



Universiteit
Leiden
The Netherlands

Pluractionality in Hausa

Součková, K.

Citation

Součková, K. (2011, December 14). *Pluractionality in Hausa*. LOT dissertation series. LOT, Utrecht. Retrieved from <https://hdl.handle.net/1887/18247>

Version: Not Applicable (or Unknown)

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/18247>

Note: To cite this publication please use the final published version (if applicable).

Pluractionality in Hausa

Published by
LOT
Trans 10
3512 JK Utrecht
The Netherlands

phone: +31 30 253 6006

e-mail: lot@uu.nl
<http://www.lotschool.nl>

Cover illustration: The Crucial Search In Argungu. Copyright © 2010: Irene
Becker. (A scene from the 2009 Argungu Fishing Festival.)

ISBN: 978-94-6093-071-3
NUR 616

Copyright © 2011: Kateřina Součková. All rights reserved.

Pluractionality in Hausa

PROEFSCHRIFT

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof.mr. P.F. van der Heijden,
volgens besluit van het College voor Promoties
te verdedigen op woensdag 14 december 2011
klokke 15:00 uur

door

Kateřina Součková

geboren te Brandýs nad Labem, Tsjechoslowakije

in 1979

Promotiecommissie:

Promotor: Prof.dr. J.E.C.V. Rooryck

Co-promotor: Dr. J.S. Doetjes

Overige Leden: Dr. M. Buba (Usmanu Danfodiyo University, Nigeria)
Prof.dr. M.P.G.M. Mous
Prof.dr. M. Zimmermann (Universität Potsdam)

The research for this book was carried out as part of the VIDI-project “Degrees across categories”, funded by the Netherlands Organisation for Scientific Research (NWO), awarded to dr. Jenny Doetjes (project nr. 276-70-007).

Table of contents

Acknowledgements	ix
List of figures	xiv
List of tables	xv
List of languages discussed in this thesis	xvi
List of abbreviations	xviii
1. Delimiting pluractionality	1
1.1. Introduction	1
1.2. Relation to nominal number	9
1.3. Relation to aspect	17
1.3.1. Terminological issues	17
1.3.2. Pluractionality vs. aspect in the literature	20
1.3.3. Pluractionality is independent of viewpoint aspect and the bounded vs. unbounded distinction	22
1.3.4. Habitual readings	23
1.3.5. Sources of iterative readings	24
1.3.6. Durative readings	26
1.3.7. Conclusion	28
1.4. Relation to degree	28
1.4.1. Degree expressions and plurality	29
1.4.2. Intensive verbs?	32
1.4.3. Intensification in addition to event plurality	33
1.4.4. Detensification in addition to event plurality	35
1.4.5. Conclusion	37
1.5. Distributive and collective interpretations	38
1.5.1. Distributive interpretations	38
1.5.2. Collective interpretations	41
1.6. Internal distinctions	44
1.6.1. Event number vs. participant number	45
1.6.2. Event-external vs. event-internal pluractionality	47
1.7. Limits of pluractionality	52
1.8. Theoretical accounts of pluractionality	55
1.8.1. Cusic (1981)	56
1.8.2. Lasersohn (1995)	59
1.8.3. Van Geenhoven (2004, 2005)	62
1.8.4. Ojeda (1998)	65
1.9. Conclusion	68
2. Pluractionality in Hausa	71
2.1. Introduction	71

2.2. Hausa	73
2.2.1. General information	73
2.2.2. Sentence structure	74
2.2.3. Verb grades	77
2.2.4. Deverbal categories	79
2.2.5. Nominal system	81
2.2.5.1. Dynamic nouns	82
2.2.5.2. Number	82
2.2.5.3. Determiners and modifiers	84
2.2.6. Reduplication	86
2.2.7. Pluractional formation	89
2.3. Plurality and individuation	93
2.3.1. Pluractional vs. single action readings	93
2.3.2. Pluractional vs. true collective readings	96
2.3.3. Pluractionality vs. distribution to atoms	97
2.3.4. Plural arguments	98
2.3.5. Singular count and mass arguments	99
2.3.6. High individuation: separateness and diversity	101
2.3.7. Pluractional vs. continuous readings	103
2.4. Iteration	105
2.4.1. Repetitive events	105
2.4.2. Repeated events	107
2.4.3. Conative and tentative readings	109
2.5. Large quantity and vagueness	110
2.6. Degree readings	114
2.6.1. High degree	114
2.6.2. Low degree	116
2.7. Interaction between large number, high degree and high individuation	117
2.8. Further issues	119
2.8.1. Exhaustivity	119
2.8.2. Unexpressed arguments	121
2.8.3. Pluractional statives and verbal nouns	122
2.8.4. Variation	124
2.9. Conclusion	125
3. Analysis	127
3.1. Introduction	127
3.2. Some preliminaries	128
3.3. Outline of the proposal	134
3.4. The core meaning of pluractionality in Hausa	141
3.5. Event individuation through anchoring	143
3.5.1. Anchoring and the non-equivalence condition	143

