

Romance		Germanic		Pama-Nyungan		non-Pama-Nyungan	
Good feeling	10.9%	Good Feeling	19 %	Anger	17.9%	Good Feeling	33.3%
Apprehension	9.5%	Apprehension	10.5%	Good Feeling	10.7%	Bad Feeling	20%
Bad Feeling	9.5%	Anger	8.6%	Bad Feeling	10.7%	Pride (negative)	13.3%
Anger	8.8%	Delusion	6.6%	Contrariety	10.7%	‘feel’ verb	13.3%
Excitement	7%	Shame	6.6%	Pride (negative)	7.1%	Shame	13.3%

Table 9. The five most represented emotion categories for each language family.

The percentages reflect the proportion of reflexemes assigned to each emotion category for each family. The totals do not add up to 100%, because more than five emotion categories are represented by reflexemes in each family. (Although families are not necessarily homogenous units of comparison when it comes to reflexemes – see above – collapsing individual languages into families was necessary to reduce the discrepancies in sheer numbers of tokens between Australian and European languages. These discrepancies were so significant that they rendered language-by-language comparisons uninterpretable.)

Another type of emotions prevalent with reflexemes relates to self-evaluation (highlighted in grey in Table 9). As the English label ‘self-evaluation’ suggests, these emotions are ‘reflexive’ in the sense that they relate to considerations about one’s own personality, actions etc. Unsurprisingly, a proportion of the reflexemes in our data, although lexicalized under a number of criteria, remain close in meaning to the underlying reflexive constructions that supports them.

This can be illustrated with German *sich erniedrigen*, REFL+‘humiliate, degrade’, specialized for the moral sense of ‘to abase oneself’. As we can see, this quasi-transparent lexicalization mechanism easily leads to ‘reflexive’ (i.e. self-oriented), evaluative emotions. This may explain the relative prevalence of ‘self-evaluation’ emotions in the denotations of reflexemes.

Overall, the semantic distribution of reflexemes seems to reflect two different trends. On the one hand, some of the distribution appears to be driven primarily by yet-to-be-explained universal pressures towards the lexicalization of certain emotion categories. These pressures are apparently not specific to reflexemes, but may on the contrary apply to all descriptive resources, as will be further discussed in 3.3 and 7.1.2. Secondly, the semantics of reflexemes seems to be influenced by an intuitive trend towards the lexicalization of ‘reflexive’ emotions, flowing naturally from reflexive constructions.

A number of observations from our sample allow us to comment on the broader, overarching research question posed at the start of this section: how do reflexemes come to be? Perhaps contrary to expectations, several observations run against the hypothesis that reflexemes would first emerge for reflexive emotions, and then expand to other, ‘neutral’ meanings. If this was the case, one would expect that Australian reflexemes, numbering less than a handful per language, would mostly encode reflexive emotions – but Table 9 shows this is not the case. Meanwhile, Mandarin has a significant cohort of words with a 自- *zì-* prefix meaning ‘self’, mostly targeting reflexive emotions, as in 自爱 ‘*zì-ai*’, ‘self’+‘love’, meaning ‘to respect oneself/self-respect’. In spite of this cohort, known to be relatively ancient, Mandarin has not developed 自- *zì-* expressions with neutral emotional meanings. (And in fact, the Mandarin items do not qualify as reflexemes based on our definition because they are not based on a productive, syntactic reflexive constructions.) This suggests that ‘reflexive emotional semantics’ is not in and of itself the initial source from which reflexemes multiply.

Instead, the functional scope of reflexive markers, and in particular the overlap with what Kemmer (1993) defines as middle marking, likely plays a key role. This is supported by the prevalence of reflexemes in European languages, where reflexive markers also serve as middle markers and therefore readily apply to emotion predicates. The semantic collusion between reflexive and middle is not widespread in Australian languages, however we found other associations, some of which may be good candidates for sourcing reflexeme. Further research is required before we can understand which profiles of reflexive marking/constructions favor the emergence of reflexemes, and how these interact with the lexicalization of emotions with reflexive semantics.

3.2 *Expressive encoding of emotions*

3.2.1 *Interjections*

In addition to figurative language and lexical resources, which are both ‘descriptive’ resources, Ponsonnet (2014b) also explored expressive emotional resources in Dalabon, including emotive interjections (2014b: 109–126). As with figurative language and emotion nouns, I have since investigated the typology of interjections in Australian languages.

Ponsonnet, Maïa. In press-b. Interjection, in Bower, C. ed., *Oxford Guide to Australian languages*. Oxford: Oxford University Press.

Interjections, broadly defined here as lexical forms that are capable of constituting utterances on their own and do not combine syntactically with other parts of speech (Wilkins 1992: 124), are most likely a universal feature of human languages (Wierzbicka 1999: 276); and are remarkably frequent in everyday speech (Kockelman 2003). This suggests a key role in human communication. Yet, relatively little is known about the formal, semantic and functional properties of interjections (Wierzbicka 1992; Goddard 2014), and virtually nothing is known about their typology across the world’s languages.

As discussed by Ameka & Wilkins (2006), Dingemanse (2017) or Lahaussais & Colombat (2019) (among others), because of their morphosyntactic independence, interjections are often considered linguistically marginal and left outside the scope of documentation. Over the years, many descriptivist colleagues have confessed to me that, given time and resource pressures, they tend to omit interjections altogether when transcribing first-hand data. As a result, the documentation of interjections is somewhat cursory, with few established descriptive categories or predictions about cross-linguistic regularities for instance. In this context, the typological investigation of interjections is a delicate pioneer enterprise – but one that offers many enlightening insights, given the novelty.

My chapter on interjections to appear in the *Oxford Guide to Australian Languages* (Bower in press) presents a semantically oriented pilot typology of interjections in a balanced sample of 37 Australian languages. The choice of languages combines the need for geographical and genealogical balance with the availability, searchability and extent of documentation – which remains limited for many languages, as explained above. The identification of interjections in the sources relied upon the descriptors’ assignments: all the items labelled ‘interjection’ or ‘exclamation’ were included in our dataset, as well as ‘particles’ when the translation was clearly interjective. Therefore, this study reports on interjections *as they have been documented over the last decades*, rather than on interjections *per se*. It goes without saying that a lot is lost in written description – in particular, prosody and visual clues (facial expressions, gestures), both essential components of the realization interjections. Hopefully, in spite or perhaps because of its limitations, this study will encourage more thorough and systematic documentation of interjections, which will in turn enhance typological insights.

The extracted tokens were organized into types, reflecting the meanings or functions of interjections; and the types were, in turn, organized into broader classes. In this respect, the classes identified by Ameka (1992) – conative, phatic and expressive – were effective, although two additional classes were needed to account for some of the types: constative and social interjections (see also Ameka & Wilkins (2006) for additional classes). The full list of the types and classes that emerged from the empirical investigation of the data is presented in Table 10.

CONATIVE INTERJECTIONS (Ameka 1992)
attention seekers, ‘wait’, warning, injunction / encouragement / permission, ‘here it is’, ‘take this’, ‘come here’, ‘be quiet’, ‘go away’, ‘stop’, ‘give it (to me)’, ‘let’s go’ / ‘come on’, ‘hurry up’, interdictions, ‘go away’ to animals, ‘listen’, ‘look’, ‘leave it’ / ‘let it be’, requesting something, responses to call / attention seekers, for help, other commands
PHATIC INTERJECTIONS (Ameka 1992)
yes, no, agreement, seeking information / confirmation / clarification, opening a sequence (‘alright’), ‘maybe’, disagreement / disbelief, ignorance, self-correction, ‘finished’, asking to continue, emphatic confirmation (‘true!’), hesitation place-holder, back channel (‘I see’), ‘just joking’, ‘for no reason’, listen, reluctant agreement, invite to consider statement
EMOTIVE INTERJECTIONS (Ameka 1992)
generic exclamation, surprise, pain, rejoicing / satisfaction / approval / relief, compassion, angry or generic dissatisfaction, sorrowful dissatisfaction, fear, endearment, disapproval, ‘serves you right’, sarcasm, irony, amusement, ‘never mind’, excitement, interest, social discomfort, anger/aggression, wishful thinking, ‘no wonder’
CONTASTATIVE INTERJECTIONS (additional class)
pointers, descriptive
SOCIAL INTERJECTIONS (additional class)
‘goodbye’, greetings, ‘sorry’, ‘thank you’, ‘bless you’, scenarized (see Ameka & Wilkins 2006: 10)

Table 10. Types and classes of interjections suited to organize interjections as documented in the 37-language sample used for this study.

The rest of Ponsonnet’s (in press-b) chapter discusses the distribution of interjections across types and tokens, and the distribution of some recurring forms. Attention seekers are the most frequently reported of all interjections, and phatic interjections (apart from quasi-universal yes/no pairs) are the least consistently described. With emotive interjections, some clear patterns emerged in spite of the somewhat elusive nature of internal states. Pain is the only sensation targeted by emotive interjections – that is, we found no interjections expressing cold or hunger for instance. On the other hand, all ‘primary’ emotions are covered apart from disgust, and a couple of ‘non-primary’ social emotions feature as well. The most frequent emotive interjections are generic exclamations, followed by negative exclamations (contrariety and sorry), and positive exclamations (satisfaction). The specific internal states most frequently expressed by interjections are pain and surprise combined, as well as compassion, which is a key social emotion amongst Australian groups. The form [jagaji], which covers both pain and surprise, is remarkably frequent across the entire Australian continent, suggesting extensive

pathways of borrowing. There is also a number of additional, smaller sets of related forms used in sometimes very distant languages with consistent functions.

Most of the observations in this study raise the question of whether they are specific to the Australian continent or universal. As such, they highlight a number of relevant questions to be tackled in future typological research about interjections, in Australia and elsewhere. What emotions are most frequently expressed by interjections across the world's languages, and what motivates this distribution? What motivates the formal resemblances we have observed? Are certain types of emotions more likely to exhibit formal resemblances, perhaps reflecting strong functional determination? Or strong physiological determinism in their production? With such questions in mind, I am currently working on an expanded version of this study using a broader sample of Australian languages, and a narrower definition of interjections adapted to cross-linguistic comparison (in preparation, to be submitted to *Linguistic Typology*).

3.2.2 *Evaluative morphology*

Ponsonnet's (2014b) discussion of expressive resources in Dalabon shed substantial light upon the emotional values of evaluative morphology, a prevalent feature of this language. Such values had largely been overlooked in small languages, in general and in Australia in particular, as they are not easily captured by traditional data-collection methods (Ponsonnet & Evans 2015). Yet, for the Gunwinyguan languages I have documented at least, they revealed as pervasive in data collected with female speakers and when removing thematic expectations around culturally male topics such as traditional mythological narratives, hunting, ethnobotanics, and the like (Ponsonnet 2018b). Data collected with Kunwok and Rembarrnga female speakers in more domestic, family-oriented, day-to-day contexts, highlighted the overwhelming prevalence of diminutives across genres. The resulting data unveiled a number of interesting differences between Dalabon and Rembarrnga in this respect (as discussed in Ponsonnet (2018b), which I will not present in detail here).

A broader typological survey of evaluative morphology across the Australian continent is a task I aim to undertake in the near future. In the meantime, taking advantage of collaborations established during my postdoctoral fellowship at Dynamique Du Langage (2014-2015, see 1.4.1 and 1.4.2), I published a cross-continental typological study of emotional connotations in morphological diminutives and augmentatives. As the first synthetic typological study of its kind, this article is regularly cited, both by linguists working on related linguistic phenomena, and by authors studying media and communication in practical contexts.

Ponsonnet, Maïa. 2018. A preliminary typology of emotional connotations in morphological diminutives and augmentatives. *Studies in Language* 42(1):17-50.

Although there exists many language-internal descriptions and cross-linguistic syntheses of morphological diminutives (inter alia Scalise 1986; Stump 1993; Dressler & Merlini Barbaresi 1994; Jurafsky 1996; Bauer 1997; Fortin 2011; Grandi & Körtvélyessy 2015), and some for

morphological augmentatives as well (Grandi 2002; Matisoff 1992), few publications discuss emotional connotations in any depth. In fact, a significant proportion do not mention them at all. Given the paucity of sources, my study is based on small language samples: 19 for diminutives, and 9 for augmentatives. Nevertheless, due to the relative coherence of emotional extensions in these devices, some patterns emerged even in spite of sample size.

Apart from relatively mild emotions related to children, diminutives are found to index contempt, compassion, romantic and/or sexually oriented love, admiration and respect, as well as comfort and control relative to personal daily routines. Based on the language sample used in this work, it appears that the distribution of some of these emotional categories could be areal, while other emotional values could be channeled by certain morphological properties, or perhaps phonetic properties. In terms of diachrony, typological observations confirm that diminutives sometimes evolve into purely qualitative evaluative devices (i.e. pejoratives and melioratives specialized for one specific emotion), and suggest that they can also bleach into markers of general emotional coloring.

Emotional connotations are less frequent and clear-cut in augmentatives than diminutives. Although negative emotions are predominant, augmentatives cover a mixed range that includes a significant proportion of positive emotions, alongside negative ones. Nevertheless, several regular patterns can be identified. Among negative connotations are contempt and repulsion relative to excessive and inappropriate behavior, as well as marginal connotations of fear. Among positive emotions are admiration and respect related to high social status, as well as endearment and compassion, i.e. a similar range as diminutives.

Importantly, although morphological diminutives and augmentatives are antonyms with respect to their quantitative meanings (small vs big), this contrast is not matched for emotional values. Positive emotions are prevalent with diminutives, but not to the exclusion of negative ones. Augmentatives, on the other hand, are far less skewed towards negative emotions than diminutives are towards positive emotions. In fact, the emotional categories expressed by diminutives and augmentatives often overlap. The most relevant contrast between the two could be that diminutives express emotions anchored – if only remotely – in the context of intimacy, whereas augmentatives more frequently express emotions grounded in a broader social context.

3.2.3 *Morphology and emotions*

Ponsonnet's (2018c) article on morphological diminutives and augmentatives was included in a special issue of *Studies in Language* that I co-edited with Marine Vuillermet (University of Zurich).

Ponsonnet, Maïa & Marine Vuillermet. 2018. *Morphology and emotions across the world's languages*. Special issue of *Studies in Language* 42(1).

The collection contains nine contributions (including Ponsonnet (2018c)), results from a workshop I organized in 2015 in *Dynamique Du Langage* (Lyon), as the culmination of a seminar cycle I had been leading during my postdoctoral fellowship (see 1.4.2). Three articles focused on morphological diminutives, thus providing some of the data for my typological study (see above). Others dealt with other morphological phenomena including apprehensive, aspectual morphology, reduplication (Ponsonnet 2018a, see 2.2.3), and an overview of emotional morphology in Kakataibo (Panoan, Peru, Zariquiey).

The special issue's introduction (Ponsonnet & Vuillermet 2018) synthesizes the above contributions to extract new insights about the semantic typology of emotional resources. Firstly, the sum of contributions delineate the semantic space covered by morphology within the domain of emotions. If we combine the data presented in this volume with existing publications on mirativity, and use Ekman's (1992a) list of basic emotions as a guide, it appears that morphological processes are attested for most basic emotions or at least for closely related emotions. However, as we saw with nouns in 3.1.2, some emotion categories are clearly more prevalent than others (but prevalent emotions are not the same as for nouns). Compassion, endearment and affection seem most frequently encoded by means of morphology – reflecting their association with diminutive devices. Among negative emotions, contempt and fear are also relatively common; anger is also attested, albeit more rarely. Surprise is not covered in this volume, but we know it exists based on existing descriptions of mirativity (DeLancey 1997).

Another dimension of variation is in the type of morphological devices that can express each type of emotions. While compassion is more frequently encoded by distributionally flexible evaluative affixes, contempt (or criticism) is a common extension of nominalizers (Zariquiey for Kakataibo) and verbalizers (Németh & Sörös for Hungarian); and fear is regularly encoded by affixes that pertain to or neighbor the TAM system (Vuillermet 2018 for Ese'eja, Takanan, Bolivia and Peru).

Based on formal and semantic criteria, Ponsonnet & Vuillermet's introduction identifies four broad profiles among the emotionally loaded morphological devices presented in the volume – three of them being 'subtypes' of evaluative morphology. A first profile corresponds to 'prototypical' evaluative morphology. Formally speaking, evaluative morphemes are 'indifferent to word class', so-to-say. They occur indifferently on many different parts of speech (especially when they express emotions, Bauer (1997: 540)), usually without modifying their word-class membership. As a consequence of distributional flexibility, evaluative morphological devices often affords flexibility in scope: they can qualify entities (when occurring on nouns) or events (when occurring on verbs); and they can also have scope over the entire enunciation context (Dressler & Merlini Barbaresi 1994; Ponsonnet 2014b: 97).

A second profile of emotionally loaded morphological devices groups together derivational, often category-changing affixes that produce words alluding to (excessive) habits, and imply

criticism to that extent. This is described in this volume by Zariquiey for Kakataibo (nominalizer *-katsái*) and Németh & Sőrés for Hungarian (verbalizer *-kVdik*). The phenomena in question echo Grandi's (2002) account of augmentative suffixes in Mediterranean languages. Semantically, all these derivational evaluative devices rely upon a conceptual association between regular habit, excess, and negative evaluation. As such, they also relate to aspectual evaluation, which has sometimes been considered a part of evaluative morphology – duration (excessive habit) can be treated as augmentation and brevity as diminution (Stump 1993; Fortin 2011). Although such devices are sometimes assimilated to evaluative morphology (e.g. Grandi 2002), their behavior and distribution do not match that of the prototypical profile in the previous paragraph. Their scope is also less flexible, to the extent that their emotional or evaluative value usually applies uniquely to their referent, as opposed to the entire context.

Also branching out from 'prototypical' evaluative morphology is the third profile, verbal evaluative morphology, i.e. morphology that occurs primarily on verbs⁸ with aspectual values. This type of evaluative morphology yields vaguer expressive connotations, compared to the relatively clear emotional values of diminutives, for instance.

Finally, the data presented by Vuillermet's chapter on apprehensive in Ese'eja in the *Studies in Language* volume suggests that what has been called apprehensives/apprehensional (Lichtenberk 1995), form a fourth, distinct profile of evaluative morphology. This groups heterogeneous morphological devices that can be analyzed within a coherent semantic system. For instance, in Ese'eja, 'apprehensive' morphemes include verbal affixes that belong to the TAM paradigm, along with a nominal suffix. However, all the devices express fear, thus operating within the 'apprehensional' domain. Mirative markers may offer other instances of comparable systems (not discussed in the volume we co-edited).

The profiles outline above are heterogeneous, in the sense that they are not defined by a coherent system of criteria; they have emerged based upon a relatively small amount of data (at least for some of them). In spite of these limitations, they represent tendencies to be kept in mind in future data collection and language descriptions. Apart from this heuristic value, they also illustrate what sort of regularities and patterns we can look for when we investigate the semantic typology of expressive resources, something I expand upon in the synthesis presented below.

3.3 Synthesis and perspectives on descriptive resources

The first observation from the sum of the studies presented above concerns the affinities between particular linguistic tools and particular emotions. As we can see from the recapitulation in Table 11, different types of linguistic resources tend to be specialized for

⁸ Prototypical evaluative morphology occurs on verbs as well, but nouns are primary, see Bauer (1997: 540) from Nieuwenhuis (1985: 221–223).

different emotions. This may in a sense sound trivial: given that humans need to deal with each emotion in a specific way, it seems evident that they cannot use the same linguistic tools to talk about righteous anger and, say, exhilarating joy – why would they? But the tendencies we observe in the data are more intriguing than this artificial example. Why do endearment and compassion tend to be expressed by morphology, while fear and surprise seem to attract specialized systems of distributed markers (3.2.3)? Why do Australian languages regularly encode shame with nouns (3.1.2), but more rarely express it with interjections (3.2.1)?

TYPE OF RESOURCE	AUSTRALIA	ELSEWHERE	PROPERTIES & AFFORDANCES
DESCRIPTIVE RESOURCES			
Body-based figurative expressions	Fear, anger and upset, feel good, feel bad, compassion and sorrow		Descriptive with some expressive connotations
Emotion nouns	Anger, generic feelings, shame, love/affection, fear		Descriptive with overarching figurative dimension (EMOTIONS ARE ENTITIES)
Reflexemes	Feel good/bad, feel (something), anger and contrariety, negative pride, shame	Europe: Good feelings, apprehension, bad feelings, anger, shame, delusion, excitement	Descriptive, predicative
EXPRESSIVE RESSOURCES			
Interjections	Surprise, dissatisfaction, contrariety, sorrow, satisfaction, compassion		Expressive, can be used on their own i.e. without mention of the stimulus
Morphological diminutives	Gunwinyguan languages: compassion, endearment, intimacy	endearment, intimacy, contempt, compassion, love and desire, admiration	Expressive, accompany the mention of (an aspect of) the stimulus
Derivational morphology and augmentatives		Contempt, repulsion, admiration, endearment, compassion	Expressive, accompany the mention of (an aspect of) the stimulus
Verbal morphology		Negative connotations (contempt, disapprobation)	Expressive, connotations
Systems of mixed morphological marking		Apprehension, ?surprise	Expressive, accompany the mention of the stimulus event

Table 11. Prevalent emotion in each type of resources, extracted from the studies presented in this chapter. The results concern type prevalence, not token frequency.

In essence, these pairings – like the four profiles of ‘emotional morphology’ summarized in 3.2.3 above – are associations of formal properties of morphological devices with certain portions of the emotional semantic space. For instance, the capacity of interjections to form a single occurrence appears to make them most suitable to express surprise, but not shame (at least in Australian languages); while the flexibility in distribution and scope of evaluative morphology appears to match with endearment.

The synthesis I am about to discuss has limitations, particularly because not all the lines in Table 11 are equally comparable with one another. This is simply because the studies respectively summarized by each line were not carried out with this level of comparison in mind. We also need to remember that the results concern prevalence of types, not token frequency. Notwithstanding these limitations, some observations emerge.

First, there is a clear contrast between descriptive resources and expressive resources. On the one hand, all the descriptive resources considered here tend to converge towards a comparable range of emotions.⁹ On the other hand, expressive resources diverge sharply from this descriptive range, as each of them covers a distinctive set of emotion categories. Obviously, it is useful to keep in mind that the linguistic devices treated as units of comparison (i.e. what constitutes a line in Table 11) are artefacts of the methodology applied across independent research projects. As such, they may be somewhat unfit for comparison. Since the formal properties and affordances of the descriptive devices listed in each line of Table 11 do not diverge much more than their respective semantic ranges, there may be no robust reason to keep them distinct. For future typological projects and developments, it will be useful to consider whether descriptive linguistic tools should be treated as one single type of tool.

At the same time, the respective semantic ranges of descriptive tools are not strictly identical. For instance, in Australian languages, compassion/sorrow are higher with body-based figurative expressions than with nouns and reflexemes; and conversely, shame is lower with figurative expressions and higher with nouns and reflexemes. These differences are not trivial, and they require further confirmation and examination (e.g. with studies in other parts of the world) before stronger conclusions can be drawn.

Notwithstanding these nuances, the set of emotion categories towards which descriptive resources globally converge is in itself informative. The most commonly targeted categories are neutral ones such as feel good/bad; followed some primary emotions like anger and fear, and some social emotions like shame or love. The overall prevalence of ‘feel good/bad’ expressions is unsurprising, since they correspond to ‘neutral emotions’ (with a valence orientation). The recurring prevalence of anger, on the other hand, is more puzzling. Although anger is typically listed among primary emotions, it is more often targeted by descriptive

⁹ Probably even more so when we take into account the moderately frequent categories that I did not include in Table 11 due to limitations of space.

linguistic resources than other primary emotions: it fares high in all three types of resources – reflexemes, body-based expressions, and nouns. The studies reported by Table 11 mostly concern Australian Indigenous languages, but the results for reflexemes confirm the high rank of anger in European reflexemes. We can also note that anger attracts a remarkably coherent range of metaphors across languages (Kövecses 1995).

There does not seem to be a self-evident reason why anger should be more prone to linguistic description than, for example, surprise, disgust, or any other primary emotion. Functional explanations may not be a strong hypothesis, because it is not particularly clear that humans have a greater need to communicate about anger than about any other emotions. Linguistic affordance is more plausible: anger enactments and displays could open more linguistic bridges towards lexicalization than other emotions? Another trend of explanations relates to the evolutionary nature of anger, for instance considering that it is often repressed, by cultural norms or even as a result of evolution in domesticated animal species (of which humans are). This could result in a push towards lexicalization? Alternatively, a purely cognitive hypothesis may suggest that anger is ‘cognitively salient’ for some reason (e.g. as a compelling inner experience, and due to socially remarkable manifestations).

To summarize our findings, it is now confirmed that different linguistic resources specialize for different emotions, and in particular expressive resources present a higher degree of specialization. Descriptive linguistic resources are semantically more homogenous, and this tells us that some emotions – among them, anger – seem more prone to linguistic description than others. Future research is needed confirm and refine our understanding of emotional specialization for each linguistic resource; and then explain these patterns of specialization. As proposed above, and in previous sections (3.1.2), candidate explanations range from functional drivers to linguistic affordance, via evolutionary and cognitive considerations. As explained in Chapter 7, in the years to come I will continue to map out the semantic typology of emotions so as to improve our understanding of resource-emotion correlations; and further elaborate, and test, the reasons behind these correlations.

3.4 Handbook chapter on research on emotional language

This brief section reports on a chapter I was invited to write for De Gruyter’s handbook *Approaches to Language and Culture*. As a reasoned review of existing work on emotional language, this chapter does not present my own scientific results, yet it is indicative of my epistemological reflection on a field of research to which I contribute myself.

Ponsonnet, Maïa. In press-c. Emotional language: A brief history of recent research, in Völkel S. & Nassenstein N. eds. *Approaches to Language and Culture Handbook*. Berlin: Mouton de Gruyter.

The chapter covers both anthropological and linguistic research on emotional language in the last five decades (i.e. since emotional language became an identified research topic). I analyze

the filiation from early anthropological interest in emotions; to the subsequent focus on emotion words; and finally to the investigation of emotional language *per se* which characterizes linguistic anthropology's approach to the theme. I also explain how linguists have complemented this perspective by studying the linguistic encoding of emotions and its typology, as well as language use in discourse and conversation. Overall, this 'brief history' demonstrates how much knowledge has been gained on emotional language in relatively recent years. At the same time, I highlight a need for synthesis and organisation around research questions, to help structure this emerging knowledge and make it more interpretable for researchers in other disciplines (for instance psychologists).

3.5 Collaborations on other semantic domains

Aside from emotions, collaborations with colleagues have created opportunities for me to investigate the typology of other semantic domains, in particular space and kinship.

My work on kinship reflects a collaboration with Patrick McConvell (Australian National University) during my PhD, resulting in a book chapter published in 2018 (McConvell & Ponsonnet 2018). This small-scale project investigated the terms for 'section'/'subsection' (the key concepts of the typically Australian socio-centric kinship grids, see Dousset (2012)) and their colexifications. Working on kinship allowed me to expand my understanding of linguistic descriptions of the person and its parts/relations, in line with my interest in body-based descriptions of emotions (3.1.1) and possessive constructions (2.2.1). McConvell & Ponsonnet (2018) has attracted attention from French anthropologists reflecting on the notion of totemism, to whom I bring expertise on linguistic representations of kin categories in Australian languages (Jessica De Largy Healy, pers. com.).

While I have not worked on kinship beyond this project so far, my research on space has a broader scope, as it is embedded in a funded, collaborative project. I am one of the four Chief Investigators of the project entitled *Landscape, Language and Culture in Indigenous Australia* (henceforth LLCIA, also known as 'OzSpace', by analogy with the 'MesoSpace' project led by Jürgen Bohnemeyer, University of Buffalo). Funded for 3 years (2020-2023) under the Discovery Project scheme of the Australian Research Council, LLCIA investigates the typology of linguistic descriptions of space in Australian Indigenous languages. Prior to applying for funding in 2018, Lead Chief Investigator Bill Palmer (University of Newcastle) and Chief Investigators Joe Blythe (Macquarie University) and Alice Gaby (Monash University) invited me to join their team to take charge of the component of the project involving the Kune variety of Kunwok, one of the languages I had worked on during my DECRA. Kune speaker Kaminjdjan Michelle Martin, who had expressed interest in linguistic projects prior to this opportunity, agreed to take the lead on behalf of the Buluhkarduru Kune community, in partnership with the Bininj Kunwok Regional Language Centre.

The LLCIA project aims to establish a more complete and accurate understanding of the diversity of ways in which speakers of Australian Indigenous languages describe space. Australian languages have featured consistently in discussions of spatial linguistics as prominent instances of languages where ‘absolute’ frames of reference dominate (Lucy 1996; 2003; inspired by Haviland 1998 on Guugu Yimidhirr) (Levinson’s 1996; 2003, inspired by Haviland 1993; 1998 on Guugu Yimidhirr). That is, Australian languages have long had the reputation of making extensive use of cardinal points to indicate directions, including in small-scale contexts where speakers of European languages tend to use left and right; and of making very little use, if at all, of other types of framework. However, recent research (Hoffmann 2019; Hoffmann, Palmer & Gaby 2022) has indicated that Australian languages across the continent actually offer a broad and diverse range of frames of reference involving front and back (which is ‘relative’ in Levinson’s term), geocentric features involving rivers, hills, coasts, or wind directions, alongside cardinal systems. Most languages (probably all) offer several frames of reference that speakers can choose from.

In this project, we will unpack this diversity, question the motivations for the existence and of these systems, and what drivers speakers choice to use one system or another in different contexts (Palmer et al. 2017). We explore correlations between the availability of certain ‘frames of reference’ (see below) for spatial description in a language, and the presence of certain landscape features where it is spoken. Such correlations would reflect the influence of the environment on the existence of linguistic features. In addition, we collect targeted, comparable corpora for five Australian languages, each spoken in geographically distinctive environments (e.g. desert language, coastal language etc.). These languages are Anindhilyakwa (Gunwinyguan, non-Pama-Nyungan, Grote Eylandt), Arrernte (Pama-Nyungan, Arandic, Central Desert), Kukatja (Pama-Nyungan, Western Desert), Kunwok (Gunwinyguan, non-Pama-Nyungan, central Arnhem Land), Murrinh Patha (Daly Languages, non-Pama-Nyungan, Daly River region). The qualitative and quantitative analyses of these corpora will reveal where, when and why speakers choose one type of frame against another when several are available. In particular we will test the effect of speakers’ demographic profile, particularly age, place of residence (e.g. remote communities or more urban), languages spoken, education, occupation; as well as the effect of context, i.e. genre and functional purpose of communication (e.g. navigation narratives), physical environment where speech is uttered (e.g. forest, desert, seaside; built vs fully natural, etc.), cultural frame of the recording (interlocutors, register expectations...).

My role in the project is two-fold. Firstly, as a Chief Investigator, I contributed to the project design and application writing. I am involved in decision-making regarding the overarching scientific orientation of the project, including various theoretical and methodological aspects such as frames of spatial reference typology (see below) and coding protocols. Secondly, I am in charge of the data collection and analysis for one of the five language-specific case study, namely Kunwok, an Arnhem Land language (Gunwinyguan family). This takes place in collaboration with a community of speakers of the Kune variety whom I met and worked with

during my DECRA postdoctoral fieldwork. In 2020, Eleanor Yacopetti (who had just completed her Honours Degree, see 1.4.4) joined the Project's team as a PhD student to conduct fieldwork, data collection and primary analysis on the Kune language under my supervision (with combined funding from the University of Western Australia and Australian Research Council). More details about this supervision are provided in 1.4.4.

Although the LLCIA project officially started in November 2020, data collection with speakers from remote First Nations communities only became possible in 2021 after some COVID-related restrictions were relaxed. Despite this delay, the team has already presented the project in a number of workshops and conferences (Palmer et al. 2019), and one publication (Palmer et al. 2021) has already appeared.

CHAPTER 4. The weight of linguistic architecture on the encoding of emotions

Emotion is a fundamental dimension of human experience, and yet different languages offer very different means to talk about emotions (see Heelas 1986, Wierzbicka 1999, among many others). Anthropological research has long confirmed that although there may be *some* universal features in humans' emotional experiences, emotions are also culturally informed (Myers 1979; Myers 1986; Levy 1984; Lutz 1986; Rosaldo 2013), so that people in different human groups can experience emotions in distinctive ways. In addition, recent psychological studies corroborate the idea that language can influence how we construe or experience emotions (see for instance Lindquist and Gendron 2013, Wood et al. 2016). These observations set the ground for a fundamental question at the centre of my research program since my PhD, namely: do the particular tools available to encode emotions in a given language influence the way its speakers talk about emotions? And perhaps, by way of consequence, the way they communicate about, manage, or even experience emotions? Phrased as above, this question sounds daunting. It asks nothing less than 'is our emotional experience subject to linguistic relativity'. Aside from possibly negative 'Whorfian' connotations – probably derived from (in my opinion misled) association with philosophical relativism –, linguistic relativity is also a somewhat inscrutable problem that mostly resists scientific progress (see Lucy 1992, among many others). In this chapter, I explain how I have approached the question of the potential influence of language upon 'emotions' so far.

Section 4.1 presents a handbook chapter that summarizes the state of the art on 'emotional linguistic relativity' and proposes methodological ways forward. Following this relatively programmatic discussion, sections 4.2 and 4.3 show how I have effectively shed light upon the issue by tackling a related, albeit slightly distinct question. Rather than asking 'can the particular grammatical architecture of a language influence its speakers' representations and practices relative to emotions?' – a classically Whorfian question – we may instead ask: 'can the particular grammatical architecture of a language influence the tools available to its speakers to express and describe emotions?'. The latter interrogation is much easier to investigate, because it does not require us to scrutinize speakers' 'representations and practices about emotions', which are very hard to capture and quantify. Instead, our revamped question remains 'within language'. It focuses on correlations between broader-level linguistic features (for example, the presence of a particular grammatical construction) and linguistic resources in the domain of emotions (for example, the availability of evaluative morphology, or of certain metaphors). Of course, this language-internal version is far less ambitious, as a research question, than the linguistic-relativity hypothesis. Yet, it does shed very informative light upon

the influence of linguistic architecture upon emotional communication, which may in turn offer a platform to tackle linguistic relativity more directly. Expanding upon my PhD research, I have approached this question from two practical angles: the grammatical affordance of metaphors, and the case of language shift. In this chapter, sections 4.2 and 4.3 focus on the grammatical affordance of metaphors. My work on language shift is presented in Chapter 5.

4.1 *Proposed theoretical framework and program*

Shortly after the publication of the 2014 monograph that resulted from my PhD, I was invited to contribute a chapter on cross-cultural research in a handbook on language and emotion prepared by De Gruyter. This chapter was the opportunity for me to theorize the status of the linguistic-relativity hypothesis relative to emotions; to relate this framework to current psychological perspectives onto emotions; and to identify bridges between these psychological theories and existing typological knowledge on the linguistic encoding of emotions (see Chapter 3). This handbook chapter is a resource for those interested in studying cross-cultural diversity in the linguistic encoding of emotions, be they psychologists, linguists, or anthropological linguists. It also lays some of the foundations of the research program I intend to tackle in the coming years (see Chapter 7), and for this reason I discuss some of its content at length here.

Ponsonnet, Maïa. In press-d. Emotional relativity and cross-cultural research on emotions, in Schiewer, G.L., Altarriba, J. & Chin, B. ed., *Language and Emotion: an International Handbook*. Berlin: Walter De Gruyter.

4.1.1 *Emotional linguistic relativity*

The canonical linguistic-relativity hypothesis (or ‘Sapir/Whorf hypothesis’), as inspired by Whorf (1956) after early discussion from Humboldt (1836/1988) and later Sapir (1949) among others, postulates some causal influence from language onto thought and practices. ‘Language’ is usually, understood here as ‘the particular linguistic resources offered by a given language’; ‘thought’ refers to conceptualization, i.e. the ways in which emotions are grouped by the brain into categories; and ‘practices’ refers to speakers’ behavior, habits etc. (Lucy 1992). Much of the research and discussions focus on the first correlation, between language and thought. While the idea of strict determination of thought by language has by and large been discarded, some psycholinguistic ‘neo-Whorfian’ research supports the idea that language can have *some* influence on cognition and behavior in *some* domains. Levinson (2003) famously demonstrated a degree of correlation between the type of spatial descriptions prevalent in a given language and its speakers’ representations of space (see 3.5). Notwithstanding their theoretical importance, these conclusions are limited to the semantic domain of space. In a (2015) review, Enfield called for further investigation of the linguistic-relativity hypothesis in more complex and socially relevant domains, – i.e. domains where interactions between speakers and their understanding of each other’s internal states play a more prominent role. The domain of emotions is such a complex and socially significant domain.

Emotions are a particularly interesting candidate for linguistic influence, because they offer multiple pathways for such influence to apply. This is illustrated in Figure 3, which compares the conceptual structure of the ‘generic’ linguistic-relativity hypothesis, with that of emotional linguistic relativity.

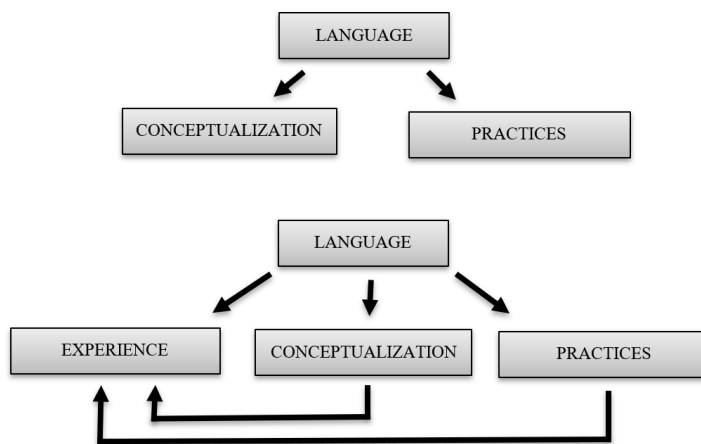


Figure 3. Top: Generic linguistic-relativity hypothesis. Bottom: Emotional linguistic-relativity hypothesis.

Firstly, where the generic linguistic-relativity hypothesis suggests that language may influence ‘thoughts’ – i.e. things pertaining to speakers’ ‘mind’ –, in the emotional domain we can hypothesize influence along two dimensions: on the one hand, the conceptualization of emotions, matching the generic hypothesis; and *experience* of emotions on the other hand. This may be, for instance, because the resources available in a given language favor expression and communication about certain emotions over others; this in turn may alter emotional prompts and receptivity to these prompts, which all contribute to emotional experience. In other words, with respect to emotions the question is not only ‘can language influence the way we think?’, but also ‘can language influence the way we feel?’.

Secondly, it seems plausible that the way we conceptualize emotions influences how we experience them. This opens another, this time indirect, hypothetical path of influence between language and how we feel. For instance, French is unusual in having a word for ‘the pleasure of being in a new and different place’, or *dépaysement*. If having such a word makes it easier for French speakers to conceptualize the corresponding emotional states, perhaps it also favors their experiencing these states? This possibility is symbolized by the feedback arrow between conceptualization and experience in the lower part of Figure 3.