3.5.2. Possible anchors	145
3.5.3. Collective interpretations	152
3.5.4. Distribution to parts and subquantities	156
3.5.4.1. Parts as anchors	156
3.5.4.2. Event-internal status of ‘distribution-to-parts’ cases and tentative interpretations	164
3.5.5. Related proposals in the literature	171
3.5.6. Conclusion	177
3.6. Event individuation through natural atomicity	178
3.6.1. Naturally atomic predicates: no anchoring needed	178
3.6.2. Event-internal status of ‘repetitive’ cases and conative interpretations	181
3.6.3. Conclusion	185
3.7. Meaning effects of special plurality	186
3.7.1. Large number	187
3.7.2. High individuation	188
3.7.3. Intensification	190
3.7.4. Compensation effects	193
3.7.5. Other special effects	195
3.7.6. Conclusion	197
3.8. Inter-speaker variation	198
3.8.1. Sources of variation	198
3.8.2. Examples of idiolects	203
3.9. Comparison with other theories	206
3.10. Conclusion	210
Bibliography	213
Samenvatting in het Nederlands	223
Curriculum vitae	227

Acknowledgements

I consider myself generally very lucky. The fact that I ended up doing my PhD in Leiden is just another confirmation of that. Being a PhD student at LUCL means, among other things, having the luxury of being surrounded by excellent linguists who are nice people at the same time. If, in addition, you become part of a research project that is both very interesting and has members who are a pleasure to spend time with – work- or otherwise – what else can you wish for? Thus, the first thank you goes to my supervisor Jenny Doetjes for creating the Degree project and accepting Camelia Constantinescu and me as her PhD students. A lot of things have happened as a consequence of that, not just the eventual emergence of this dissertation.

The topic of my dissertation turned out to be only partly related to gradability but that didn't make my involvement in the project any less fun. Working with Jenny and Camelia was always very enjoyable and it led, among other things, to discoveries like 'a Czech can be a brain twin of a Romanian'. Whether reading a paper together, preparing a joint talk or organizing a workshop, it always seemed easy to work as a team.

From the beginning, it was also very clear how lucky I was to have Jenny as my supervisor. In every stage of the process I got all the advice, support and freedom that I needed. Things couldn't have been smoother for me in this respect. In the final stages of my writing, my promotor Johan Rooryck was an immense help. Without Johan's critical reading, this dissertation would have been much less readable. Thank you, Jenny and Johan! In addition, I would like to thank Willem Adelaar for reading part of an earlier version of the manuscript and giving me invaluable comments and suggestions.¹

It goes without saying that many other people had an influence on me and my linguistic thinking and thus directly or indirectly contributed to the shape this dissertation has taken. Making the partly arbitrary decision of putting the beginning point of my interest in linguistics in my university years in Prague, I would like to thank two of my Prague teachers specifically: Jarmila Panevová and Oldřich Uličný. Jarmila Panevová inspired some of the first passionate linguistic discussions I engaged in – with Jakub Dotlačil, until late at night in our student dorm in Prague. Oldřich Uličný deserves credit for informing me (and Jakub, again) about the possibility of studying general linguistics in Norway and thus effectively sending me on a path that eventually took me to Leiden. Thank you both so much!

Moving to Tromsø changed my life. I learned a lot in the two years I spent there. I would like to thank my Tromsø teachers for that, especially Gillian Ramchand, Peter Svenonius, Øystein Nilsen and Tarald Taraldsen.

¹ My thanks go also to Malami Buba for checking the tones and vowel length in my Hausa examples and Stanly Oomen and Jenny Doetjes for providing the Dutch translation of the summary.

After coming to the Netherlands, the number of people who had an impact on me as a linguist suddenly became too large for me to even try to come up with a reasonably complete list. It is a great thing about the Netherlands that the individual institutes are not very far from each other and thus it is not a problem to attend linguistic events at other institutes than one's own and meet linguists from other Dutch universities as well as from abroad. I'm giving up on mentioning concrete names now for the fear that I forget someone. However, apart from all LUCL members, who created such a friendly and stimulating environment, I would like to thank especially the Utrecht linguists, since the Leiden – Utrecht connection was an especially important one to me.