Thirdly, such feedback effects also apply with respect to the influence of language upon practices. Indeed, our practices about emotions, for instance habits around emotional management, or the degree of attention and nature of support our emotional states attract from others, are very likely to influence how we feel (and this is presumably a recursive mechanism). For example, it is imaginable that having a word for *dépaysement* may bring French speakers to discuss the corresponding emotion more often; this in turn may increase the social value of

this emotional experience, and encourage one to seek it more often. The possibility of this mechanism is represented by the arrow pointing from practices to experience in Figure 3.¹⁰

4.1.2 *Psychological theories bridging to linguistic relativity*

While the ramifications of the emotional linguistic-relativity hypothesis suggest a fruitful research area, they also render its investigation particularly challenging. At this point, the most feasible approach seems to test it experimentally, using protocols inspired both by the relevant psychological theories on emotions, and by our growing typological knowledge of the linguistic encoding of emotions. Some psychologists already study adjacent questions on the role of language and communication relative to emotion. They tend to consider language as a universal function rather than in its linguistic diversity and resulting variations,¹¹ yet their findings can serve as stepping stones to explore the questions articulated above. Based on this literature, Ponsonnet (in press-d) identifies a number of specific propositions in support of the emotional linguistic-relativity hypothesis, and suggests pathways to test them.

Language as ‘glue’

In relatively recent years, the ‘basic emotion’ theory (Izard 1977; Ekman 1992a), which postulated a subset of primary emotions construed as universal ‘natural kinds’ and reflecting unified patterns of physiological and neurological activity, has largely been superseded by models that allow for more complexity. Under these new models, ‘basic emotions’ are backgrounded or altogether replaced by notions of emotions viewed as multi-dimensional events resulting, in part, from cognitive processes (Scherer, Shorr and Johnstone 2001; Mesquita 2003; Boiger and Mesquita 2012). Such emotions cannot be systematically matched with physiological or neurological processes, and instead the putative unity of our experience of, say, fear or anger, is largely constructed.

In this perspective, Feldman Barrett (2009) hypothesizes that emotion words are categorization tools that help construct emotional experience insofar as they ‘glue the various instances of [a given emotion] together into a single category’. That is, emotional experience does not naturally divide into strictly differentiated clusters. Instead, the grouping of diverse experiences under certain labels is an effect of linguistic categorization. Elaborating upon Feldman Barrett’s (2009) suggestion, Lindquist & Gendron (2013) claim that ‘language constructs emotion perception’, arguing that the words we use to describe emotions define emotional experience. They do not explicitly consider linguistic diversity, but given that different languages offer different sets of emotion words to their speakers, their observations imply that speakers of different languages should categorize emotional experience in different ways, and thus experience emotions differently. Also in psychology, Lomas (2016) has considered this question, but systematic investigation and testing is yet to take place.

¹⁰ This feedback effect can be hypothesized for other semantic domains as well, but it seems intuitively plausible that it is particularly strong in the domain of emotions, where social interactions (including verbal interactions) play a crucial part.

¹¹ But see (Elfenbein & Ambady 2016; Pell et al. 2009; Sauter et al. 2010; Bhatara et al. 2016, among others).

The emotional discharge hypothesis

Further pathways via which language may, according to psychological research, influence emotional experience, have to do with emotional management and the regulation of negative emotions. Perhaps the most intuitive hypothesis in this respect is what some psychologists refer to as the ‘emotional discharge hypothesis’ (Rimé 2009: 74). It suggests that verbally expressing one’s emotions could help alleviate emotional experience.

A ‘folk’ version of this hypothesis is the common assumption that ‘it’s good to talk’ (Wilce 2009: 78) – reflected in metaphors like ‘get it off your chest’, where negative emotions are figuratively depicted as an intrusive element to be expelled from inside the person (see Kövecses 2000: 154–156). This would mean, for instance, that an English speaker vocalizing their disgust by saying ‘yak!’ would, as a result, feel less disgusted (Byrne 2017). Under this hypothesis, differences in the linguistic resources, or in conventions of use guiding the expression and description of emotions in various languages, could make a difference as to which emotions can more easily be expelled, and therefore modify the way speakers ultimately feel.

Beyond folk conceptions, there is some neurophysiological evidence in favor of this hypothesis (see for instance Lieberman et al. (2007; 2011), Memarian et al. (2017); Wood et al. (2016: 274) on responses of the amygdala to emotion labelling). Wood et al. (2016) suggest that the demonstrated potential of linguistic categorization to impoverish cognition (Schooler & Engstler-Schooler (1990) cited by Enfield (2015: 208)) enables emotion words to regulate intense emotions. While elaborate versions of the emotional discharge hypothesis have been extensively explored by some research groups, they remain to be interrogated and tested in the light of linguistic diversity.

Channelling emotional intelligence

According to Rimé’s (2009) meta-analysis on the social sharing of emotions, the potential benefits of verbalizing emotions do not result from expression directly causing relief (as postulated by the emotional discharge hypothesis). Rimé argues they are mediated by cognitive and social mechanisms. Discussing negative emotions can help identify practical strategies to cope with them (Rimé 1993; Kennedy-Moore and Watson 1999). Emotional intelligence – the capacity to reason and make adequate inferences about emotions – can be expected to favor such processes, and indeed, psychological studies have indicated some correlation between emotional intelligence and emotional well-being (Schutte et al. 2002; Fernández-Berrocal and Extremera 2016).

One way to develop emotional intelligence is to refine our conceptual categories by acquiring more fine-grained emotion vocabularies. Lomas (2016) has proposed that exposure to cross-linguistic lexical diversity may help improve our emotional intelligence, and therefore our

capacities to regulate emotions. Expanding upon Lomas's (2016) suggestion, we can note that cultural and linguistic diversity is not the sole source of lexical diversity: speakers of all languages can learn or even coin new emotion words to refer to fine-grained emotions. Figurative language has been argued to influence conceptual representations in the domain of emotions (Williams & Bargh 2008a; 2008b) and could therefore also enhance emotional reasoning. The relations between lexical and figurative emotional repertoires on the one hand, and emotional intelligence as well as management on the other hand, remain to be systematically investigated.

Emotional intelligence may also be enhanced by emotional discourse and communication. Some studies have confirmed this effect in the context of children development: Laible et al. (2013), for instance, show that further elaboration in caregivers' discourse about emotions can improve emotional and relational understanding in young children. Comparable benefits may result from exposure to discussions of emotion in less interactive contexts. For example, reading literature where the emotional states of characters are discussed in minute details may improve emotional intelligence (see Caruso & Salovey (2008), cited in Oatley (2009)). In other words, the way we represent emotions and emotional events in language can influence the way we understand, manage, and subsequently experience emotions. To that extent, the particular conventions that regulate the elaboration of discourse around emotions in various languages – for instance the literary and poetic genres that have course in a given language, or conversational etiquette/habits around which emotions can be discussed – are likely to influence emotional experience. This is yet another pathway for the investigation of emotional linguistic relativity.

The social benefits of sharing

Rimé (2009) points out that apart from its effect on the self, the social sharing of emotions also influences interactions within the group. Some modes of communication may for instance encourage demonstrations of empathy, affection and other emotional support (see also Clark & Finkel 2004). Enhanced social bonds may in turn propagate throughout social networks, so that emotion sharing ultimately consolidates the network itself, which in turn may have effects upon the emotional experience of its members. Given that all this is achieved 'by using language' (Rimé 2009: 80), it seems plausible that the linguistic resources and conventions specific to a given human community – for instance the availability of certain expressive resources such as interjections, conventionalized prosodic contours – may modulate the emotional bonds and support available to its members.

4.1.3 The role of linguistic typology

Although the studies and models discussed above all involve language to some extent, psychologists rarely discuss linguistic diversity as such. One possible explanation is that psychologists often know little about the linguistic resources and mechanisms involved in these propositions, and even less about their diversity across the world. They tend to be attentive to

emotion words, potentially metaphors or prosody; they are less likely to consider interjections, evaluative morphology, syntactic constructions, discourse or conversation structures, etc. Ponsonnet (in press-d) emphasizes the potential for interdisciplinary collaboration between psychology and linguistics (as well as anthropology). The last section of the handbook chapter provides an overview of existing typological knowledge about major emotional linguistic resources, highlighting which ones may be relevant for the study of emotional linguistic relativity.

Ponsonnet (in press-d) is a ‘programmatic’ piece that points towards ambitious interdisciplinary research around linguistic relativity in the domain of emotion. Although I did collaborate with colleagues in psychology at the University of Western Australia for a pilot study, most of the implementation of this program is yet to take place. The program unfold by Ponsonnet (in press-d) inspired the research project presented to the CNRS National Committee in 2021, and will guide my research activities at Dynamique Du Langage in the coming years (see Chapter 7). Meanwhile, as presented in the next sections, I have investigated the relation between language and emotions using other methods, based on linguistic description and cross-linguistic comparison.

4.2 The grammatical affordance of emotion metaphors

As explained in the introduction to this section, the canonical linguistic-relativity hypothesis is not the only way to approach the problem of linguistic influence in the semantic domain of emotions. Alternatively, we can bring the question back to language-internal considerations, asking whether the particular grammatical architecture of a language could influence the tools available to its speakers to express and describe emotions. In other words, can certain morphological profiles, word order, marking preferences, etc., favor the existence of certain linguistic resources to encode emotions? This is a hypothesis my doctoral thesis on the Dalabon language articulated in a final, intentionally speculative chapter that I chose to omit in the published version.

This thesis chapter points to a scenario, suggested by the Dalabon data, whereby specific linguistic properties could plausibly constrain the emotion metaphors available in the language. In Dalabon (like in many languages in Australia and in the world, see 3.1.1), body parts are a privileged figurative source for emotions. Dalabon body-part nouns, as members of the morphosyntactically inalienable part-of-animate possession class, have a strong tendency to incorporate syntactically into verb complexes (see Ponsonnet (2015), and 2.2.1). As a result, the vast majority of Dalabon emotion metaphors occur as lexicalized noun-incorporation constructions, where the incorporated noun denotes a body part. For example, *ngah-kangu-yowyow*, ‘I’+‘belly’+‘flow’, which means ‘I feel good’, translates literally as ‘I flow from the belly’, under the metaphor FEELING GOOD IS LIKE FLOWING FROM ONE’S BELLY.

Do the grammatical properties of the ‘host’ construction of these figurative representations, namely noun incorporation, channel what tropes can occur, and therefore determine the figurative range of emotions in the language? Dalabon noun-incorporation constructions certainly constrain the argument mapping of their constituents. Cross-linguistically and in Australian languages in particular, syntactically incorporated nouns normally express absolutive arguments, i.e. either the subject of an intransitive verb (17), or the object of a transitive verb (18) (Evans 1996; Saulwick 2003b: 327–502; Ponsonnet 2015).

- (17) DALABON
Nga-h-dengu-berderde-mu.
 1SG-R-**foot**-ache-PRES
 ‘My foot aches.’ (20110521a_002_MT 030)
- (18) DALABON
Nunda namorrorddo bulu=kungu-ngerh-ma-ng.
 DEM supernatural.being 3PL=APPR:3SG/3-**heart**-get-PRES
 ‘The namorrorddo might take their hearts [the children’s].’
 (The namorrorddo is a supernatural being who steals children’s hearts at night.)
 (250909_89OK 0356 (LB))

Dalabon body-part nouns are also subjected to ‘grammatical obligatory possession’, i.e. a body-part noun must be represented as a part of the whole to which it belongs. In other words, a belly must be specified as *someone’s* belly. This implies that when incorporated, body-part nouns represent a *part* of the absolutive argument – not the absolutive argument itself. Compare the incorporated constructions with *dengu* ‘foot’ in (17) and *ngerh* ‘heart’ in (18) above on the one hand; and the constructions with *dulh* ‘tree’ in (19) and *wadda* ‘camp/home’ in (20) below. With incorporated body-part nouns, the absolutive arguments are the persons to whom they belong, encoded by first person singular in (17) (prefix *ngah-*) and third person plural in (18) (proclitic *bulu=*). The incorporated nouns represent the relevant parts of these animate arguments. In (19) and (20), on the other hand, the incorporated nouns are in themselves the absolutive arguments, encoded by third person in both cases (prefix *kah-* in (19) and portmanteau prefix *yila-* 1PL.EXCL/3 in (20)).

- (19) DALABON
Dubmi-yah ka-h-dulh-rarrimu-n.
 now-LIM 3SG-R-**tree**-grow-PRES
 ‘The tree is only just growing now.’ (20100718b_004_MT 021)
- (20) DALABON
Mak yala-Ing-ni-ngi, yila-h-wadda-bawo-ng.
 NEG 1PL.EXCL-SEQ-sit/be-IRR 1PL.EXCL/3-R-**camp**-leave-PFV
 ‘We didn’t stay, we left the place.’ (20110529_003_MT 140)

Given these grammatical properties of Dalabon body-part nouns, Dalabon figurative expressions cannot project body parts in ergative roles, because these are inaccessible to incorporated nouns; neither can body parts represent emotions independently of the person to whom they belong, since they are systematically represented as part of this person. As a result, in Dalabon emotional tropes, body parts never stand for a figurative agent, instrument, force and the like; instead, in these tropes usually circumscribe the part of the experiencer that figuratively experiences the emotion. We see this in (21), where *kangu* ‘belly’ is depicted as the part of the experiencer shaken by anger; and in (22), *kangu* ‘belly’ is the part of a person one needs to see to be emotionally attuned to them.

- (21) DALABON
Nunda dja-h-kangu-darridjdarridj-duninj.
 DEM 2SG-R-**belly**-shake.in.agony:REDUP:PRES-EMPH
 ‘You’re really furious this time.’
 Lit. ‘Your body shakes in agony this time.’ (20110614_009_LB 23)
- (22) DALABON
Korreh bahdih buka-h-kangu-na-n.
 before but 3SG/3SG.H-R-**belly**-see-PRES
 ‘Because she readily understands her emotionally.’
 Lit. ‘Because she readily sees her belly.’ (20120714b_005_MT 078)

Importantly, some figurative readings are blocked by the rules of interpretation for incorporated noun in Dalabon. For instance, one could imagine that the compound *kangu-nan*, lit. ‘belly’+‘see’, meaning ‘understand someone’, would yield the metaphor ‘see with the belly’. That is, *kangu* ‘belly’ would be interpreted as the body part with which the ergative argument (the subject of the transitive verb *nan* ‘see’) perceives others’ emotions. As we will see in 4.3.1, this can occur in some other languages. But in Dalabon, the incorporated *kangu* ‘belly’ cannot represent a part of the ergative argument, but only a part of the absolutive argument, i.e. the part of the person who is being understood and figuratively seen.

These grammatical principles limit the formation of metaphors depicting the body part as an autonomous agent, instrument, force, etc. As a matter of fact, such metaphors are absent in Dalabon. This could have consequences on how emotions themselves are depicted, because Dalabon emotion nouns tend to behave like part-of-animate nouns (Ponsonnet 2013: Chap 11; Ponsonnet 2016b). Now, how much responsibility do grammatical mechanisms endorse for the *absence* of such metaphors in the language altogether? Aren’t cultural pressures more likely to be at play here, in the sense that if Dalabon speakers construed emotions as autonomous and agentive, they would presumably manage to articulate the corresponding metaphors by some other linguistic means? This is indeed what one would expect based on Lakoff & Johnson’s (1980) and Lakoff’s (1987) seminal insight that figurative language reflects shared conceptual representations. If metaphors are partly determined by the grammatical features available in a language, then their relationship with shared representations must be loser.

One way to shed light on this question is to compare Dalabon with languages that present relevant grammatical differences, and are spoken in comparable cultural contexts. If the range of emotion metaphors in such languages differs from Dalabon, for instance including metaphors where emotions or body parts are represented figuratively as agents, then grammar must play a role in channelling metaphors.

4.3 *Comparative work on Australian emotion metaphors*

To explore the above hypothesis, I investigated emotion metaphors and their grammar in a larger sample of Australian languages. Australia is a vast continent harboring hundreds of languages from different social groups, with distinct social and belief systems. Yet, this cultural diversity is relative: most Australian groups (especially in the north of the continent) share comparable subsistence modes (hunting and gathering), kinship (Dousset 2012), and cosmogonic structures. Moral and social etiquettes, including around emotions, often exhibit family resemblances; and more specifically, many linguistic resources used to talk about emotions recur across groups from distant regions (see Ponsonnet (2020: Chap 5), and for specific resources: Ponsonnet & Laginha (2020) on body-based emotion metaphors (3.1.1), Yacopetti & Ponsonnet (in prep) on emotion nouns (3.1.2), Ponsonnet (in press-b) on interjections (3.2.1)). Against this shared background, investigating emotion metaphors together with their linguistic underpinnings helps to circumscribe the influence of grammar upon figurative representations of emotions.

The thorough documentation of Dalabon metaphors I produced as part of my PhD research required more fieldwork than could possibly be repeated for a large number of languages. Therefore, I could not rely on first-hand data-collection to provide enough comparative data. Unfortunately, published data very rarely contains enough information on figurative language to answer specific hypotheses. I did exploit a large amount of second-hand data for the typological work on body-based emotion metaphors presented in 3.1.1 (Ponsonnet & Laginha 2020), but this did not inform my hypothesis on the grammar-metaphor nexus. I overcame this difficulty by initiating a collaboration between nine linguists with expertise in Australian languages (including myself), which resulted in a special issue of *Pragmatics & Cognition* on emotion metaphors in Australian languages.

Ponsonnet, Maïa, Dorothea Hoffmann & Isabel O’Keeffe. 2020. *Emotion, body and mind across a continent: Figurative representations of emotions in Australian Aboriginal languages*. Special issue of *Pragmatics & Cognition* 27(1).

Ponsonnet, Hoffmann & O’Keeffe (2020a) originated in a conference workshop I convened at Annual Meeting of the Australian Linguistic Society, in December 2017 at the University of Sydney. The workshop, titled ‘Emotion metaphors in Australian languages: the role of the body’, included six presentations, five of which resulted in an article in the joint volume.

Ponsonnet & Laginha's (2020) typological study of body-based emotion metaphors (3.1.1) appeared in this volume. The rest of the special issue contains five detailed descriptions and discussions of figurative representations of emotions in ten Australian languages. While contributors chose to adopt diverse angles suiting their data and domains of interest, all of them adopted some features of the framework and research questions proposed by Ponsonnet (2014b). This results in greater coherence and comparability across the volume. Altogether, the five contributions cover seven non-Pama-Nyungan languages from three different parts of the continent, and two Pama-Nyungan languages each from a different part of the continent. The larger number of non-Pama-Nyungan languages captures the nuances and resemblances of emotion metaphors across these languages, which are linguistically more diverse than Pama-Nyungan languages. Of note are two articles on Gunwinyguan languages (Bednall 2020; O'Keeffe, Coleman & Singer 2020). Combined with Ponsonnet (2014b) on Dalabon and data collected on Rembarrnga and Kunwok during my DECRA fieldwork, these studies open up collaborative perspectives for fine-grained comparisons of figurative systems across the Gunwinyguan family. This will allow to interrogate the respective weight of linguistic inheritance and contact influence upon emotion metaphors, as initiated by O'Keeffe, Coleman & Singer (2020), and further explored in a joint conference presentation by Ponsonnet, Bednall & O'Keeffe (2019). This research pathway can hopefully be pursued in future collaborations. Complementing these non-Pama-Nyungan insights, the two Pama-Nyungan studies in the volume offer enlightening points of comparison with the non-Pama-Nyungan group. With this network of comparative perspectives, several articles in this special issue of *Pragmatics & Cognition* point to possible loci of grammar-metaphor influence.

4.3.1 Perception metaphors in Warlpiri

Laughren, Mary & Maïa Ponsonnet. 2020. Ear and belly in Warlpiri descriptions of cognitive and emotional experience. *Pragmatics & Cognition* 27(1):240-271.

Laughren & Ponsonnet (2020) examine emotion metaphors in Warlpiri (Pama-Nyungan, Ngumpin Yapa, Central Australia), and explicitly discuss differences with non-Pama-Nyungan languages, shedding further light upon the role of grammar as hypothesized above. Using Warlpiri data collected by Mary Laughren, the article combines her expertise of the language with my expertise on emotion metaphors to produce a detailed, systematic analysis of belly- and ear-based cognitive and emotional collocations in Warlpiri. Table 12 lists the belly-based ones, along with the tropes they instantiate. The article discusses their semantics, as well as the articulation of figurative mappings with their grammatical underpinnings. These fine-grained analyses offer interesting comparisons with the figurative systems encountered in other Australian languages, in particular non-Pama-Nyungan languages described in the same volume, as well as with Ponsonnet's (2014b) description of Dalabon. At first sight, Warlpiri metaphors seem very close to the body-based metaphors documented for Dalabon, and in fact for many other non-Pama-Nyungan languages. However, closer examination reveals significant differences.

Predicate	Literal translation	Lexical sense	Trope
Metonymies			
<i>maju</i> 'bad'	x is bad (belly-wise)	x feels bad emotionally	EMOTIONS ARE STATES OF THE BELLY
<i>wardinyi-jarri</i> 'be(come) happy'	x is/become happy from the belly	x is happy	BELLY FOR EXPERIENCER OF EMOTIONS
<i>ngarrurda</i> 'afraid'	x is afraid from the belly	x is scared	
belly-REDUP + transitive verb of punishment	x's belly-belly does p to y out of concern for y	x acts out of concern for y	BELLY FOR COMPASSION
<i>-jarri</i> 'INCH'	x becomes belly for y	x feels sorry for y	
<i>yukaja</i> 'enter'	y enters x in the belly	x likes y	BELLY FOR CONTAINER OF OBJECT OF AFFECTION
<i>walyka</i> 'cool'	x is cool in the belly	x is calm, serene	FEELING ANGRY IS LIKE
<i>warlu</i> 'fire, hot'	x is burning in the belly	x is angry	HAVING A HOT BELLY (somatic)
Metaphors			
<i>raa-pi-nyi</i> 'open, clear'	x clears/opens y from the belly	x comfort y emotionally	OPEN/CLEAR BELLY FOR POSITIVE FEELINGS (accessibility)
<i>yulpu</i> 'soft'	x is soft in the belly	x is not compassionate	HARD BELLY FOR COMPASSION (resistance)
<i>-jarra</i> 'two'	x is two-bellied	x is in two minds	DIVIDED BELLY FOR HESITATION (destruction by division)
<i>-kari</i> 'other'	x has an altered belly	X is depressed	ALTERED BELLY FOR NEGATIVE FEELINGS (alteration)
<i>nyanyi</i> 'see'+ <i>maju</i> 'bad'	x sees someone y as bad with the belly	x dislikes y	NEGATIVE INTUITIONS/ EMOTIONS ARE PERCEPTIONS OF THE BELLY (agentive)
<i>nyanyi</i> 'see'	x sees something y with the belly	x is concerned, anxious about y	
<i>wangka</i> 'speak'	x speaks from the belly	x think/ speaks internally	THOUGHTS ARE EXPRESSION OF THE BELLY (agentive)
<i>wangka</i> 'speak'	x speaks from the belly for y	worry for someone	CONCERN IS EXPRESSION OF THE BELLY (agentive)
<i>yarlkirni</i> 'bite' CAUS	x bites y in the belly	x makes y angry	ANGER IS LIKE HARM CAUSED TO THE BELLY (patientive)
<i>yarlkirni</i> 'bite' REFL	x bites x's own belly	x becomes angry	
<i>pinyi</i> 'hit' REFL	x hits x's own belly	x becomes angry	
<i>pinjarra-pinjarra-jarri</i> 'striking:REDUP-INCH'	x starts striking from the belly	x becomes angry	
<i>pinjarra-pinjarra-nyina</i> 'striking:REDUP-sit/be'	x is striking from the belly	x is angry	

Table 12. Attested emotional and cognitive collocations with *miyalu* 'belly'.

Particularly relevant to the comparison is the perception metaphor instantiated by *miyalu* 'belly' and *nyanyi* 'see'. The collocation formed with *miyalu* + *nyanyi* 'belly' + 'see' means 'be anxious (about somebody or something)' and that with *miyalu* + *nyanyi* + *maju* 'belly' + 'see' + 'bad' means 'dislike someone', as illustrated in (23). Both rely upon the metaphor EMOTIONS ARE PERCEPTIONS OF THE BELLY.

- (23) WARLPIRI
Nyuntu ka-rna=ngku miyalu-rlu nya-nyi maju.
 you PRES-1SUBJ=2OBJ belly-ERG see-NPST bad
 ‘I don’t like you.’
 Lit. ‘I see you with (my) belly (to be) bad.’ (Mary Laughren’s data.)

Miyalu + nyanyi + maju ‘belly’ + ‘see’ + ‘bad’ translates literally as ‘I see you with my belly (to be) bad’. A transitive verb, *nyanyi* ‘see’ naturally has two arguments. The suffix and enclitic on the present-tense auxiliary *ka* indicate that in (23), the ergative argument is the first person singular, i.e. the speaker (suffix *-rna*), and the absolutive argument is the second person singular, i.e. the addressee (enclitic *=ngku*). The nature of the emotion is expressed by the nominal predicate *maju* ‘bad’, with scope over the absolutive argument. As dictated by Warlpiri grammar, *miyalu* ‘belly’ is ergatively marked (suffix *-rlu*). This is because, like in Dalabon, body-part nouns to an inalienable possession class, which dictates that they share the syntactic case marking of their possessor – here, the speaker in an ergative role. Similar argument mapping and marking schemes apply with *miyalu + nyanyi* ‘belly’ + ‘see’, ‘be anxious’, illustrated in (24), also instantiating the metaphor EMOTIONS ARE PERCEPTIONS OF THE BELLY.

- (24) WARLPIRI
Miyalu-rlu ka=rna=ngku nya-nyi
 belly-ERG PRES=1SUBJ=2OBJ see-NPST
ngula ka=npa=ju jurnta parnka-mi
 that PRES=2SUBJ=1DAT away run-NPST
 ‘I worry about you running away from me.’
 Lit. ‘I see with my belly that you run away from me.’ (Mary Laughren’s data.)

As we saw in 4.2, Dalabon has a superficially similar collocation, *kangu-nan* ‘belly’+‘see’, ‘understand someone emotionally’. However, the argument structure of this expression differs from the Warlpiri collocations with ‘belly’ and ‘see’. Following grammatical rules for noun incorporation in Dalabon, in *kangu-nan* the noun *kangu* ‘belly’ represents a part of the absolutive argument (i.e. the object, or stimulus of the emotion), not a part of the ergative argument (i.e. the experiencer of emotions and of the visual perception in the metaphor). That is, the figurative interpretation is not ‘see with the belly’ for ‘appraise emotionally’ as with the Warlpiri expression, but ‘see someone’s belly’ for ‘understand someone’s emotions’. The important point here is that in Dalabon, there is no grammatically convenient way to produce a collocation that could be interpreted figuratively as ‘see with the belly’, whereas in Warlpiri, this is grammatically straightforward. This grammatical difference results in the occurrence of a metaphor EMOTIONS ARE PERCEPTIONS OF THE BELLY. In Dalabon, metaphors of this type are absent, and instead emotions are mostly represented as states of parts of the person – not as perceptions or actions. The absence of perception metaphors for emotions is notable, because they are cross-linguistically frequent.

Beyond the comparison between Warlpiri Dalabon, Laughren & Ponsonnet (2020) discuss contrasts between larger groups of languages. Ponsonnet & Laginha (2020) report perception metaphors in several Pama-Nyungan languages. Visual-perception metaphors are attested with the belly in Kaytetye (Arandic, Central Australia), and with the throat in Alyawarr (Arandic, Central Australia). Sensory functions of the liver¹² map onto emotions in Diyari and Kurna (respectively Karnic and South West groups, both in Southern Australia). On the other hand, metaphors depicting emotions as perceptions of a body part are not attested in non-Pama-Nyungan languages. Detailed studies of body-based emotion metaphors in non-Pama-Nyungan languages suggest that they most typically originate in noun incorporation (Bednall 2020; O’Keeffe, Coleman & Singer 2020; Hoffmann 2020). Kofod & Crane (2020) and O’Keeffe, Coleman & Singer (2020) show that in non-Pama-Nyungan languages which do not feature productive noun incorporation, body parts can have somewhat broader roles in emotion metaphors (Gija, Jarragan, Kimberley; Mawng, Iwaidjan, Arnhem Land; and Ndjébbana, Maningridan, Arnhem Land).

Of course, the conclusions to be drawn from the influence of one construction remain limited. More systematic comparisons between languages across the Pama-Nyungan/non-Pama-Nyungan divide are required before we progress our hypotheses further. Yet, the comparison between Warlpiri and Dalabon is suggestive as it highlights a precise mechanism motivating differences in figurative representations of emotions in two Australian languages. In addition, another contribution to the same special issue of *Pragmatics & Cognition* uncovered further evidence for the influence of grammar onto emotion metaphors, which I will now present.

4.3.2 Further evidence for grammatical affordance in emotion metaphors

Kofod & Crane’s (2020) masterpiece contribution to the same special issue of *Pragmatics & Cognition*, on the Gija language (Jarragan, non-Pama-Nyungan, Kimberley), points to another grammatical constraint on figurative representations of emotions. As I am not a co-author for this publication, I will not discuss it in too much detail here. Yet, I believe my solicitations and contributions as a volume director, did play a role in bringing the authors to write on the topic as they did. My introduction to the special issue (Ponsonnet et al. 2020b) highlights how Kofod & Crane’s (2020) remarkably exhaustive discussion of emotion metaphors in Gija sheds new light onto the grammar-metaphor nexus. In this case, it comes from metaphors that do not recruit any body-part nouns, and are instead conveyed by coverbs/generic-verbs constructions.

Ponsonnet & Laginha (2020), along with the rest of the contributions to the joint volume and earlier publications (Peile 1997; Turpin 2002; Gaby 2008), show that body-based figurative representations of emotions exhibit significant consistency across Australian Indigenous languages. Their ‘family resemblance’ may reflect underlying conceptual representations of emotions shared between language groups, and therefore be indicative of a degree cultural

¹² Hearing and smell.

uniformity across the continent. This uniformity, however, should not be taken as evidence that body-based metaphors *exhaust* the possible representations of emotions among Australian groups. Indeed, Kofod & Crane (2020) illustrate that when creating metaphors with another grammatical tool – coverbs instead of body-part nouns –, Gija speakers articulate very different figurative representations of emotions.

Australian languages are rich in complex predicates, including coverb/generic-verbs constructions (Schultze-Berndt 2000; Bower 2014). Although their syntax is well known, like their semantics to some extent, the figurative role of coverbs with respect to emotions had not, to my knowledge, been studied so far before Kofod & Crane's (2020) study on Gija. The authors show that in coverb/generic-verbs constructions that describe emotions, speakers' choice of generic verbs produce metaphors whereby emotional impact is associated with physical violence. Namely, speakers can choose generic verbs meaning HIT or SPEAR, against more standard transitive forms such as GET and PUT, when describing emotionally impactful events. This suggests a figurative realm entirely distinct from that of body-based tropes. Interestingly, figurative representations of emotions as physical violence are not attested with Gija body-based tropes. Such metaphors are relatively rare in Australian languages, and especially in non-Pama-Nyungan languages, when the body is involved (see Ponsonnet & Laginha 2020; Laughren & Ponsonnet 2020). Yet, Kofod & Crane (2020) show that in Gija – which belongs to the non-Pama-Nyungan group –, physical violence forms the base of figurative representations of emotions when these are grammatically anchored in coverb/generic-verbs constructions.

This is another indication that grammar can influence figurative representations of emotions – which in turn mitigates their ties with shared cognitive representations, as postulated by classical metaphor theories (Lakoff & Johnson 1980; Lakoff 1987). As I will show in the next chapter, the comparison between languages on each side of a language shift – namely, Dalabon and Kriol – brings additional, nuanced light onto the matter.

CHAPTER 5. The case of language shift

The previous section showed how comparing different languages spoken by different social groups living in comparable cultural contexts can inform our understanding of the grammatical affordance of metaphors. The linguistic ecology of the region where Dalabon is spoken offers opportunities to examine the same question via a comparison of a slightly different nature: that between languages spoken by successive generations within a single community, before or after language shift. As explained in 2.1.1, Dalabon is severely endangered. In their vast majority, the descendants of Dalabon speakers have now adopted Kriol (2.1.2), an English-based creole natively spoken by many thousands Indigenous Australians (Schultze-Berndt, Meakins & Angelo 2013). The typological profile of Kriol contrasts sharply with that of Dalabon, primarily because Dalabon (like all Gunwinyguan languages) is highly polysynthetic, while Kriol (like most creoles) is to a large extent isolating.

As for the cultural context, by and large, the Kriol-speaking younger generations have inherited the core norms and values relative to emotions embraced by their forebears (Moisseeff 1999; Mansfield 2013; Ponsonnet 2018d). But does the language they use allow them to express themselves in the same way as the previous generation did in Dalabon? Take morphological diminutives for instance, which are pervasive in Dalabon and in several other neighboring languages (Ponsonnet 2014b: 81–109; Ponsonnet 2018b). As expected given its morphological profile, Kriol does not have them. How do speakers deal with this difference? Have corresponding semantic categories and connotations simply receded in communication, as suggested by Woodbury's (1998) observation regarding affective suffixes of Cup'ik and their English translation? Or do Kriol speakers encode the same semantic categories covered by morphological diminutives in Dalabon using different linguistic resources?

Woodbury (1998) observed, based on Cup'ik, that distributionally flexible affective morphology is both ubiquitous and discreet, which allows it to diffuse emotional connotations throughout speech. His study suggests that when such morphological devices are replaced by full words in a target translation language, the expressive effect is altered. While the problem articulated above regarding Dalabon evaluative morphology and its rendering in Kriol resembles the one tackled by Woodbury, the two situations differ. Language shift and translation are not comparable for the purpose of evaluating the impact of grammatical properties upon speakers' communication. In the language-shift situation I examine, a community created a new lexico-grammatical code, free of target standards,¹³ and mostly for

¹³ Creole genesis is often compared to L2 learning, with speakers trying to match the superstrate as if it were a 'target language'. While this model is heuristically useful, in the case of Kriol at least (Harris 1986) there is no

the purpose of communicating within this very community. This is very different from situations, where people learn or adopt an existing language, already spoken by an existing community. The latter situation is in fact the one many of us experience when speaking a second language, or translating between languages, as discussed by Woodbury (1998) and Wierzbicka (1999: Chap 6). Existing practices provide a model that ‘new speakers’ / L2 learners have to match at least to some extent – they do not enjoy the freedom that allows a group to innovate a creole language.

I have evaluated the impact of the absence of evaluative morphology in Kriol, and other questions along the same line, in a monograph published in 2020. Based on results from my ASLAN postdoctoral project (2013-2015) and DECRA project (2016-2019), the volume articulates a systematic comparisons between the resources available to describe and express emotions in Kriol and in Dalabon. It also complements descriptions of these resources that I published elsewhere, for instance the emotion lexicon (Ponsonnet 2018, [Ponsonnet 2019](#)), reduplication (Ponsonnet 2018a, 2.2.3), prosodic contours (Ponsonnet 2018d), interjections, metaphors and gestures (Ponsonnet 2017). The comparison with Dalabon uses my 2014 monograph on Dalabon as a reference point, with additional background on other Gunwinyguan background provided by data on Rembarrnga and Kunwok collected under my DECRA project. The present chapter synthesizes the arguments and conclusions from the above publications combined, positioning them relative to my broader research questions – including the ones presented in Chapter 5.

Ponsonnet, Maïa. 2020. *Difference and repetition in language shift to a creole. The expression of emotions*. London: Routledge.

5.1 Data, methods and research questions

Thanks to my ASLAN postdoctoral funding, in 2014 and 2015 I collected first hand data with 20 female speakers of Kriol aged 13 to 80 years. With their help, I collated a corpus of ~30 transcribed hours, using the same methods and stimuli I had designed while building my Dalabon corpus (Ponsonnet 2014a, 6.2.3). As a result, my Kriol corpus is not only rich in emotion-oriented speech, but also highly comparable with my Dalabon corpus, since they partly rely upon the same stimuli. (This corpus is also extensive and diverse enough to answer most questions on general semantics and morphosyntax, as evidenced by the publications presented in Chapter 2).

Comparing languages is a delicate exercise (Dixon 2016), but one that makes sense when anchored in the language-shift situation, where we can juxtapose how speakers use each language in similar contexts to talk about the same things – as repeatedly illustrated in my corpora. The aim of the comparison carried out in Ponsonnet (2020) is not to assess which

reason to believe that early speakers were ever trying to speak ‘correct’ English. They were using English material in order to communicate, however this does not imply that they held English as a standard.

Kriol features result from substrate languages, understood in a narrow sense as the local languages spoken in this particular region before Kriol emerged. The debates on creole genesis opposing universalists (e.g. Bickerton 1981; 1984), superstratists (e.g. Chaudenson 2001; Mufwene 2001) and substratists (e.g. Migge 2003; Lefebvre 2004) have amply demonstrated that mere resemblances between a creole and one local language are not good evidence of substrate influence. Instead, Siegel (2008) has devised a much finer framework to explain and predict substrate influence (for the application of this framework to Kriol in the Top End of Australia, see Munro (2004)). Some of the resemblances between Kriol and Dalabon pointed out by Ponsonnet (2020) probably result from broader Australian Aboriginal languages, and fewer, perhaps, from local substrates. But in any case, in the context of my research, comparing Kriol and Dalabon has a different purpose: namely, evaluating whether the two languages allow their speakers to package information in similar ways. Consider the following examples, two descriptions of Figures 4 and 5, produced several years apart by two speakers who rarely talked to each other.

[Describing the characters on Fig. 4.]

(25) KRIOL

Im salki-wan na tubala
 3SG sulky-SHIFT EMPH 3DU
yuluk mami im jukdan darrei miself [...]
 look mother 3SG bend.down there alone
 ‘She’s sulking at the other two, look mummy, she’s bending down there on her own.’
 (20140327c_001_LB_ND 09 (LB))

[Describing the characters on Fig. 5.]

(26) DALABON

Nunda njing dja-h-dja-djud-kurlkkurlka-n kardu narra-h-du-rru-ninj
 DEM 2SG 2SG-R-FOC-neck-bend-PRES maybe 2DU-R-scold-RR-PFV
wanjh dja-h-yolh-weh-mu-n.
 CONJ 2SG-R-feelings-bad-INCH-PRES
 ‘And you, you are bending down, you two might have been arguing and that’s why you are sad.’
 (20110523b_005_MT 035)



Figures 4 and 5. Pictures described with examples (25) and (26) respectively.

Example (25) is expressed entirely in Kriol, and (26) entirely in Dalabon. Yet, the semantic similarities between the two are striking. Both speakers described someone sulking and for this reason sitting apart from a group, and in both languages, lexemes describing the posture convey emotional connotations. By and large, Kriol and Dalabon allow speakers to craft two functionally commensurate, highly translatable descriptions, in spite of their contrasted

grammar. In other words, in comparable contexts Kriol offers tools that can express the same meanings as in Dalabon, and these are semantically packaged in similar ways.

If the resemblance between Kriol (25) and Dalabon (26) happened to replicate across a large number of contexts, involving different types of resources, this would suggest that linguistic architecture may not have a drastic impact upon the ways these languages allow their speakers to describe and express emotions. In order to assess the representativity of this pair of examples, I carried out systematic comparisons between the emotional resources identified by Ponsonnet's (2014b) for the Dalabon language – supplemented by data on neighboring Gunwinyguan languages as well as other Australian languages – and Kriol, based on analyses of my own corpus. Chapter after chapter, Ponsonnet (2020) investigates the semantics of each linguistic resource (words, intonation contours, diminutive suffixes, figurative representations) to evaluate functional commensurability between the two contrasted lexico-grammatical codes. The study relies primarily on traditional methods of morphosyntactic and semantic descriptions, aided by the comparability of my Kriol and Dalabon corpora. As such, it remains qualitative and relatively impressionistic, which of course limits the reach of its results. Nevertheless, this investigation of language shift is the first of its kind, and represents an important first step to identify which aspects should be further explored, and with which methods.