For the development of the ideas put forward in this thesis, certain events and people outside the Netherlands were also important. First, I would like to mention the Nominal and Verbal Plurality workshops that took place in Paris in the years 2007-2009. I would like to thank the organizers (Patricia Cabredo Hofherr and Brenda Laca), as well as the speakers and the audience. Many of the talks presented there contributed substantially to my understanding of plur(action)ality. Second, I would like to thank Katharina Hartmann for inviting me to give a talk at ZAS in June 2009. It not only helped me formulate some of the ideas presented in this dissertation but it was also nice to get in touch with other formal linguists working on Chadic languages (apart from Katharina Hartmann and Malte Zimmerman also Andreas Haida and Mira Grubic), and to work with their informant (who later turned out to be a great companion in Nigeria).

A big portion of the time and energy devoted to this dissertation went into collecting the data. When I started my PhD, I knew nothing about Hausa. It was thus a long journey to the stage when I thought I'd finally understood what is going on with Hausa pluractionals and there were many people involved in the process. I would like to thank them here.

Within LUCL, my thanks go to Maarten Kossman who first introduced me to Hausa in his Hausa structure course and provided me with study material and Stanly Oomen who did his best to make my Hausa tolerable (unfortunately largely unsuccessfully) by texting me in the language and providing me with Hausa books and links to various Hausa websites. I would also like to thank all LUCL members who helped me find native speakers of Hausa in the Netherlands or elsewhere in Europe.

Outside LUCL, there are many people to thank for helping me in Hausa-related matters: those who helped me understand the Hausa grammar, learn aspects of the Hausa culture, find native speakers and those who shared their judgments on pluractional verbs with me. Everyone's help is truly appreciated.

My most important guide into all matters Hausa was undoubtedly Malami Buba. He came as a guest lecturer to Leiden in June 2007 and managed to teach me some Hausa despite the fact that I was often falling asleep right in front of his eyes in my after-lunch dip. Malami wasn't only my Hausa teacher, however. He also provided me with the first set of pluractional data and his comments helped me greatly to get a feel for the data. In

August and September 2009 he also took care of me during my field-trip to Sokoto, Nigeria. His ‘all-in-one’ package deal including accommodation, food, transportation and arranging sessions with informants, among other things, made everything much easier for me. He was also my guide into the Hausa culture and made it possible for me to have a fuller contact with the locals. My thanks also go to Malami’s wife Norma, his Sokoto-based family and friends, who welcomed me warmly in their homes.

In Sokoto, there was one more person who contributed greatly to my enjoyment of my stay there: Mu’awiya Jibir, a.k.a. MJ. Having met a few months earlier in Berlin, it was a pleasure to meet again. Without all the thick sweaters this time (June 2009 was quite cold in Berlin), Mu’awiya took me around, introduced me to his friends and made sure I saw what there was to see and ate what I didn’t get a chance to eat elsewhere, despite the fact that he himself, like everyone else, was fasting. I miss you, Mu’awiya!

Clearly, this dissertation could not have been written without me having access to the relevant data, that is, without the help of my informants. Apart from the native speakers of Hausa that I interviewed in Sokoto, I would like to thank those that I met and had a chance to talk to all around Europe. Whether based in Nigeria, the Netherlands, Great Britain, the Czech republic or Germany, all the Hausa speakers I had a chance to work with were very friendly, helpful and willing to consider all the strange scenarios I asked them to imagine, even though it was often hard for them to conceal their amusement at the kinds of things some linguists want to know. My thanks go naturally also to all those people who helped me find native speakers of Hausa in Europe, which was an unexpectedly difficult job. Thank you all!

One of the most important things that I have gained by becoming a PhD student in Leiden is all the amazing people I met during those years as a consequence of that. Some of the people have already been mentioned above. It was especially my Leiden friends who made my stay in Leiden so much fun. Camelia Constantinescu, Mélanie Jouitteau, Juliette Huber, Stanly Oomen, Rebecca Voll and Allison Kirk (in the order they appeared in my life) represent the ‘core’ of my Leiden family. The family started out as a triangle, with Camelia and Mélanie being its Romance angles, and even though Mélanie, unfortunately for us, left after the first year, it was gradually getting bigger. Rebecca deserves most credit for that as she not only made Josh Wilbur come to Leiden but the two of them even made a new member from scratch. Mélanie, on the other hand, probably deserves most credit for creating links leading outside the Netherlands. It is through her that I met people like Anamaria Fălăuş and Milan Rezac, which is something I’m very thankful to her for – apart from her letting me meet herself, naturally! Back in Leiden, there were others: Sandra Barasa, joining us on special occasions, Jessie Nixon, who moved to Leiden at a later point, and other colleagues-friends. Whether it was painting Camelia’s apartment, canoeing in Czechia, getting lost in the dunes of Texel, playing ‘extreme’ croquet or just having dinners together, all these occasions contributed greatly to making the Leiden years unforgettable for me. Thank you all! I would also like to thank the few non-linguists that I met while I was in Leiden

– on trains, at Turkish dinners, at yoga... You're not likely to read these lines but in case you do, I hope you know I'm talking about you!