One of the emerging conclusions is that indeed, the linguistic resources respectively available in Kriol and Dalabon to express and describe emotions share many semantic traits and afford their speakers the means to communicate about emotions in very similar ways. At first sight, this conclusion appears to contradict the observations presented in 4.2 and 4.3, where I discussed linguistic evidence suggesting that grammar may constrain the figurative representations of emotions. This apparent contradiction will however be reconciled in the following sections. First, section 5.2 will show that there are discrepancies between figurative Kriol and Dalabon representations of emotions – this is in fact where the most notable differences occur. This suggests that figurative language is perhaps more sensitive to grammatical contrasts between lexico-grammatical codes than other linguistic resources. Second, as discussed above, the language-shift situation is a particular case. Comparing two languages spoken by the same community on each side of a shift does not tell us about the relations between languages spoken by different communities. Grammatical architecture may apply different constraints in each of different situations. The question of the plasticity of language in language shift will be discussed *per se* in 5.3, and 5.4 considers what conclusions we can draw regarding the impact of language shift more generally.

5.2 *Figurative representations of emotions in language shift*

As I will show in the following sections, in many respects Kriol offers linguistic tools that allow its speakers to communicate about emotions in similar ways as previous generations would in Dalabon. Yet, figurative representations of emotions stand out as an area of discrepancy between the two languages. Ponsonnet (2014b) demonstrated a strong linguistic

association between body and emotions in Dalabon. This association most notably takes the form of lexicalized figurative compounds of the form [body-part noun+predicate], such as *kangu-yowyow(mu)* ‘belly’+‘flow’, which means ‘feel good/be nice’ (this was also illustrated in 4.2 with *kangu-nan* ‘belly’+‘see’, ‘understand someone’). These compounds can be interpreted as syntactic noun-incorporation constructions, a very common construction with Dalabon body-part nouns. Based on the regular interpretation of such constructions *kangu-yowyow(mu)* translates literally as ‘belly flows’, but attracts a figurative emotional reading based on the metaphor FEELING GOOD IS LIKE FLOWING FROM ONE’S BELLY. Ponsonnet (2014b: Chap 8) documented more than 60 lexicalized [body-part noun+predicate] figurative compounds in the Dalabon emotion lexicon. The belly (*kangu*) is the most productive body part, but the heart (*ngerh* or *ngurlk*) is also common, as well as other parts of the body.

Most languages in the world – or perhaps all of them – have *some* body-based collocations to describe emotions (Wierzbicka 1999: 276). English, the superstrate of Kriol, does feature such collocations (as in ‘broken hearted’ for instance). But this is a relatively small cohort, and English body-based emotional collocations tend to pertain to marked registers (being used for stylistic effects etc.). Dalabon not only has a large cohort of such collocations, like other Australian languages (Ponsonnet & Laginha 2020); some of its figurative emotional compounds also count among the most standard ways to express certain emotions. With rich figurative associations between emotions and the body in Australian languages, and a much weaker tendency in the English superstrate, where does Kriol fall with respect to body-based figurative representations of emotions?

Ponsonnet, Maïa. 2017. Conceptual representations and figurative language in language shift. Metaphors and gestures for emotions in Kriol (Barunga, northern Australia). *Cognitive Linguistics* 28(4):631-671.

5.2.1 Lesser prevalence of the body in Kriol figurative representations of emotions

Based on the figurative representations of emotions in the Kriol corpus described in 5.1, Ponsonnet (2017) showed that body-based tropes are by no means as frequent in Kriol as they are in Dalabon (see also Chapters 7 and 8 in Ponsonnet (2020)). Australian influence is evident in that Kriol treats the belly as the main seat of emotions, as a majority of Australian languages do (Ponsonnet & Laginha 2020), where the English superstrate focuses on the heart. As for the number and frequency of emotional collocations involving body parts, on the other hand, Kriol is closer to English than to Dalabon or other Australian languages. Compared to the 60+ compounds reported by Ponsonnet (2014b) for Dalabon, less than 10 such lexicalized collocations – all listed in Table 13 – are attested in my Kriol corpus (and other resources such as Lee’s (2004) dictionary, Nicholls (2009) or Dickson (2015) did not reveal any further items). Besides, apart from the generic expressions *gud/nogud binji* ‘good/bad’+‘belly’, ‘feel good/bad’, all the expressions in Table 13 are rare, and some are only attested with older Kriol speakers. As a result, the prevalence of these lexicalised expressions in speech is much lower in Kriol than in Dalabon.

LANGUAGE	COLLOCATION	LITERAL SENSE	MEANING	ETYMOLOGY
CALQUES WITH CLEAR DALABON EQUIVALENTS				
KRIOL	<i>big as</i> , adj.	‘big’+‘arse’	selfish, greedy	<i>big, arse</i>
DALABON	<i>dedj boyenj</i> , adj.	‘tail, bum’+‘big’	selfish, greedy	attested elsewhere, e.g. Warlpiri (Swartz 2012)
KRIOL	<i>gud/nogud binji</i> , adj.	‘good’/‘bad’+‘belly’	feel good/bad, be happy/unhappy, be in a good/bad mood	<i>good</i> , plus Sydney language <i>bindhi</i> (Troy 1994)
DALABON	<i>kangu-mon, kangu-weh-mun</i> , adj.	‘belly’+‘good’/‘bad’	feel fine/bad, be good-tempered/angry	
KRIOL	<i>hatkrej</i> , v.i.	‘heart’+‘crack’	be surprised, undergo an emotional shock	<i>heart, crack</i>
DALABON	<i>kangu-barrh(mu)</i> , v.i.	‘belly’+‘crack’	be surprised, undergo an emotional shock	
KRIOL	<i>jelop nos</i> , ?adj.	‘swell’+‘nose’	be snobbish, cold to	<i>swell up, nose</i>
	<i>standap nos</i> , ?adj.	‘stand’+‘nose’	someone	<i>stand up, nose</i>
DALABON	<i>dje-bruh(mu)</i> , v.i.	‘nose/nostrils/face’+‘blow, SWELL’	be sulky, be sad/put on a sad face, a rictus	
OTHERS				
KRIOL	<i>wan gats/binji</i> , ?adj.	‘one’+‘belly/guts’	have a strong and determined temperament	<i>one, guts</i> , Sydney language <i>bindhi</i> (Troy 1994: App 21)
WARLPIRI, other languages of Western and Central Australia	HESITATING IS LIKE HAVING A SPLIT BELLY, e.g. <i>miyalu-jarra</i> , ?adj.	‘stomach’+‘two’	in two minds	Laughren & Ponsonnet (2020.), and David Wilkins pers. com. Dec 2015

Table 13. Kriol emotional expressions involving a body part, with Dalabon and/or Australian equivalents.

Free body-based emotion metaphors do occur in Kriol, and those in my corpus often resemble metaphors attested in Dalabon and other Australian languages. Example (27), for instance, illustrates an entanglement metaphor found in several languages in Arnhem Land and elsewhere (Ponsonnet 2022: 9). Such resemblances are further explored in Ponsonnet (2017) and (2020), but for now we can note that occurrences of typically Australian (and absent from the English superstrate) emotion metaphors are unequivocally scarce compared to Dalabon, and to many Australian languages (Ponsonnet & Laginha 2020). In sum, whether it is expressed

via lexicalized collocations or via free metaphors, the figurative association between the body and emotion is by no means as entrenched in Kriol as it is in Dalabon.

- (27) KRIOL
Im-in *daimap* *mijelb* *binji* *na.*
 3SG-PST **tie** **REFL/RECP** **belly** EMPH
Im-in *fil* *nogud* *na* *im* *binji,* *ba* *im...*
 3SG-PST feel bad LOC 3SG.POSS belly DAT 3SG.POSS
ba *im* *ekshen* *wana* *im-in* *du...*
 DAT 3SG.POSS actions what 3SG-PST do
 ‘She’s tied up in the belly [she is anxious] indeed.
 She was feeling bad in her belly, because of her... because of her actions, what she did...’
 (20140326a_000_MJ_QB 128 (MJ))

5.2.2 Linguistic constraint on body-based figurative representations of emotions

The discrepancy between Kriol and Dalabon with respect to the role of body parts in descriptions of emotions calls for some explanations. As will be further discussed in 5.3 below, in many respects Kriol linguistic resources for emotions semantically match Dalabon ones. Furthermore, there are indications that Kriol speakers endorse body-based representations of emotions: we saw in 5.2.1 above they do occasionally associate emotions with the body in free metaphors; and they sometimes evoke typically Australian metaphors using gestures (Ponsonnet 2017: 656–663). So, why should body-part collocations remain so scarce in the Kriol lexicon?¹⁴ Are there linguistic constraints, for example imposed by Kriol grammar, or by the dynamics of contact leading to its creation, that limited the emergence of such figurative tools?

I will begin with the possible grammatical underpinnings for the small number of body-based emotional expressions, as it directly addresses the hypothesis that emotion metaphors may be constrained by ‘grammatical affordance’, as discussed in Chapter 4. Namely, we will see that Kriol grammar does not produce a large number of forms with a potential to support body-based figurative representations of emotions.

First, we should recall Siegel’s (2008: 105–234) framework for the formation of creole, which stipulates a number of conditions for features to ‘transfer’ from substrate languages into a creole. One of them, called the ‘availability constraint’, states that the superstrate should offer a form that can be adequately reanalyzed. In the case under consideration, it is not clear which English forms could have been productively reinterpreted to support the development of body-based emotion expressions in Kriol. Yet, the existence of the lexicalized collocations in Table 13 (5.2.1) demonstrates that the absence of English targets did not entirely preclude Kriol speakers from calquing Australian expressions. The Kriol form *nogud binji* (‘feel bad’), for

¹⁴ Creoles and other contact languages across the world have been reported to calque compound expressions, including emotion collocations, from their substrates (Holm (1988:1986) and Lefebvre ((2004: 183–185, 205) for Atlantic Creoles, Ameka (2015) for Ghanaian English). However, given limited examples and discussions in these reports, we cannot exclude that the phenomenon may be as marginal in these languages as it is in Kriol.

example, cannot have been inspired by an English form ‘no good belly’, as there is no reason to think that this was a common occurrence in the English language at any point in time. The form was nevertheless calqued from Australian languages, i.e. Kriol speakers somehow generated forms capable of supporting figurative representations of emotions that involved body parts. However, only a few such forms were in fact generated, and this is what the grammar of Kriol contributes to explain.

In Dalabon, the main linguistic channel of expression of the body-emotion association is via lexicalized compounds of the form [body-part noun+predicate] that result from noun-incorporation constructions. All languages in the world have compounds, but in Dalabon (and other Gunwinyguan languages), productive noun incorporation offers large numbers of ‘lexicalizable’ forms in this fashion. This may have favored the development of such a large cohort of emotional compounds in Dalabon. Kriol, on the other hand, does not have noun incorporation. This is not at all surprising: noun incorporation as a productive grammatical process is typical of polysynthetic languages like Dalabon, and uncommon in mostly isolating languages like Kriol. Instead of noun incorporation, most of the calques listed in Table 13 do correspond to a valid Kriol construction where the predicate is a body-part noun modified by an adjective. That is, the structure of a clause is then [subject+adjective+body part], as in (28).

- (28) KRIOL
Dat min yu nogud ais hei...
 DET mean 2SG bad eyes CONJ
 ‘It means ‘your eyes are no good’ hey.’ (230909_75OK 0784 (QB))

The lexicalized expression *nogud binji* ‘bad’+‘belly’, ‘feel bad’ is built on the exact same model as *nogud ais* ‘bad eyes’ in 0; so is *gud binji* and several other calques listed in Table 13. These are therefore lexicalized versions of a well-formed Kriol construction, and this brings further support to the hypothesis that figurative language requires grammatical scaffolding. In this context, while the existence of some body-based emotional collocations is explained by the existence of the construction, the lesser prevalence of such collocations is also explained by the relative rarity of the conditioning grammatical construction illustrated in (28). It is indeed far less productive than noun incorporation in Dalabon, which is default or even quasi-obligatory for body-part nouns in many contexts (Ponsonnet 2015).

Naturally, this cannot be the only explanation for the scarce presence of body-based emotional collocations in Kriol. Many languages in Australia and around the world do not have productive grammatical constructions yielding body-part compounds, and yet some of them exhibit a large number of body-based emotional collocations (see Chapter 4 for examples of Pama-Nyungan languages). It is likely that other linguistic constraints played a role. In particular, Siegel’s (2008) ‘reinforcement principle’ – positing that features have better chances to transfer when they occur in a larger number of substrate sources – contributed to determine how many collocations were adopted, and which.

Nonetheless, in this context of language shift to a creole, the lower productivity of a grammatical construction in the emerging language contributes to explain why its speakers have not developed a larger cohort of body-based emotional collocations. Following the cases examined in 4.3, this is another instance where grammar seems to influence the figurative repertoire of a language. This is particularly notable when we consider that, as I will discuss in the following sections, the adoption of a new lexico-grammatical code does not otherwise cause striking changes in the ways speakers communicate about emotions. It therefore looks as if figurative language is an aspect of the linguistic encoding of emotions particularly sensitive to grammatical determination and affordance.

5.3 *The plasticity of language*

Beyond figurative language, what did the systematic comparison between Kriol and Dalabon teach us about the impact of language shift upon the linguistic encoding of emotions? A salient, if expected observation, across several of the resources I compared, was that language is highly plastic. In this language-shift situation, speakers creatively elaborated their new linguistic code in ways that allow them to convey the contents they want. In other words, what speakers had to say and express about emotions influenced the shape of the lexico-grammatical code – not the opposite.

While the observation that humans manage to say what they want with their language may sound trivial, in the context of language shift, it may not be entirely so. Firstly, contra this observation, language shift is often regarded as a threat to cultural contents, which seems to imply that using a new language can inflect how a group communicates. This will be further discussed in 5.4. Also non-trivial are the specific *ways* in which speakers can shape a creole language to suit their communicative needs. In this case, the plasticity of linguistic resources was apparent from the study of the Kriol lexicon (presented in Ponsonnet (2018e), and Ponsonnet (2020: Chap 4)), showing that speakers easily re-package old meanings under the guise of new word forms. This is discussed in 5.3.1 below. Another facet of this plasticity is speakers' ability to circumvent the absence of certain tools by modulating and expanding the functions of other tools, recruited from all sorts of possible sources. The tools innovated by Kriol speakers to cover the functions catered for by Dalabon morphological diminutives – which are absent in Kriol – are an excellent illustration, as presented in 5.3.2.

5.3.1 *New forms, same meanings: the lexicon*

Ponsonnet, Maïa. 2018. Lexical semantics in language shift. Comparing emotion lexica in Dalabon and Barunga Kriol (northern Australia). *Journal of Pidgin and Kriol languages* 33(1):92-135.

Ponsonnet (2018e) analyses some of the lexical semantic features of Kriol in comparison with Dalabon, thus offering insights into the degrees of loss or retention of lexical semantics in language shift. The article spells out the exact nature of the lexical resemblances between the

two languages, and highlights major differences as well. The conclusions are two-fold. Firstly, with respect to the impact of language shift on the linguistic encoding of emotions, we observe that the Kriol and Dalabon emotion lexica share many properties. As a result, Kriol and Dalabon speakers are often able to package meaning in very similar ways: the two languages offer comparable means of describing the world's event. From that point of view, language shift can be considered to have a lesser impact. Secondly, from the point of view of lexical-semantic typology, the study shows that the lexical resemblances between Kriol and Dalabon are not limited to simple cases where the lexemes in each language share the same forms and/or meanings. Instead, lexical resemblances relate to a number of other properties in semantics and combinatorics. The article proposes a preliminary typology of these lexical resemblances, which may serve as a tentative grid to qualitatively evaluate lexical resemblances between languages more generally.

Pre-analytically, the Kriol and Dalabon emotion lexica convey an impression of 'family resemblance' – perhaps a common impression with creole languages and (potential) substrates. Yet, few linguistic studies seek to explore what underpins such intuitions. Linguistic publications on creole lexica usually concentrate on substrate etyma (see for instance Holm 2000; Mühlhäusler 2011; Farquharson 2012; Dickson 2015). Calqued expressions are occasionally touched upon (Holm 1988: 86; Lefebvre 2004: 183–185, 205), but authors tend to list the forms borrowed from the substrates without dedicating much attention to their meanings. Overall, few studies consider the semantics of the creole lexemes etymologically derived from superstrate languages – although they obviously form the lion share of creole lexemes. Accordingly, Ponsonnet (2018e) and (2020: Chap 4) carefully explore these Kriol lexemes as well as those with an Australian etymology.

In addition, when we systematically review emotion lexica, at first sight only a handful of Kriol words appear to strictly share their semantics with Dalabon ones. However, looking beyond strict one-to-one matches between Kriol and Dalabon lexical categories, Ponsonnet (2018e) shows that lexical resemblances between the two languages come in the form of a number of more subtle commonalities. Some of them concern nuances of lexical divisions and overlaps, others word combinatorics. Ultimately, it is the accumulation of such subtly shared properties that explains *prima facie* impressions of resemblance between emotion lexica in Kriol and Dalabon.

In total, excluding purely formal resemblances, and leaving aside a couple of marginal cases, I found that at least 21 Kriol emotional lexemes (often relatively common ones) display some kind of resemblance with Dalabon lexemes. This represents about a third of the 60+ common lexemes documented for the emotion lexicon in Kriol, hence a significant resemblance with Dalabon. The resemblances can be categorized into a number of types, ranging from the most apparent similarities to relatively 'covert' ones – i.e. resemblances that are only revealed by specific contexts of use, rather than evident at all times. Figure 6 organizes these types

according to the lexical property they concern (form, semantics, combinatorics) and their degree of ‘accessibility’.

lexical form	semantic	combinatorics	
etymological sourcing e.g. <i>gula</i> ‘conflict, anger’	plain equivalence e.g. <i>sheim</i> ‘avoid interactions with others because of fear’	argument subcategorization e.g. <i>sori</i> ‘indulge someone with something (out of compassion)’	+ apparent
calques e.g. <i>gud binji</i> ‘feel good, happy, be in a good mood’	common colexification e.g. <i>laikim mijelp</i> ‘feel good/show off/flirt’	semantics of non-core arguments e.g. <i>wori</i> ‘feel bad about a beloved person (missing, grieving...)’	
	partial semantic overlap e.g. <i>jinggebat</i> ‘be upset, be confused, brood over’	(selectional restrictions) see 5.2	
	common connotation e.g. <i>jukdan</i> ‘bend over’ (common figurative tropes) see 5.4		
	common lexical gaps e.g. <i>pride</i>		
← + apparent			– apparent (covert)

Figure 6. Types of lexical resemblances. The types between parentheses are plausible cases not instantiated by the Kriol and Dalabon emotion lexica.

Resemblances in form are the most immediately perceptible. Calqued expressions, as stable and close-to-the-surface resemblances in pattern, are also easily perceptible. Less apparent are resemblances in semantics. Plain semantic resemblances (where two lexemes share the same or very similar meanings) are less visible because they are not flagged by a common form, but some semantic resemblances can be much subtler. For instance, resemblances in the way lexemes group different senses together (‘common colexifications’), ‘partial semantic overlaps’ between lexemes that otherwise encapsulate relatively different meanings, or shared lexical gaps. Finally, the most covert resemblances concern neither the form nor the meaning of lexemes, but their combinatorics, i.e. the way they combine with other lexemes and behave syntactically. As such, they are neither flagged by a remarkable form, nor encapsulated within just one form (like semantic resemblances), and for these reasons they are more likely to remain unnoticed.