Camelia has been mentioned several times already but I would like to do it one more time. One of the lucky consequences of my coming to Leiden is that I met a friend of a kind that one can probably find only once in a lifetime. Thank you for coming into my life and everything that has followed from that!

Apart from the 'new' people in my life, I would like to thank all my old friends who stayed in touch with me throughout my Leiden years. I might not have been able to see especially my Czech friends as often as I would have wanted to but the mere fact that they were (and are) still there made a huge difference to me.

Naturally, I wouldn't be writing these lines without my parents being there in the first place. I would like to thank them for so much more than just creating me, though. I have always had their love and full support in everything I did. I wish my father could see that even though I never changed my mind and started studying something more useful (like law or economics), I'm doing fine. My mother has never worried about that and now she's probably even stopped worrying about where my crazy journey across the planet will take me next. Thank you both for the freedom you always gave me and the confidence you've always had in me! I would also like to thank my sisters and the rest of my family! One of the best things about having a family is that even though no one might really know what exactly it is that you do for a living, they love you anyway.

Finally, I would like to thank Shoshi, for storming into my life and turning it upside down. I'm so glad Bubák threw you my way!

List of figures

Figure 3.1.: Number-neutral denotation

Figure 3.2.: Proper plurals

Figure 3.3.: The core meaning of Hausa pluractionals

Figure 3.4.: The three-component system

Figure 3.5.: The core meaning of Hausa pluractionals

Figure 3.6.: Anchoring

Figure 3.7.: Possible scenario for reading (d) of sentence (53)

List of tables

Table 1.1.: Parallels between nominal and verbal number forms

Table 2.1.: TAMs

Table 2.2.: Forms of the verb *sàya* ‘buy’

Table 2.3.: Verb stem *say-* ‘buy’ in different grades

Table 3.1.: Types of participant-based readings

List of languages discussed in this thesis

Language	Genus, (Subfamily,) Family
Arabic	Semitic, Afro-Asiatic
Armenian	Armenian, Indo-European
Berbice Dutch Creole	Creoles and Pidgins
Bole	West Chadic, Chadic, Afro-Asiatic
Brazilian Portuguese	Romance, Indo-European
Chechen	Nakh, Nakh-Daghestanian
Cuzco Quechua	Quechuan, Quechuan
Czech	Slavic, Indo-European
Daba	Biu-Mandara, Chadic, Afro-Asiatic
Dutch	Germanic, Indo-European
English	Germanic, Indo-European
Fasu	Kutubuan, Trans-New Guinea
French	Romance, Indo-European
Georgian	Kartvelian, Kartvelian
Hausa	West Chadic, Chadic, Afro-Asiatic
Huichol	Corachol, Uto-Aztecan
Hungarian	Ugric, Finno-Ugric, Uralic
Ilocano	Northern Philippines, Western Malayo-Polynesian, Austronesian
Indonesian	Sundic, Western Malayo-Polynesian, Austronesian
Italian	Romance, Indo-European
Itonama	Itonama, Itonama
Jamaican Creole	Creoles and Pidgins
Kaqchikel	Mayan, Mayan
Karitiana	Arikem, Tupian
Kiwai	Kiwaian, Kiwaian
Klamath	Klamath-Modoc, Penutian
Koasati	Muskogean, Muskogean
Konso	East Cushitic, Cushitic, Afro-Asiatic
Korean	Korean, Korean
Kwakiutl	Northern Wakashan, Wakashan
Kwarandzyey	Songhay, Nilo-Saharan?
Luiŋeño	Takic, Uto-Aztecan
Malay	Sundic, Western Malayo-Polynesian, Austronesian
Mandarin	Chinese, Sino-Tibetan
Modern Hebrew	Semitic, Afro-Asiatic
Modern Hindi	Indic, Indo-European
Mohawk	Northern Iroquoian, Iroquoian
Mono	Numic, Uto-Aztecan