Table 14 on the next page lists the Kriol expressions bearing resemblances with Dalabon, arranged by types of resemblances from the most immediately perceptible to the most covert. The list of calques overlaps with the list of figurative collocations presented in 5.2.1. Ponsonnet (2018e) explains and illustrates each type, but here I will focus on two cases that give a good idea of why and how the lexical resources of Kriol allow its speakers to craft messages with comparable meaning and structure as in Dalabon.

BKriol	Meaning	Etymology	Dalabon match
CALQUES			
<i>big as</i> , adj.	selfish, greedy	<i>big, arse</i>	<i>dedj-boyenj</i> , adj. 'tail, bum' + 'big'
<i>gud/nogud binji</i> , adj.	feel good/bad, be happy/unhappy, be in a good/bad mood	<i>good, no Sydney language bindhi</i>	<i>kangu-mon</i> , <i>kangu-weh-mun</i> , adj. 'belly' + 'good'/'bad'
<i>hatkre</i> , v.i.	be surprised, undergo an emotional shock	<i>heart, crack</i>	<i>kangu-barrh(mu)</i> , v.i. 'belly' + 'crack'
<i>jelop nos</i> , ?adj.	be snobbish, cold to someone	<i>swell up, nose</i>	<i>dje-bruh(mu)</i> , v.i. 'nose/nostrils/face' + 'blow, SWELL'
PLAIN SEMANTIC RESEMBLANCE			
<i>gede shok</i> , v.i.	be surprised (can be positive or neutral), undergo emotional shock	<i>get a shock</i>	<i>kangu-barrh(mu)</i> , v.i.
<i>gula</i> , n.	trouble, conflict, anger, aggression	Sydney language <i>gulara</i>	<i>yirru</i> , n.
<i>heit</i> , v.t.	have resentment, have negative feeling for someone (contextual)	<i>hate</i>	<i>ngurrng-dung</i> , <i>njirrhmiwon</i> , <i>kangu-dinjirr(mu)</i> , v.t./i.
<i>laik</i> , v.t.	like (food, people, to do something...), love (friendship, romantic, sexually oriented)	<i>like</i> (v.t.)	<i>djare</i> , adj.
<i>sheim</i> , adj.	avoid interactions for fear of others	<i>shame, ashamed</i>	<i>yer(mu)</i> , v.i.
<i>sheim mijelp</i> , v.i.	avoid interactions for fear of others	<i>shame, ashamed, myself</i>	<i>yer(mu)</i> , v.i.
<i>sori</i> , v.t.	indulge someone with something (out of compassion)	<i>sorry</i>	<i>marrbun</i> , v.dt.
<i>tjiki</i> , adj.	likely to cause harm: aggressive, harmful, dangerous, poisonous	<i>cheeky</i>	<i>yirru-mon</i> , adj.
PATTERNS OF COLEXIFICATION			
<i>laikim mijelp</i> , v.i.	feel good/show off, parade around/ seduce, flirt	<i>like</i> (v.t.), <i>myself</i>	<i>kol(mu)</i> , v.i.
PARTIAL SEMANTIC OVERLAP			
<i>jinggebat</i> , v.i. continuous form	brood over, think for a long time about something negative	<i>think, about</i>	<i>njirrk(mu)</i> , v.i.
<i>kan get oba</i> , v.i.	be unable to come to terms with an emotionally difficult situation, typically in mourning	<i>can't get over</i>	<i>njirrk(mu)</i> , v.i.
EMOTIONAL CONNOTATIONS			
<i>jukdan</i> , v.i.	bend over (often because of being sad or upset)	<i>shook, down</i>	<i>djud-kurkkurkan</i> , <i>djud-kur(mu)</i> , v.i.
ARGUMENT SUBCATEGORIZATION			
<i>boring</i> , adj.	boring, bored	<i>boring</i>	<i>warndih</i> , adj.
<i>sori</i> , v.t.	indulge someone with something (out of compassion)	<i>sorry</i>	<i>marrbun</i> , v.dt.
<i>sori mijelp</i> , v.i.	feel sorrowful, desperate / feel sheepish	<i>sorry, myself</i>	<i>marrburrun</i> , v.rr.
SEMANTICS OF NON-CORE ARGUMENTS			
<i>hapi (bla)</i> , adj.	feel good + DAT: like someone	<i>happy</i>	<i>yolh-mon</i> , adj.
<i>wori (bla)</i> , v.i.	worry + DAT: feel bad when, missing someone/grieving for someone	<i>worry</i>	<i>kangu-darr(mu)</i> , v.i.

Table 14. Kriol emotion lexemes that share some properties with Dalabon emotion lexemes

The first example concerns the intransitive verb *jinggebat*, which means ‘think about’ as well as ‘brood over, think for a long time about something negative’. *Jinggebat* instantiates a partial semantic overlap with the Dalabon intransitive verb *njirrk(mu)* ‘be upset, be confused, brood over’ (Ponsonnet 2011). As illustrated in (29), *njirrk(mu)* often describes people who brood over remorse when they feel guilty about something and/or cannot come to terms with a situation.

- (29) DALABON
Kardu *bunu* *burra-h-marnu-bun-inj*, *be-burrng*,
 maybe 3DU 3DU/3-R-BEN-hit-PFV male’s.child-3DU.POSS
o *kanh* *eksiden-kun* *bala-h-eksiden-hm-inj*...
 or DEM accident-GEN 3PL-R-accident-VBLZR-PRS
Bala-h-dja-njirrk-mu *yelek*.
 3PL-R-SEQ-**brood.over**-PRES wait
 ‘Perhaps they (two) bashed their son, or about an accident, they had an accident. They keep brooding over it still.’ (2008/30005/8’ (LB))

There is no clear equivalent for *njirrk(mu)* ‘be upset, be confused, brood over’ in English, and no Kriol lexeme captures exactly and only this meaning. However, several expressions are available to describe this particular emotional state, the most common being two continuous forms of *think* ‘think’: *jinggebat* (‘think’+continuous suffix *-bat*, semi-lexicalized as *jinggebat*¹⁵), and the less frequent *thinking* (‘think’ + continuous suffix *-ing*). The semantic resemblance between Kriol *think* ‘think’ and Dalabon *njirrk(mu)* ‘be upset, be confused, brood over’ is far from complete. It is limited to these inflected forms of *think*, and only to *some* of their contexts. However, this overlap represents an important resemblance between Kriol and Dalabon, because it provides Kriol speakers with lexemes and expressions functionally equivalent to a Dalabon-specific lexical category encoded by *njirrk(mu)* ‘be upset, be confused, brood over’. Speakers can use extensions of *think* in contexts where *njirrk(mu)* would have been used in Dalabon, and thanks to this lexical tool they can express the same semantic content as with *njirrk(mu)* by means of just one word or one collocation, as opposed to a paraphrase. In other words, the specialization of the continuous forms of *think* ‘think’ that I will now present fills in a lexical gap and brings the Kriol lexicon closer to the Dalabon lexicon in terms of its capacities to communicate contents.

The following account of *jinggebat* is broadly valid for *thinking* as well. Like its base form *think* (<Eng. ‘think’), *jinggebat* often denotes intellectual processes of thought. This is particularly true if the content of thought is specified: when *jinggebat* is used to introduce reported speech (‘he was thinking: ‘...’), or when one thinks ‘about something’. When the object is a person, there are often negative connotations, simply because thinking about someone often coincides pragmatically with worrying or feeling sad about someone. It is when

¹⁵ The form is lexicalized to the extent that the first consonant is stabilized as [j̥j̥] (vs. a predominant [d̥]) for the base form). In addition, the epenthetic vowel between the verb root and the continuous suffix *-bat* is also very stable. Its presence is unsurprising given that it breaks an infelicitous consonant cluster [kb]. Voicing ([k] > [g]) is expected in word-internal position.

the content of thought remains unspecified (no object, or vague object such as *samthing* ‘something’) that *jinggebat* has the same sense as *njirrk(mu)* in Dalabon. In such cases, *jinggebat* denotes an enduring meditative activity, usually with strong negative connotations of feeling worried and preoccupied. In (30), this involves remorse, regrets and confusion. The example was a comment on Figure 7, one of the vignettes of a longer story presented under the form of drawings for the purpose of elicitation.¹⁶ Both the message and the context in (30) bear obvious resemblances with the use of Dalabon *njirrk(mu)* ‘be upset, be confused, brood over’ in (29) above.

Figure 7. Picture from the Family Problems Picture Task used in elicitation.

[A man bitterly reflecting upon his past with his ex-wife.]

(30) KRIOL

<i>Im-in</i>	<i>teik-id-ewei</i>	<i>im</i>	<i>kids</i>	<i>tu</i>
3SG-PST	take-TR-away	3SG.POSS	children	too
<i>en</i>	<i>laik</i>	<i>im</i>	<i>jingge-bat</i>	<i>yuno.</i>
and	CONJ	3SG	think-CONT	CONJ
<i>So</i>	<i>im-in</i>	<i>insaid</i>	<i>nanga</i>	<i>dat</i> <i>sal</i>
CONJ	3SG-PST	inside	LOC	DET cell
<i>think-ing</i>	<i>rili</i>	<i>had</i>	<i>bobala.</i>	
think-CONT	really	hard	INTJ.comp	



‘She [his ex-wife] took away his kids too and like he’s thinking you know. So he’s inside there in this cell, thinking really hard/brooding over, poor thing.’ (20140326A_001_MJ_QB 100 (MJ))

Jinggebat is used very regularly in contexts comparable to (29) and (30), and more generally in contexts where *njirrk(mu)* ‘be upset, be confused, brood over’ would be used in Dalabon. This allows Kriol speakers to identify and refer to a certain class of emotional states with just one word, as it happens in Dalabon – but not in English. Thanks to this partial semantic overlap, translation gaps are avoided (Wierzbicka 1999: 24–31), and speakers can articulate statements like (30), inviting the addressee to focus on the exact same emotional states as the Dalabon statement in (29).

Another instance of subtle yet functionally significant resemblance concerns the argument subcategorization of Kriol *sori* (<Eng. ‘sorry’). Unlike its English etymology, *sori* has both an intransitive and a transitive use, and as I show below, the transitive verb matches a Dalabon verb, *marrbun* ‘indulge someone with something (out of compassion)’.

In its intransitive use, *sori* in Kriol is very close to *sorry* in English. It is used adjectively to mean ‘sorry’ in the sense of ‘sad’, and can describe compassion, especially in the constructions *fil sori la/na* and *fil sori bla*, ‘feel sorry for’. In addition, the form *sori* is also a transitive verb that is typically used with a dative complement, then meaning ‘indulge someone with something (out of compassion)’, as in (31). The conceptual association between compassion and giving is very natural in the cultural context at stake, where generosity and sharing are

¹⁶ The Family Problems Picture Task, see San Roque *et al.* (2012).

conventionally regarded as evidence of (socially encouraged) compassionate feelings (see Ponsonnet 2014a:196–199; Myers 1979:355–358; 1986:113–117).

- (31) KRIOL
Dei neba bin sori mi [bla] fish.
 3PL.S NEG PST **indulge** 1SG.PDAT fish
 ‘They didn’t indulge me with fish.’ (20150823b_000_BB_TM 13)

This transitive subcategorization pattern and the associated meaning of *sori* are not at all matched by *sorry* in English. Instead, *sori* as a transitive verb actually has a lot in common with the Dalabon (di)transitive verb *marrbun* ‘feel sorry, compassionate for/indulge someone with something (out of compassion)’. The sense ‘feel sorry, compassionate’, conveyed in Kriol by *sori* as an adjective, is illustrated in (32). The sense ‘indulge someone with something’ is illustrated in (33) with the ditransitive use of *marrbun*.

- (32) DALABON
Bulu ka-h-marrbo-ng.
 3PL 3SG/3-R-**feel.sorry.for**-PFV
 ‘He’s got compassion/mercy for them.’ (20120721_003_LB 173)

- (33) DALABON
Bulu ka-h-ngabbo-ng, mey bulu ka-h-marrbo-ng.
 3PL 3SG/3-R-give-PFV food 3PL 3SG/3-R-**indulge**-PFV
 ‘He gave them [something], he indulged them with some food.’ (20120721_001_LB 49)

Here again, there is remarkable similarity between the Kriol utterance in (31) and the Dalabon one in (33). Both languages offer a lexical means to describe an act of giving as an act of compassion, thus linguistically sanctioning a well-entrenched moral value.

The resemblances between *jinggebat* and *njirrk(mu)* ‘be upset, be confused, brood over’, and between *sori* and *marrbun* ‘feel sorry, compassionate for/indulge someone with something (out of compassion)’ are just two instances of the many ways in which Kriol speakers have used English forms to create a lexico-grammatical code with which they can easily communicate the same meanings as Dalabon speakers do. This possibility readily derives from well-established properties of language, such as the mutual independence of form and meaning, and the propension of humans to constantly modify the linguistic codes with which they communicate. Based on these properties, it is only natural that a community who adopts a new lexico-grammatical code will tailor it to its own communicative needs. The implications of these mechanisms for the way we approach language shift as a social phenomenon will be discussed in 5.4. As for the question of whether the structure of a lexico-grammatical code influences the tools available to speakers to describe and express emotions, our observations suggest that such an influence may be minimal in the context of language shift. Beyond the lexicon, as I will now show, the same conclusion is further supported by a comparison between Kriol and Dalabon that also involves morphology.

5.3.2 *Replacing absent resources: evaluative morphology*

As discussed in the introduction to this chapter, evaluative morphology is particularly interesting in the shift from Dalabon to Kriol, because it is available and overwhelmingly frequent in Dalabon, as expected in a polysynthetic language; but absent in Kriol, as expected in a relatively isolating language. What are the consequences of this mismatch? Are the expressive functions covered by Dalabon affective morphemes ‘dropped’, left unexpressed, in Kriol? The comparison between Kriol and Dalabon corpora presented in Chapter 6 of my 2020 monograph indicates that Kriol speakers effectively mirror the functions of Dalabon diminutives using a number of different tools, innovated from a range of different sources.

Ponsonnet, Maïa. 2020. Chapter 6: ‘Evaluative morphology. Replacing absent linguistic resources’. *Difference and repetition in language shift to a creole. The expression of emotions*. London: Routledge.

Dalabon has two morphological diminutives: an enclitic, =*wurd* (etymologically related to the nouns *wurd* ‘female child’ and *wurdurd* ‘child’), and a verbal prefix *yaw-* (related to the adjective/noun *yaw-no* ‘little’). These diminutives are discussed in detail by Ponsonnet (2014b: 81–109) (see also Ponsonnet & Evans 2015), summarized below. Like many diminutives across the world’s languages (Ponsonnet 2018c), =*wurd* and *yaw-* have expressive values in addition to their denotational meanings. Most frequently, they connote compassion or related emotions such as endearment when witnessing compassion, i.e. people suffering for each other or providing material support to each other. Dalabon diminutives can also express affection, as well as endearment when witnessing personal, intimate routines.

Diminutives are a prevalent expressive resource in Dalabon. They occur with remarkable frequency across a range of genres in my corpus, averaging one token every six minutes at least. Importantly, their distributional flexibility makes them ubiquitous, as they can occur on most word classes. In the relatively frequent case where Dalabon diminutives occur on verb complexes, their semantic scope is usually the entire event. Far from being specific to Dalabon, morphological diminutives are also prevalent in neighboring Gunwinyguan languages such as Rembarrnga and Kunwok dialects, and among other languages of the family (e.g. Wubuy, Heath 1982: 233; 1984: 492; Ponsonnet 2018b).

As is typical for a creole language, Kriol does not have a very large amount of morphology, and unsurprisingly does not have a morphological diminutive. Instead, to cover the expressive values of Dalabon diminutives, Kriol speakers recruit a suite of tools with overlapping functions and connotations. Firstly, they make abundant use of a lexical diminutives and other evaluative adjectives or adverbs, originally borrowed from English – *lil* and *lilbit* (<Eng. ‘little’, ‘bit’), *ol* (<Eng. ‘old’)). These mostly express affection and endearment, including when witnessing intimate routines; but do not convey compassion, the most salient expressive value in Dalabon diminutives.

Secondly, Kriol reduplication also fulfills some of the range of the Dalabon diminutives (see Ponsonnet 2018a). Kriol and Dalabon share reduplication as a morphological process, but in Dalabon expressive functions remain extremely marginal. In Kriol, they are more salient, and include compassion, as illustrated in (34) below – to be compared with (35), the Dalabon sentence used by a speaker from a different family, several years earlier, to describe the same stimulus. The semantic match with Dalabon diminutives is notable, yet expressive uses of Kriol reduplications are relatively rare.

[Addressing her ~18-month-old daughter, with emotional intonation contours and some articulatory features of baby talk.]

- (34) KRIOL
Dem ran na bala,
 3PL.S run EMPH INTJ.comp
yu luk bala dei ranran!
 2SG look INTJ.comp 3PL **run:REDUP**
 ‘They’re running there oh no, look poor things they are running!’ (20140406a_001_MJ 060 (DB))

- (35) DALABON
Bala-h-yaw-kurlkkurl-mu¹⁷ bala-h-yaw-wurdiwurdi.
 3PL-R-DIM-run-PRES 3PL-R-DIM-**run.away:REDUP**
 ‘They’re running poor things, oh dear they’re running away.’ (20120721_001_LB* 02)

Last, but certainly not least, the most common way to express compassion in Kriol is by means of compassionate interjections, using *bobala* (<Eng. ‘poor fellow’) and its contracted variant *bala*. These interjections are the solution bilingual speakers typically recruit when prompted to translate Dalabon utterances featuring =*wurd* in Kriol. Compassionate interjections are relatively common in Australian languages (Ponsonnet 2021b), and well attested in Dalabon and other Gunwinyguan languages (Ponsonnet (2014b: 117–126) for Dalabon, and first-hand data for Rembarrnga and Kunwok). The compassionate meaning of the Kriol version is illustrated in (36)0, a comment on a movie scene where a grandmother hits herself on the head with a stone (a customary response to grief) after her granddaughters have been forcibly taken away from her.

- (36) KRIOL
Ol nena-wan bala
 old grandmother-RLTN INTJ.comp
im kil-im-bat mijelb ba olebat!
 3SG hit/kill-TR-CONT RECP/REFL DAT 3PL
 ‘The old grandmother poor thing, she is hitting herself for them!’
 (20140407a_000_MJ_QB 045 (MJ))

In addition to the semantic proximity with Dalabon diminutives, Kriol compassionate interjections match their distributional flexibility, affording scope either on individual referents (as in (36)) or on entire events (as in (37)) depending on their position in the sentence.

¹⁷ The reduplication of *kurlkurl(mu)* in Dalabon is lexical: this is the standard form for the verb ‘run’.

Remarkably, when compared across calibrated Kriol and Dalabon datasets, the frequency of diminutives and compassionate interjections combined in Dalabon is practically the same as the frequency of compassionate interjections alone in Kriol (one every 1.51 and 1.61 minutes respectively).

(37) KRIOL

Oh bobala garra ole kat na im fut bala.

INTJ.excl INTJ.comp with DET cut LOC 3SG.POSS foot INTJ.comp

‘Oh dear, with all the cuts in her foot poor thing.’ (20140406a_002_MJ 33)

Naturally, even though the convergence in frequency brings quantitative support to the hypothesis that compassionate interjections fulfill the same expressive functions in Kriol as morphological diminutives in Dalabon, the above account remains impressionistic. While qualitative inspection is enlightening, it cannot rule out the possibility that expressing the same semantic categories by means other than morphological diminutives does introduce some subtle differences in communication. For instance, with morphological diminutives, expressive content is necessarily concomitant with a description of someone or something; interjections, by contrast, can stand as full utterances on their own, thus only expressing the speaker’s evaluation. Conversely, Dalabon morphological diminutives are slightly less phonologically salient than Kriol compassionate interjections (being shorter and more integrated prosodically). This does not have an effect on production since usage frequencies match, yet it could have an effect on reception. While the potential communicative impact of these differences remains to be tested in future, experimental research (see Chapter 7), for the moment we can retain that it is not salient enough to be identified based on systematic corpus inspection.

At the level of granularity afforded by semantic description and corpus comparison, Kriol offers linguistic resources to cover all the expressive values conveyed by Dalabon diminutives, with comparable scope, distribution and frequency. In order to do so, Kriol speakers exploit resources from remarkably diverse origins. For affection and endearment, Kriol speakers use adjectival diminutives with straightforward superstrate etymologies (*lil*, <Eng. ‘little’). Compassion, which is not covered by adjectival diminutives, is partly reassigned to reduplication. Reduplication as a morphological process reflects Australian influence, but Kriol speakers have invested it with stronger expressive values than it has in Dalabon. Finally, the most common way to express compassion in Kriol is via a typically Australian linguistic device: a compassionate interjection. These strategies further illustrate the plasticity highlighted in the previous section about lexical items, this time applied to morphological resources as well. The diversity of innovations and the range of sources they draw from indicate that when faced with discrepancies between the old and the new language, speakers make do with what they have, conveying the desired meanings with whatever forms they can recycle to do so.

5.4 *Perspectives from language shift*

The comparison of linguistic metaphors across Australian languages presented in 4.2 and 4.3 suggested that emotional figurative language may be sensitive to specific grammatical properties of particular languages. The language-shift situation considered in the present section brings further support to this hypothesis. While in many respects the resources available to describe and express emotions in Kriol match Dalabon ones, emotion metaphors differ; and the grammar of Kriol may have contributed to this discrepancy.

On the other hand, beyond figurative representations, adopting a language with a fundamentally different architecture does not, at this level of analysis, appear to bear strong impact on what speakers can say about emotions, or even on how they say it. In this respect, this language-shift situation differs from what has been observed in translations, where there are indications that bilingual speakers are constrained by the alternative code they are using (as suggested by Woodbury (1998) or Wierzbicka (1999: Chap 6) for instance. By contrast, when an entirely new language is created, old meanings can be repackaged under new forms, and speakers use a variety of strategies to carve linguistic tools that will communicate what they want to communicate. In other words, when a whole group shifts to a new language, the new lexico-grammatical code adapts to what speakers have to say about emotions – not the opposite. This suggests that emotion, as a phenomenon, has enough driving force to bend the lexico-grammatical code – whether this property is shared with many other phenomena, or whether this reflects the particular cognitive and social status of emotions. Another take home point from this case study on Kriol and Dalabon is that the impact of language shift on content communication should be examined rather than taken for granted.

The above conclusions do not, however, rule out any possible influence of the linguistic architecture of individual languages upon the description or expression of emotion. For a more complete picture, the roles of specific linguistic resources need to be further using a range of methods. Although Kriol offers options to communicate the same content as Dalabon in comparable ways, speakers often have to do so with slightly different linguistic tools. Whether the small nuances introduced by such tools could cumulate into significant variation in communication remains a question for future research, using experimental methods. This will be further discussed in Chapter 7.

Aside from the role of linguistic architecture upon the description and expression of emotions, the comparison between Kriol and Dalabon presented in Ponsonnet (2020) also sheds light upon another question: the impact of language shift as a social phenomenon. This angle ties up with my long-standing interest for language ideologies, and anthropological linguistics broadly speaking, which I present in the following chapter.

CHAPTER 6. Communities and ideologies

This section combines aspects of my work that are relatively diverse, but all relate to my engagement with language communities. In 6.1 I present my research on language ideologies, which derives from my work on language shift but remains independent from my research questions on the linguistic encoding of emotions. In 6.2 I describe my collaborations with language communities. The first part summarizes my contributions to language documentation, including the production and management of large language corpora. The second part discusses ‘applied’ contributions to language communities, from my field sites and more broadly. (Broad-audience contributions, such as the online publications, were discussed in earlier chapters.)

6.1 *Ideologies of language shift*

One of the main scientific endeavours of descriptive linguistics is to empirically examine a broad range of languages across the world. In line with this mission, in recent decades descriptive linguists have developed ideologically informed narratives and stances about linguistic diversity, largely within a preservation paradigm. In this context, language shift has often been assimilated with loss. From a global point of view, language shift reduces the number of languages human beings actively speak on the planet (Evans 2010; 2022); from a local point of view, shifting communities leave behind ancestral tools typically regarded as the repositories of historical and cultural values (Fishman 1991; Hinton & Hale 2001), in line with the popular view that ‘language is culture’, and that ‘losing one’s language is losing one’s culture’ (Kulick 1992; Hill 2002; Foley 2005).

My 2020 book questions rather than assumes the dimension of loss in language shift, and in doing so pays careful attention to Kriol speakers’ innovative agency. The original inspiration for this approach reflects views expressed by some Kriol speakers themselves, as reported in Ponsonnet (2010b).

6.1.1 *Kriol speakers’ attitudes to their own language*

Ponsonnet, Maïa. 2010. Brainwash from English? Barunga Kriol speakers’ views on their own language. *Anthropological Linguistics* 52(2):160-183.

Although this article was published during my PhD, this research was not part of my doctoral project. Ponsonnet (2010b) reports and analyzes a series of conversations with Kriol speakers that took place during a field trip in 2008. The initial trigger was a casual interaction with a

young, male native speaker of Kriol, who stated that Kriol was *breinwoj brom Ingliz*, literally ‘brainwash from English’. This statement was puzzling, because it did not match the views usually expressed in my presence by Kriol speakers across generations. In the Barunga region, where the interaction took place, Kriol speakers more often emphasize their affection for the language they use every day, which they widely regard as a positive cultural marker.

To further explore the implications of the young man’s statement, in the following days I interviewed three older Kriol speakers to record their interpretations of his comment, as well as their own perspectives on Kriol. Although each of these three interviewees developed slightly different views, they all asserted the value of Kriol, and shared a number of recurring themes. All of them expressed affection for, and even pride in, Kriol, claiming it as a part of their Aboriginal identity. Instead of opposing Kriol with other Australian Indigenous languages, they granted it with an ‘intermediary’ status between English and older local languages. Specifically, they saw Kriol as a language invented by their own community as a means to improve communication with settlers in the early days of colonization – a difficult time of abrupt change and strong antagonism. In this context, the oldest interviewee portrayed Kriol as an effective instrument of strategic resistance. The middle-age interviewees described it as an opportunity for their children and grandchildren to learn a language that would ease later acquisition of older local Australian languages and English alike.

Irrespective of their degree of realism, these sophisticated views were clearly and often explicitly anchored in events from the preceding decades (Harris 1986; Sandefur 1986; Cowlishaw 1999). The oldest interviewee in particular, a senior consultant for Dalabon and speaker of several other local languages, grounded her view of Kriol upon her fine understanding of the local language ecology, as well as of her own family’s involvement in the adoption and promotion of Kriol. By contrast, the younger speaker who described Kriol as *‘breinwoj brom Ingliz’* could not rely on such a depth of historical or linguistic knowledge, and this perhaps prevented him from nurturing further confidence about his native tongue.

Ponsonnet (2010b) highlights the risk for younger generations of Kriol speakers to lose the historical and linguistic anchors their forebears rely upon. The conclusion also highlights the benefits of documenting traditional languages to ensure future generations can access them should they wish to. While these points still stand, further (unpublished) observations and discussions with Kriol speakers post-2010 confirmed that negative perceptions of Kriol were not necessarily widespread even among younger generations. Younger Kriol speakers’ perspectives on their own language may not be as informed those I reported above from middle-age and older speakers. Nevertheless, many of them embrace Kriol as the language they learnt as children, and pass on to their own offspring; as well as a cultural asset that unites Indigenous groups in the region and differentiates them from the English-speaking population. They do express a degree of attachment to Dalabon, which they seem to value as their elders’ cultural asset, but they do not lament the shift to Kriol nor present it as a loss, cultural or otherwise.

All this suggests that as linguists help Kriol speakers document their heritage languages where they wish to, they should also dedicate some attention to Kriol – both because it is an important tool for communication and social assertion, and because many Kriol speakers are very keen to work on their own language. These local perspectives and observations greatly influenced my decision to turn to Kriol after my PhD on Dalabon, and to examine without prejudice the impact of language shift on the description and expression of emotion.

6.1.2 *Language, culture, and essentialization*

As already discussed in 5.3, overall, the comparison between Kriol and Dalabon presented in Ponsonnet (2020) does not bring strong support to the idea that ‘losing one’s language is losing one’s culture’. Linguistic plasticity means that when adopting a new lexico-grammatical code, a speakers’ community can bend their new linguistic tool so that it fulfils their needs for communication. As a matter of fact, this observation largely aligns with previous studies of language shift on the Australian continent (Meakins 2011; Hoffmann 2012; Dickson 2015). More generally, in linguistics there is no scientific consensus about the correlations between language and culture, or language and thought/cognition (Levinson & Gumperz 1996; Levinson 2003; Malt & Wolff 2010; Malt et al. 2011; Malt 2019): these relations are open fields of investigation. Historically rooted in the ‘linguistic-relativity hypothesis’, the matter has attracted a significant amount of scientific attention in recent decades (Lucy 1992; Lucy 1996; Boroditsky & Gaby 2010; Boroditsky 2011; Sidnell & Enfield 2012; Enfield 2015; Cibelli et al. 2016).

Yet, as scientific enquiry strives to understand these complex questions, their raw, pre-scientific version – where language and culture are simply assimilated to each other – is often embraced in public discussions and institutional discourse and policies. Within my own ‘Western mainstream’ social network, in Europe and in Australia, the vast majority of the non-linguists I discuss these matters with (and this represents quite a few) express strong convictions about the close association between language and culture. This view often surfaces in institutional communication as well. As pointed out by Minasyan (2014: 12), ‘almost every document dealing with languages or multilingualism produced by UNESCO in the first decade of the 21st century states that languages are more than communication tools, as they reflect our ways of being and conceptualizing the world’ (see also Heller & Duchêne 2007: 1). Minasyan explicitly traces this back to the linguistic-relativity hypothesis, and identifies, within UNESCO’s official literature, some specific inputs from linguists who appear to endorse the equation (or close association) between language and thought, and/or language and culture (see also Jaffe 2007: 61–62).¹⁸ In 2019, a very comparable rhetoric was deployed around the

¹⁸ Minasyan cites the UNESCO’s *Atlas of the World’s Languages in Danger* (1996 and 2001), as well as a paper by the UNESCO Ad Hoc Expert Group, both authored by prominent linguists. I have deliberately omitted their names here, because there is little doubt that many linguists have explicitly or implicitly endorsed correlations between language and culture when addressing the public or policy makers. They have done so in the interest of a number of communities, including speakers’ communities, and pointing to individuals in the present context would be short-sighted and counterproductive.

UNESCO-orchestrated International Year for Indigenous Languages. The related Action Plan, for instance, states that Indigenous languages are ‘cultural treasures’ that ‘foster and promote unique local cultures, customs and values’ (UNESCO 2018: 2). Languages presumably foster local cultures and values in so far as they encode them (Cash Cash 2018). They may also help preserve some specialized knowledge (e.g. ethnobiological knowledge), although there is indication that these survive through language shift (Dickson 2015). Yet, emphatic ‘hypervalorization’ (Hill 2002: 123–125) obscures the lack of scientific consensus about the extent to which languages ‘promote’ these matters. Although linguists are, as scientists, well aware of the complexity of the relationship between language and culture, we occasionally chose to push complexity under the carpet when there are valuable reasons to do so.

Simplified equations between language and culture serve evident strategic purposes to promote – and fund – the preservation of minority languages and linguistic diversity. In a context where many communities across the world shift to new languages, presenting individual languages as precious cultural assets makes some sense. Language shift often results from deeply harmful political pressures and persecutions, including active linguistic repression, and physical violence. Such persecutions have not simply slipped in the past: today’s First Nations populations still suffer drastic disadvantages. In Australia and elsewhere, language maintenance and reclamation is a response to historical trauma and a political act of resistance by communities deeply attached to their heritage languages for aesthetical and emotional reasons (Fishman 1991; Hinton & Hale 2001; Wilce 2009). Minority-language speakers themselves frequently embrace the language-culture association, as it offers welcome validation of their linguistic attachment (e.g. Dickson 2015: 360–361). By and large, linguists’ communication around language endangerment, including promoting a close association between language and culture, has followed the needs of minority groups, and proven relatively successful when it came to raising public and institutional awareness about language loss.

Unfortunately, this strategy has its downsides as well. Equating language and culture poses a number of problems for the communities who have already shifted to a new language or are evidently about to do so (see for instance Hill 2002; Blommaert 2006; Jaffe 2007). A major ethical cost lies in the stereotypes and stigma associated with cultural loss – which, if we equate language with culture, derives very directly from language shift.

All around the world, and particularly in colonized countries where minority languages are autochthonous, this implication feeds derogatory perceptions of contemporary Indigenous peoples as ‘inauthentic’, ‘acculturated’, and therefore unanchored and illegitimate (see for instance Eades 1988; Keefe 1988; Cowlishaw 2009; 2012; Dickson 2019; Rodriguez Louro & Collard 2021). With respect to creole languages in particular, the language-culture equation combines with an ideology of purity that motivates the repression of ‘cross-breed’ idioms, and often portrays their speakers as disoriented in-betweens that cannot fully master *any* linguistic or cultural code (Jourdan 1990; 2001; 2013; Rhydwen 1995; 1996; Ponsonnet 2010b; Barsony 2013; Levisen 2016). When internalized by those speakers who have adopted a new language

themselves, all these ideologies represent significant threats to well-being and sense of self, triggering the emotional insecurity reported by Ponsonnet (2010b).

There are also practical consequences to essentializing perceptions of creoles and other contact varieties. In education, these varieties are often ignored or even denied (Sellwood & Angelo 2013). Equating language and culture translates into legal and economical disadvantage. In Australia, the legal framework whereby First Nations' land ownership can be officially recognized requires that they demonstrate cultural continuity with pre-colonial times. In this process, mastering a 'traditional' Australian language is an advantage; but conversely, in a country where a majority of First Nations groups have shifted to contact varieties (Kriol or Aboriginal English, see Dickson (2019) and Rodriguez Louro & Collard (2021), using language preservation as evidence of cultural continuity is more often to the claimants' disadvantage (Walsh 2010; Boynton 2014).

To summarize, in countries where language shift results directly from colonization, linguists face an acute dilemma. On the one hand, language shift is not a benign change, and instead is often experienced as a theft. From this point of view, emphasizing the association between language and culture has proven effective to help communities who wish to maintain or reclaim heritage languages. At the same time, many minority groups around the world suffer the negative consequences of naïve representations of language shift inspired by the language/culture equation – which itself lacks firm scientific grounds. For linguists or language activists, this tension does not necessarily crystalize into practical dilemmas, because it is entirely possible to support the communities who wish to maintain their traditional languages, without condemning those who have shifted to a new language. Nevertheless, the ideological paradox does create difficulties at the levels of public perceptions or language policies.

With these tensions in mind, my 2020 monograph on Kriol aims to inspire nuanced perspectives on language shift. The introduction does so by reminding linguists of the risks of incautious language-diversity advocacy, as presented above. The rest of the volume analyzes what adopting a new lexico-grammatical code implies linguistically, and shows that contrary to what has become a popular belief, cultural loss is not warranted. Because these matters do not concern linguists alone, I have summarized these views on non-academic platforms, for instance via a Conversation article entitled [*Indigenous languages matter – but all is not lost when they change or even disappear*](#) (The Conversation Australia, January 2020). Based on Kriol examples, the article explains why and how newly adopted languages continue to reflect the values and culture of those who speak them.

6.2 *Language documentation and community engagement*

I have explained in the Introduction to this report that my relationship with the speakers' communities I work with as a linguist predate my linguistic training. Reflecting this personal involvement, I have always paid careful attention to speakers' and communities' interests and

inclinations. Like all scientific research in Australia, all my projects since my PhD have undergone thorough review, and approval, by institutional Human Research Ethics Committees. Apart from these formal processes, I have taken care to nurture long-term personal relationships when the speakers I worked with sought them. Over the years, I have knit close ties with a wide network of people across several language communities of the Arnhem Land region, some of whom have taken leadership in recent projects (e.g. Kaminjdjan Michelle Martin's involvement with the *Language, Landscape and Culture in Indigenous Australia* ARC project, 3.5).

6.2.1 *Language corpora*

I have applied best-standard practices regarding the data speakers entrust me with throughout all my projects. This includes long-term preservation in suitable repositories that can handle delicate access conditions; opening access to data wherever possible, while protecting speakers' and communities' cultural sensitivities where needed; returning data to communities and individual participants specifically, and optimizing their access to online corpora; as well as producing dedicated community and/or broad audience resources where possible.

My PhD project featured a language documentation component, with my doctoral fieldwork funded by the Hans-Rausing Foundation's Endangered Language Documentation Program. Upon completion of the project in 2014, I deposited a large corpus with the Endangered Language Archive under the title [‘A Culturally informed corpus of Dalabon’](#). This corpus is also archived with the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS, Canberra), which offers community-friendly access services. At the time of initial deposit, the data included 60 transcribed hours of recordings; since then I have continued to enrich the ELAR corpus with translated and interlinearized versions (3h30 hours at this point). Based on speakers' permissions, the ELAR corpus has been put to use by third parties, including scientific projects (my own or others'), as well as an online art project ([Last Whispers](#), 2016). Some of my Dalabon data has been curated for the [DoReCo](#) corpus (Seifart, Paschen & Stave 2022), and a selection of narratives is presented in the Centre of Excellence for the Dynamics of Language online corpus, which ensures easy access to recordings and translations for speakers and other members of the public via the [Gerlingo interface](#). In the name of the scientific community, I would like to thank Dalabon speakers for accepting to share their language so readily and generously. With many Australian languages protected for cultural reasons, the availability of the Dalabon data is of huge benefit to comparative and typological linguistics.

The 30-hour Kriol corpus (almost entirely transcribed) collected and curated during my ASLAN postdoctoral fellowship at Dynamique Du Langage (see 2.1.2) is also archived with the AIATSIS Audiovisual Archive (the standard repository for Australian language material). In addition, a [Kriol-English emotion glossary](#) is available online.

The AIATSIS Audiovisual Archive is currently processing the corpora from my DECRA Fellowship, including a 12-hour corpus of Kunwok and 17-hour corpus of Rembarrnga, most of them transcribed and partly translated with speakers (2.1.1). A subset of the Rembarrnga data has been shared with the Mimal Rangers community organization (who works with a number of Rembarrnga speakers), for addition to their online [Cultural Database](#).

6.2.2 *Other documentation*

During my DECRA project, some Rembarrnga speakers expressed requests for specific documentation products. Elder and senior language consultant Belinj Nellie Camfoo, in particular, wanted to see some of the stories she recorded with me compiled into a book. Together, we selected four Rembarrnga narratives set in the early postcolonial era recorded by herself and her sister Belinj Dorothy Cameron, and produced a bilingual booklet suitable for community consumption (Cameron, Camfoo & Ponsonnet 2017). The book was distributed locally, and digitally deposited with the Mimal online Cultural Database.