Mono Lake Paiute	Numic, Uto-Aztecan
Nahuatl	Aztecan, Uto-Aztecan
Ndyuka	Creoles and Pidgins
Ngamo	West Chadic, Chadic, Afro-Asiatic
Ngizim	West Chadic, Chadic, Afro-Asiatic
Niuean	Oceanic, Eastern Malayo-Polynesian, Austronesian
Nukuoro	Oceanic, Eastern Malayo-Polynesian, Austronesian
Papago	Tepiman, Uto-Aztecan
Pangasinan	Northern Philippines, Western Malayo-Polynesian, Austronesian
Podoko	Biu-Mandara, Chadic, Afro-Asiatic
Pomo	Pomoan, Hokan
Punjabi	Indic, Indo-European
Quileute	Chimakuan, Chimakuan
Russian	Slavic, Indo-European
Saho	Eastern Cushitic, Cushitic, Afro-Asiatic
Sierra Nahuat	Aztecan, Uto-Aztecan
Spanish	Romance, Indo-European
Squamish	Central Salish, Salishan
St'át'imcets (Lillooet Salish)	Interior Salish, Salishan
Tangale	West Chadic, Chadic, Afro-Asiatic
Tubatulabal	Tubatulabal, Uto-Aztecan
Turkish	Turkic, Altaic
Tümpisa Shoshone	Numic, Uto-Aztecan
Vedic (Sanskrit)	Indo-Aryan, Indo-Iranian, Indo-European
West Greenlandic	Eskimo-Aleut, Eskimo-Aleut
Yakan	Sama-Bajaw, Western Malayo-Polynesian, Austronesian
Yuma	Yuman, Hokan
Yurok	Yurok, Algonquian
Zamboangeño	Creoles and Pidgins
Zoque	Mixe-Zoque, Mixe-Zoque

List of abbreviations

1	first person
2	second person
3	third person
DEL	delimitative
DEM	demonstrative
DIR	directed
DISTR	distributive
F	feminine
FREQ	frequentative
FUT	future TAM
HAB	habitual TAM
IMP	impersonal
IMPF	imperfective TAM
INF	infinitive
IPFV	imperfective aspect
M	masculine
NEG	negation
NEGIMPF	negative imperfective TAM
NEGPF	negative perfective TAM
NONDIR	non-directed
PF	perfective TAM
PFV	perfective aspect
PL	plural
PLC	pluractional
PREF	prefix
PREP	preposition
PST	past
RED	reduplication
RELIMPF	relative imperfective TAM
RELPF	relative perfective TAM
SG	singular
ST	stative
STAB	stabilizer
SUBJ	subjunctive TAM
SUF	suffix
V	verb
VN	verbal noun

Chapter 1: Delimiting pluractionality

1.1. Introduction

Terms like ‘singular’ and ‘plural’ are normally used in connection with the category of number in the nominal domain. It is intuitively very clear what the singular (*a*) *dog* means, as opposed to the plural *dogs*. On the other hand, the notion of ‘plural verbs’ seems to be much less transparent. In spite of that, plural or ‘pluractional’ verbs are more than common in the languages of the world and they fully deserve the growing attention in the literature. Examples from several languages are given below:¹

- (1) a. Wa’kenatahrónnion’ [Mohawk]²
wa’-k-nata-hr-onnion’
FACTUAL-1SG.AGENT-visit-ANDATIVE-DISTRIBUTIVE.PRF
‘I went visiting here and there’
- b. X-in-ru-chap-acha’ [Kaqchikel]³
CP-A1s-E3s-touch-PLRC
‘He touched me repeatedly’
- c. ?inanta-si? ?ana ?i=ʔom-t-i [Konso]⁴
girl-DEF.M/F me 3=bite[PL]-3.SG.F-PF
‘The girl bit me in many places.’
- d. Yârân sun rur-rùudee [Hausa]
children.the 3PL.PF RED-be.confused
‘The children are (all) very confused’

¹ I adopt the following conventions for example sentences and word forms. The language of the example is given in square brackets. A list of languages discussed in this thesis, including the information on the genus and family they belong to, is given on page xvi. The source of the example is indicated in a footnote. If the square brackets are not followed by a footnote reference, the example is my own.

The form of the example sentences taken from the literature is generally preserved (with minor exceptions such as capitalizing the beginnings of the sentences, replacing capitals in glosses by small caps etc.). However, emphasis in the form of underlined or bold text is removed. If the examples do contain emphasis, the emphasis is my own. If other changes to the examples have been made, this is indicated in the footnote associated with the example. Abbreviations used in examples taken from the literature, if not completely transparent, are given in their respective footnotes, unless they are not provided by the author. The list of abbreviations used in the glosses of my own examples is given on page xviii.