In August 2017, I was invited by my Rembarrnga friends to attend a female-only ceremony called Djarrarda (Cowlshaw 1999), which I subsequently offered to record with its last performer, also Belinj Nellie Camfoo (born around 1940). After the ceremony, Nellie Camfoo and I transcribed the lyrics of the 28 Djarrarda songs we had been able to capture. Like with most Australian songs, the wording is antiquated and no longer intelligible to today's speakers of Rembarrnga or other related languages. Nellie Camfoo was at the time the only person to know the songs well enough to sing them. The recordings and transcripts have been archived with [AIATSIS](#), where they are accessible upon request to any female person (as per Nellie Camfoo and family's request). I also produced digital kits including the audio recordings on USB drives or SD cards, and booklets with the lyrics. We exerted caution when distributing these kits to community members, given that men should not access any Djarrarda-related material. Nevertheless, Rembarrnga women were able to use these recordings in a subsequent iteration of the ceremony in 2019, to supplement Nellie Camfoo's live singing. This will probably happen again in the future, when ceremonies can resume after the pandemic interruption.

6.2.3 *Data-collection methods*

The data-collection I orchestrated during my PhD was an opportunity to innovate a number of data-collection methods targeting the documentation of emotions, which I continued to implement in subsequent data collection (see 2.1, and Chapter 5). Emotional speech is difficult to record with speakers of an endangered language, because emotions tend to be intimate, often interactional, and require a degree of informality if not spontaneity. Initially, working on Dalabon with a small number of speakers of a language that was barely spoken outside of the documentation context, I had to experiment with new stimuli such as tailored photographs and selected featured films.

Shortly after submitting my PhD I published an account of these new methods (Ponsonnet 2014a). I also made a kit of tools (stimuli, protocols etc.) available via a share drive, for use by researchers and other language workers (e.g. from Language Centres). Indeed, these tools have been used and inspired other projects (Isabel O’Keeffe, Louise Ashmore, pers. com.). Observing the growing interest in emotional communication among community organisations across Australia (e.g. intergenerational workshops at Maningrida Education Centre, productions of resources such as booklets and posters by the Ngaanyatjarra Pitjantjatjara Women’s Council), in 2019 I co-convened a workshop on this theme at the PULiiMA Language and Technologies in Indigenous Conference. PULiiMA is an applied forum aimed at First Nations community members and workers. In the workshop *Putting Emotions and Wellbeing into your Own Words*, co-organized by Steven Bird (Charles Darwin University) and myself, participants were encouraged to engage with a number of topics and tools they could then use to facilitate community activities on the language of emotions. Since then, the [Emotion Language Australia webpage](#) has been made available (see 3.1.1). It gives open access to a wealth of data and material to support community activities, as well as inform language reconstruction where needed (Giacon 2014; Amery 2020).

6.2.4 Collaborations with Language Centres

Apart from my engagement with the language communities associated organisations (Mimal Rangers and Bininj Kunwok Language Centre) in Arnhem Land (northern Australia), I have also collaborated with a number of Language Centres representing language groups and communities in Western Australia. In Australia, ‘Language Centres’ are publicly funded community-based organizations where teams of linguists, speakers and other language workers organize documentation, training, awareness programs and the like, depending on communities’ needs. There are seven active Language Centres in Western Australia. As a Senior Lecturer teaching the ‘Linguistics of Australian Indigenous Languages’ Unit in the only Linguistics Department in the State, and later as a Chair (i.e. coordinator) of this Department (1.4.3), I felt a responsibility to provide a point of academic contact for Western Australian Language Centres and their staff. Subsequently, I made sure to intensify the interactions and collaborations between the UWA’s Linguistics Department and some of the States’ Language Centres.

Some of these collaborations remained occasional, for instance inviting the coordinator of the Noongar Boodjar Language Centre, Denise Smith-Ali, to give a guest lecture in the ‘Linguistics of Australian Indigenous Languages’ Unit, so that she could meet my students and recruit among them. At the same Language Centre, and upon their request, I delivered a training session for their staff and UWA students on the ELAN language-documentation software. I arranged for one of my PhD students (Connor Brown) to team up with the Mirima Dawang Woorlab-gerring in Kununurra as he began to work on the local Kriol (1.4.4). The Centre subsequently offered him an internship, followed by some fix-term employment. Several other UWA students followed in the same steps. During COVID, in the face of strict inter-state travel

restrictions, the Mirima Language Centre liaised directly with UWA staffs and graduates to identify interns and new hires.

In addition to these less formal collaborations, our Department created an official internship program whereby UWA Linguistics undergraduates joined Language Centres for 2 weeks and were able to claim this experience ‘for credit’ as part of their Degree’s training. This program was developed and ran by Linguistics Major Coordinator Luisa Miceli, with me initiating and supporting relationships with Language Centres. Between 2019 and 2021 (when I left UWA), around 15 students took visited four Language Centre partners, helping with a broad range of projects at the same time as they improved their understanding of language-related needs in the State’s First Nations communities.

Reflecting my role as an academic contact-point for Western Australian Language Centres, in 2021 I was invited to join a project entitled ‘*Life after digitisation: future-proofing Western Australia’s vulnerable cultural heritage*’. The project, involving five researchers (experts in cultural heritage, digital humanities, ethnomusicology, performing arts, and myself), was funded by the Australian Research Council for 4 years starting mid-2022. It is hosted across three Western Australian Universities, the Digitization Centre of Western Australia, and the University of Queensland. The team will orchestrate the digitization of significant cultural collections held across Western Australia, including Aboriginal languages, the Western Australian performing arts collection, and selected cultural heritage objects of significance from across the State. The digitisation of vulnerable language collections will take place in collaboration with five Language Centres where these collections are held. In addition to safeguarding this material, the project will explore how speakers’ populations envisage the digitisation of heritage language archives. One of my roles in the project is to co-design and co-supervise a PhD project to collaborate with partner Language Centres in order to document, interpret and report on the views and aspirations of heritage-language stakeholders relative to the digitization of language collections. The PhD recruitment process will begin at the end of 2022 and I am scheduled to visit some of the partner Language Centres in early 2023.

CHAPTER 7. Syntheses and research perspectives

In this section, I succinctly present my work plans for the years to come, in the form of a ‘big picture’ reflection on ambitious research developments. To launch this reflection, I begin with a summary of ‘take-home points’ from my main results on the linguistic encoding of emotions.

- On the semantic typology of the linguistic encoding of emotions:
 - First typological investigations of figurative representations, emotion nouns, reflexemes, interjections, evaluative morphology, as well as other expressive morphological features.
 - Expressive resources are more specialized semantically than descriptive resources, i.e. each of them focuses on a different set of emotions; while different descriptive resources tend to target the same suite of emotions.
 - Not all emotions attract the same amount of descriptive linguistic resources. ‘Neutral’ categories like ‘feel good/bad’ are better represented, along with some primary emotions like anger and fear, and some social emotions like shame. Based on the studies currently available, anger seems particularly prevalent.
- On the influence of grammatical architecture on the linguistic encoding of emotions:
 - There are indications that figurative language is sensitive to ‘grammatical affordance’, i.e. the range of emotion metaphors that occurs in a language is partly constrained by the grammatical constructions available in this language.
 - Beyond this, the examination of a language-shift situation suggests that language is plastic enough for speakers to compensate differences in grammatical architecture. Where a particular emotional linguistic resource is absent, speakers use other resources to cover the same semantic range.
 - Therefore, notwithstanding the accumulation of subtle differences, at the level of semantic description and corpus comparison the impact of using a new language on the linguistic encoding of emotions is not clearly significant.

The sections below flesh out these bullet points to derive research pathways, and explain my plans to pursue them. I have chosen this focused approach because it is concise and synthetic. Conversely, it cannot do justice to the wealth of other research activities I will undertake along the way. Non-exhaustively, these include: producing grammatical descriptions for the languages I have expertise on, particularly when this feeds into colleagues’ research questions (see Chapter 2); taking part in collaborative projects (see 3.5), particularly those fostering collaborations with speakers’ communities (see 6.2); contributing to broad-audience

dissemination of linguistic knowledge and results, notably with an anthropological linguistic angle onto language-based discrimination and inequity (see 6.1).

While the rest of this concluding section focuses on how I will maintain and enhance meaningful research activities and outputs, I strongly believe academic careers are only truly meaningful when they include other-oriented tasks and duties alongside pure research. In this spirit, I will seek supervision roles, at Master and PhD levels, and take up teaching opportunities when they arise. I am also very willing to endorse collective responsibilities, either within Dynamique Du Langage – as I have already done by taking up a leadership role in my team less than a year after joining CNRS – or in adjacent institutions and committees. Of course, juggling an ambitious research program along with the rest of these commitments will be a challenge, but this is plainly every academic's challenge.

7.1 Semantic typology of the linguistic encoding of emotions

Flowing directly from my doctoral thesis on the language of emotions in a minority language (Dalabon, Australia), my research since 2014 has produced pioneering results concerning the description and typology of the linguistic encoding of emotions. This includes continent-wide or broader typologies of figurative representations of emotions, emotion nouns, reflexemes, interjections, evaluative morphology, as well as other expressive morphological features. There remains much space for further typological investigation of these types of resources, and the resulting overarching hypotheses have raised questions to be addressed in future research.

7.1.1 The semantic distribution of expressive resources

One observation is that expressive resources (i.e. resources understood to index an internal state) are semantically more specialized than descriptive resources (like words or syntactic constructions). Each of the types of expressive resources I have investigated targets a particular set of emotions: for instance, endearment and compassion are prevalent with morphological diminutives, while surprise (and pain) are prevalent with interjections, in Australia at least.

To confirm this observation, and draw a more complete picture of how emotions distribute semantically across expressive resources, in the years to come I will continue to map their typology. In particular, the typology of interjections should be expanded to a cross-continental (or if possible, worldwide) scale. I also plan to investigate the typology of conventionalized prosodic features. I had described such features (in particular, a melodic contour expressing compassion, and voice creakiness expressing grief) for Dalabon in my 2014 monograph (Ponsonnet 2014b: 127–141), and further analyzed them, including a comparative dimension, in Ponsonnet¹⁹ (2018d). I now plan to explore the typology of such highly conventionalized, controlled features, in Australia and elsewhere. The above typological investigations can take

¹⁹ This differs from the cross-cultural comparison of voice modulations speakers are not aware of, see for instance Elfenbein & Ambady (2016).

place with the help of collaborators at Dynamique Du Langage and among my existing networks (for instance, Patrick Caudal, from CNRS Laboratoire de Linguistique Formelle, has expressed interest in joint projects around conventionalized prosodic contours in Australian languages). These research endeavours will also represent an opportunity to initiate collaborations with colleagues working on adjacent questions (see 7.4 below).

Once evaluative morphology, interjections, and conventionalized prosodic features have been examined and compared across several continents, a monograph should be envisaged. In my experience, synthesizing and combining findings at the scale of an entire volume helps highlight meaningful conclusions, in this case concerning emotional experience and human communication.

7.1.2 Emotions with linguistic salience

A second observation regarding the semantic typology of the linguistic encoding of emotions is that different types of descriptive resources seem to converge towards similar emotion categories (contrary to expressive resources). In Australian Indigenous languages, good/bad feelings are clearly prevalent, along with a couple of primary emotions like anger and fear, and certain social emotions like shame. While the prevalence of ‘feel good/bad’ can easily be explained by their neutral semantics, the order of prevalence of other emotions calls for explanations. The higher rank of anger, if it confirms, is particularly puzzling.

To confirm whether anger is indeed a linguistically prevalent emotions in Australian languages and beyond, we can quantify basic descriptive resources such as lexical resources in a balanced sample of languages across the world. This will reveal trends regarding other emotions as well, across the world and/or for particular language families or geographic areas. Such an investigation can rely upon data from published sources and corpora, especially with the help of colleagues whose expertise will guide the interpretation of these sources. Later, frequency studies can also be carried out. If anger or some other emotions stand out as a linguistically salient emotion, their social, communicative and cognitive statuses can then be examined to explore the underpinnings of this salience.

7.2 Grammatical architecture and the linguistic encoding of emotions

My research so far has also contributed to determine the potential influence of grammatical architecture – that is, the core features defining a given language, or the particular constructions available to its speakers – upon the linguistic encoding of emotions, i.e. which resources speakers use to describe and express emotions. In this respect, figurative representations of emotions stand out, as they seem to exhibit a degree of ‘grammatical affordance’: their occurrence appears to be channelled by the presence or absence of grammatical constructions in a given language.

Beyond figurative language, on the other hand, support for the influence of grammatical architecture upon the linguistic encoding of emotions remains relatively weak so far. On the contrary, observations from a language-shift situation suggest that language is by nature plastic enough to bend under the influence of speakers' communicative needs when it comes to describing or expressing emotions. When shifting to a new language, even with a very different core architecture, humans are capable of re-creating tools with the same semantics and functions as in their other language(s). This suggests that emotion, as a fundamental individual and social experience, is a compelling force in human communication.

As discussed in 5.3.2, notwithstanding this perspective from language shift, it remains possible that using different linguistic tools to express the same semantic categories of emotions could in fact result in differences in communication over time. For instance, if a language uses interjections to express endearment, while another language uses morphological diminutives for the same purpose, each community of speakers may as a result communicate about endearment in different ways or contexts. For example, interjections and morphological diminutives are respectively defined by distinctive properties: the former can occur in single-word occurrences, while the latter are more phonologically integrated and therefore readily lend themselves to repetition within a single utterance. While this hardly produces semantic differences at utterance level, across a large number of interactions a cumulative effect may be perceptible (Sidnell & Enfield 2012). I plan to test this effect experimentally, comparing communication chains (see for instance Bebbington et al. 2017) in Romance languages with and without morphological diminutives (e.g. Spanish vs French). A suite of protocols will be developed to assess the potential impact of other linguistic differences, for instance the availability of certain lexical tools (e.g. where languages have rare lexical categories such as *dépaysement* in French or *schadenfreude* in German).

Overall, this experimental program aims to identify whether the nature of the language(s) spoken by a human group has chances to inflect how its member communicate emotions. This paves the way for the investigation of how this can in turn influence emotional management, and emotional experience.

7.3 Questioning the notion of expressivity

A third research question emerging from my research on the linguistic encoding of emotions concerns the notion of 'expressive resources'. So far, my work has not questioned this notion; instead, I have used the distinction between 'descriptive' and 'expressive' linguistic resources as a heuristically helpful contrast. Indeed, many foundational linguistic texts acknowledge 'expressivity' as one of the functions of language (Jakobson 1960; Leech 1974; Halliday 1976: 26–29; Lyons 1977: 50–56). While conceptually sound, defining 'expressive' resources semiotically as indexical (Peirce 1955), i.e. caused by an internal state experienced by the speaker, is somewhat simplistic. Strictly speaking, this suggests that resources like interjections would be 'reflex' signals, produced spontaneously under physiological pressures. Naturally,

this is not plausible. In reality, most of the time, these resources are ‘performed’, i.e. produced for the benefit of an audience (Goffman 1978). ‘Performed’ here does not mean ‘inauthentic’ or ‘insincere’, but simply that these resources are used to *communicate* with others. This does not preclude that they may, at the same time, be partly *expressive* in the sense of being prompted by the speakers’ experiencing the corresponding state. Although linguists have now clarified the semantic characteristics of expressive resources (Potts 2007), the difference between the functions of expression and communication has hardly been explored at all.

With this in mind, we can now articulate a more sophisticated approach: given that *non-descriptive* linguistic resources may have an *expressive* dimension, and a *communicative* dimension – in the senses outlined above –, how do these dimensions distribute, for different types of resources, and in different contexts? Are some generalizations possible in this respect? For instance, certain types of emotions may tend to be more often expressed, others communicated, e.g. if linguistic displays of fear were usually more expressive, and displays of endearment comparatively more communicative? Certain types of linguistic resources, or modalities, could lend themselves more readily to one or the other function. E.g. facial displays of emotions may be more expressive than non-verbal vocalizations; melodic contours may be more expressive than, say, interjections, which would be more communicative? Perhaps the degree of conventionality of the forms may correlate with more prevalent communicative functions: a single open vowel like ‘aaaah’, which is closer to a scream, may be used more expressively than the secondary interjection ‘shit’, which sits higher on the conventionalisation scale?

Mapping out these tendencies would be helpful in many respects, including significant applied potential. For instance, it would shed light upon the underlying fabric of emotional speech, and its tighter or looser ties with emotional experience – which, in turn, could inform the detection of emotional distress in real-world contexts. Evaluating the degree of linguistic expressivity across narrative genres and interactional situations would also pave the way towards re-assessing the ‘emotional discharge hypothesis’ (4.1.2), according to which talking about negative emotions alleviates negative experience. A nuanced understanding of the role of communication and expression in this process would help target the most helpful use of linguistic interactions in mental-health care and similar contexts.

In a pilot study conducted in collaboration with Nic Fay (University of Western Australia’s School of Psychological Sciences), I have tested an experimental protocol to disentangle the expressive from communicative dimensions of different verbal and non-verbal modalities. Exposing participants to arousing stimuli (videos) either alone, or in company, allowed to measure which linguistic resources and modalities were produced for the benefit of an audience, i.e. used communicatively (Fridlund 1991; Fridlund, Kenworthy & Jaffey 1992; Lee & Wagner 2002). This confirmed that interjections were – expectedly – more expressive than fully articulated verbal communication (i.e. full sentences), but more communicative than non-lexical vocalizations. Nic Fay has expressed his willingness to continue collaborations in this

direction. At Dynamique Du Langage, collaboration has begun with Kasia Pisanski, whose research addresses complementary questions from an ethological standpoint. As part of her 80 Prime CNRS project ‘*The evolved social functions of nonverbal vocalisations: a cross-cultural investigation*’, we are currently using her database of spontaneous pain vocalizations to compare them with frequent forms of interjections as found across the world’s languages. This will allow us to estimate the formal influence of fully reflex cries upon lexical interjections, tying up with the question of degrees of conventionalization.

These research questions on the status and functions of non-descriptive linguistic resources correspond to one of the themes profiled in my CNRS project (2021). The corresponding application documents detail the framework and a number of protocols aiming to map expressive and communicative functions in a number of linguistic resources. This research plan also represents a natural continuation and complement of my investigation of the ways emotions are encoded in human language, and how this encoding influences our emotional experience.

7.4 Collaborations and integrative grant

Some of the research plans highlighted above can stem from existing collaborations, supervision of Master and PhD students, and resources accessible via Dynamique Du Langage or the ASLAN LabEx (a funded consortium of laboratories). With the upcoming, long-awaited publication of two important chapters submitted in 2017 and 2018, I expect my research network to grow to include more linguists currently investigating overlapping aspects of language, as well as scientists from other disciplines with expertise on emotions. Since my recent appointment at CNRS (Feb 2022) and return to Europe, opportunities to interact with emotion specialists have multiplied. For instance, I have recently been invited to an interdisciplinary symposium on ‘Affective Negotiations’, co-organized by Laboratoire d’Anthropologie et de Psychologie Cliniques, Cognitives et Sociales (Arnaud Halloy), and Laboratoire d’Anthropologie Sociale du Collège de France (Paul Codjia) (December 2022).

In the years to come I will, as a first step, lean against smaller-scale funding to sponsor pilot projects with close colleagues; with a view to developing a major project federating research questions and consolidating collaborations around the linguistic encoding of emotions. The most natural ports of call for a grant application along these lines are the French Agence Nationale de la Recherche and the European Research Council, with which I would aim to submit within three to four years from now. Depending on the scheme – individual or collective –, the project could either be structured around the research questions presented above: the semantic typology of the linguistic encoding of emotions; the influence of grammar on the linguistic encoding of emotions; the nature and distribution of expressive and communicative functions in non-descriptive resources. A fourth, horizontal axis of the project would concern applied extensions relative to emotional communication, management, and experience, particularly in health and mental-health contexts. Naturally, with a collective-grant scheme, the

project would combine the above research questions with that of other Chief Investigators, opening up opportunities to include research questions for which I cannot claim sufficient expertise. A larger, collaborative project would allow additional emphasis on the communication of emotions in interactions, including facial and gestural expressions, and their impact in medical contexts.

Mah, bonj.

(Dalabon for ‘Voilà, j’ai terminé.’)

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