In case the translation of an example is not sufficient and additional comments are required, they are added in a fourth line, introduced by ‘N.B.’.

² Mithun (1999:90).

³ Henderson (2010:20).

⁴ Ongaye Oda (2010).

- e. Ysh niaxar ullie hittira [Chechen]⁵
 they door by stand.PLR.WP
 ‘They assumed a standing position by the door’

What all these examples have in common is the fact that they refer to events that are plural in some sense. Sentence (1a) refers to a plural event of visiting different people in different places; (1b) describes a situation involving repeated touching. Example (1c) involves many bites. Sentence (1d) refers to different events (states) of being confused as experienced by different children. In example (1e), several events of assuming a standing position, each by a different person, are described.

The observation that verbs like those given in (1) above refer to situations involving multiplicity of events is reflected in the way Lasnik (1995:240) characterizes pluractional verbs, summarizing descriptive work of many linguists: “The basic idea, I think, is clear; pluractional markers attach to the verb to indicate a multiplicity of actions, whether involving multiple participants, times, or locations”. Thus, pluractionality is not a kind of agreement. It is often stressed in the literature that even though the use of a pluractional form might convey information about the number of individuals involved in the event, pluractionality is essentially about the events themselves being plural.⁶

From the geographical or typological point of view, pluractionality is widespread. In fact, its virtual absence in European languages looks rather like an exception than the rule. Pluractional verbs are found in many languages of the world: they are very common in American languages, all four major families of Africa (Afroasiatic, Niger-Congo, Nilo-Saharan, Khoisan), but they are also found in various languages of Asia (e.g. Paleoasiatic, Austronesian, Papuan) and Australia (cf. Corbett 2000 and the references therein). As for the formal means used to express pluractionality, reduplication, other affixation and stem alternation seem to be the most common (cf. Wood 2007). Moreover, it is generally agreed that pluractional marking is derivational by nature, rather than inflectional. This is in contrast to number marking in the nominal domain, at least as we know it from languages like English (cf. esp. Mithun 1988).

The term ‘pluractional verbs’ was introduced in Newman (1980) and is now widely used. Newman coined the term as a replacement for the older term ‘intensive verbs’, used by most Chadicists at that time, and as a better alternative to the term ‘plural verbs’, which is problematic because it might be misunderstood as referring to plural agreement. Newman did not consider the term ‘intensive verbs’ adequate because, as he puts it, “the essential semantic component of these forms [is] plurality and not intensification” (Newman 2000:423). In his definition, pluractional verbs “indicate multiple, iterative, frequentative, distributive, or extensive action” (Newman 2000:423). Newman was not the first one to recognize the plural semantics of these verbs, however: he himself

⁵ Yu (2003:296). PLR – pluractional, WP – witnessed past.

⁶ See Durie (1986:357-62) and Corbett (2000:252-7) for the diagnostics for verbal number, as opposed to number agreement marked on the verb.

mentions works as old as Westermann (1911). An important early work discussing verbal plurality in general is Dressler (1968). For an extensive overview of the pluractional concept as well as the history of the term see Newman (to appear). Other works that offer a cross-linguistic survey of pluractionality include Wood (2007) and Cabredo Hofherr (2010).

The present thesis belongs to the line of research that focuses on the semantics of pluractionality. In particular, I will provide an analysis of the meaning of pluractional verbs in Hausa (Chadic). Hausa will become the focus of the discussion only in Chapter 2 and 3. Chapter 1 is devoted to a general discussion of pluractionality: its purpose is to delimit pluractionality and discuss possible approaches to it. Before delving deep into the intricacies of the phenomenon, however, a working definition of pluractionality will be given. The purpose of this definition is not to cover all possible cases of pluractionals. Rather, it represents what I consider to be typical properties of pluractional verbs.

(2) **Typical properties of pluractionals**

- form: morphological marking
- meaning: (a) basic meaning – plurality of events:
 - temporal readings
 - participant readings
- (b) additional meanings:
 - large number of events
 - high individuation/ diversification
 - intensification (and other degree-like effects)

A typical pluractional has the plurality encoded in the form of the verb. The typical meaning contribution can be described as consisting of two parts. The first part is the basic meaning of pluractionality, which is event plurality. Event plurality can be manifested in more than one way. It seems to be characteristic for pluractionals that they can be interpreted as referring either to iterated events (temporal readings; cf. (1b)), or events distributed to different participants (participant readings; cf. (1e)).⁷ Even though the ability to express both temporal and participant-based readings is not a necessary feature of pluractionals, I will suggest below that at least some of the markers labeled as pluractional in the literature that give rise exclusively to temporal readings should be analyzed as aspectual. Similarly, a subset of the participant-based cases will be argued to represent a different phenomenon.⁸

⁷ Spatial readings (the plural events are distributed over different locations) could be either considered a subtype of participant readings or they could represent a third type of readings. It is not important at this point which way of dealing with spatial cases is more adequate. What is important at this point is that whether spatial readings are separate or not, a typical pluractional is not restricted to one way of expressing event plurality. Rather, it can be used for all these different meanings.

A fuller discussion of spatial readings – for Hausa only – will be given in Chapter 3.

⁸ The issue will be discussed in section 1.6.1.

In addition to event plurality, pluractionals often express various additional meanings. Most often, these additional meanings are ‘large number’ and ‘high individuation’/ ‘diversification’. This means that pluractionals typically refer to events that are many, rather than simply plural, and differentiated (cf. (1a)). Another possible additional meaning – less common, however – is intensification (cf. (1d)).⁹

The term ‘pluractional’ has also been used to describe cases that do not fit the characterization given above. One of the main goals of this chapter is to explore to what extent the notion of pluractionality can be extended without losing its content. This is particularly important in connection with the relatively large number of recent proposals that analyze phenomena that would traditionally be considered aspectual as pluractional in nature. However, the relation between aspect and pluractionality is not the only area where it is necessary to be careful about where the boundaries are drawn. Before a more adequate definition of pluractionality can be proposed, more research is also needed to determine, for example, which properties of pluractionals are defining and which are only typical. The present thesis cannot answer all possible questions related to how pluractionality should be delimited. Nevertheless, I will argue for a specific position in some of the issues and, in general, I will defend a rather restricted use of the term ‘pluractional’.

In the rest of this introduction, I will briefly discuss several issues. They all have to do with how pluractionality should be delimited. First, I will elaborate somewhat on the relation between pluractionality and aspect and pluractionality and gradability since some of the meaning effects associated with the use of pluractionals could be attributed to these other phenomena as well. Iterativity, for example, traditionally belongs to the domain of aspect. Intensification, on the other hand, is more naturally understood as having to do with gradability, rather than (event) plurality.¹⁰ In relation to that, I will also briefly discuss reduplication as a way of marking plurality, aspectual categories and intensification alike and as such representing a natural connection between these notions. Finally, I will discuss a possible strategy that can be used in determining what should be included in pluractionality and what represents a different phenomenon.

Starting with the connection between pluractionality, aspect and degree, I have stated that the basic meaning of pluractionality is event plurality. However, when looking more closely at the various cases labeled as ‘pluractional’ in the literature, one often encounters examples that could in principle be found in the literature on aspect or gradability. For instance, the habitual and iterative interpretations in (3a-b) would traditionally belong to the realm of aspect:

⁹ In some cases the degree effect seems to be the opposite: detensification. Cf. section 1.4.

¹⁰ The relation between pluractionality and aspect, and pluractionality and degree will be discussed in detail in sections 1.3. and 1.4.

- (3) a. krgrtk- krtk- [Yurok]¹¹
 ‘to fish habitually/ repeatedly’ ‘to fish for trout’
 b. hihindā hindā [Ngamo]¹²
 ‘he stood up repeatedly’ ‘he stood up’

Similarly, one can find examples of pluractional verbs where the event seems to be intensified, as in the following example:

- (4) Ku k’-uuk skuuwoksi’m ku pekoyoh [Yurok]¹³
 ART 2SG-child like.ITR.SG ART red
 ‘Your kids really like the candy (red licorice)’

Put in a non-pluractional context, this example could be taken to illustrate gradability in the verbal domain.

Notice that the boundaries between the three phenomena can be blurred not only in languages that are claimed to have pluractionals. The English example in (5) illustrates how a single expression can give rise to different interpretations that, when considered separately, could be potentially analyzed as plurality (5a), aspect (5b) and gradability (5c):

- (5) a. a lot of furniture ~ many pieces
 b. to go to the cinema a lot ~ frequently
 c. to appreciate a lot ~ intensively

The same degree expression *a lot* can give rise to different meaning effects depending on the type of predicate it combines with (cf. Doetjes 1997, 2004, 2007; Abeillé, Doetjes, Molendijk & de Swart 2004).¹⁴ Example (5a) has an interpretation involving a large number of pieces of furniture (a plural-like effect). In example (5b), *a lot* seems to be contributing the meaning of high frequency, which resembles aspect. Finally, example (5c) illustrates the ability of *a lot* to bring about intensification with the right type of predicate. Looking at cases like these separately might create the wrong impression of what the underlying phenomenon is in each particular case. The examples in (5) thus illustrate that the boundaries between plurality, aspect and gradability might in some cases be less clear and separating these phenomena requires caution.

In addition to the existence of (presumably unambiguous) expressions like *a lot*, where the actual meaning effect depends on the nature of the modified predicate, there is a formal means that is used to express a number of often related but separate meanings:

¹¹ Wood (2007:143).

¹² Newman (to appear, referring to Schuh, p.c.).

¹³ Wood (2007:167). ART – article, ITR – iterative.

¹⁴ The basic idea is that degree expressions like *a lot* require the presence of a scale and the predicates in (5) each introduce a different type of scale. The resulting interpretation then depends on the type of scale associated with the given predicate.

reduplication.¹⁵ Reduplication is very common in the languages of the world. It is also one of the most common means of deriving pluractionals. From the examples below, it can be seen that reduplication can be used to express plurality ((6a-b), (6e)), aspectual notions (6f-g) and meanings connected to gradability ((6c-d), (6h-i)) alike. Note that it applies to many different lexical categories.

(6)	<u>nouns</u>			
a.	amimígo 'friends'	amígo 'friend'	PLURAL	[Pangasinan] ¹⁶
	<u>adjectives</u>			
b.	na-lulukmeg 'fat.distr'	na-lukmeg 'fat'	PLURAL	[Ilocano]
c.	nikkaa nikkaa 'very small'	nikkaa 'small'	INTENS.	[Punjabi]
d.	yelo-yelo 'yellowish'	yelo 'yellow'	DETENS.	[Jamaican Creole]
	<u>verbs</u>			
e.	sseni 'sleep, pl actor'	seni 'sleep, sg actor'	PL. PARTICIP.	[Nukuoro]
f.	dewduddag 'repeatedly fall off'	duddag 'fall off'	ITERATIVE	[Yakan]
g.	mangi-mangi 'keep running'	mangi 'run'	CONTINUOUS	[Berbice D. Cr.]
h.	kyére-kyére 'desire intensely'	kyére 'desire'	INTENS.	[Zamboangeño]
i.	lon-lon 'be kind of running'	lon 'to run'	APPROX.	[Ndyuka]

Thus, on the one hand, the fact that plurality, various aspectual and degree-like meanings can all be expressed by reduplication can be taken as support for the idea that the links between these notions are very natural. On the other hand, the fact that reduplication can have all these uses might also explain why certain meaning effects are sometimes put together despite the fact that they represent separate meanings.

In the paragraphs above I have given some indication as to how and why the boundaries between pluractionality and other phenomena are often unclear. Below I suggest a

¹⁵ Naturally, there are different types of reduplication. However, for reasons of space I cannot discuss any finer distinctions here. For an overview of the various types and meanings of reduplication, see e.g. Moravcsik (1978), Niepokuj (1997), Regier (1998), Rubino (2005).

¹⁶ All examples, except for (d) and (i), are from Rubino (2005). Examples (d) and (i) are from Kouwenberg & LaCharité (2003). Berbice D. Cr. – Berbice Dutch Creole.

strategy that can be used in determining whether a marker is or is not pluractional. In particular, I will suggest that looking at languages that have a single marker for all pluractional uses is of special importance. The reasons are the following. First, if a language has a marker that can be used to express several different ‘meanings’, e.g. iterative and participant-based readings, it is quite safe to conclude that it is a genuine pluractional marker. This is true both in cases in which the given marker is the only pluractional marker of the language and in cases in which the language has other pluractional markers as well. The second reason why studying these ‘general’ pluractional markers is of special importance is a consequence of the first one: they can be used to restrict the range of possible pluractional meanings. This information can then be used when evaluating markers that express more specialized meanings. In particular, I suggest that only those markers could potentially be considered pluractional that express meanings which are also reported as possible meanings of at least some of these ‘general’ pluractional markers. This can be illustrated on durative interpretations. Consider the following description from Newman’s discussion of pluractionality in various Chadic languages (Newman 1991:55):

“Daba [...] has two different constructions of a pluractional nature. It has a reduplicated “iterative” construction that marks action repeated or extended over a period of time, and it has a suffixal “durative” construction which is used for “une action qui a déjà commencé et qui va continuer” [an action that has started and that will continue] (Lienhard & Wieseemann 1986:46).”

Durative readings are not in any obvious sense plural. Yet they are sometimes reported as possible meanings of pluractionals. I suggest that when deciding whether durative interpretations are possible pluractional interpretations, what should be looked at is whether there is a language whose general pluractional marker has also a durative reading. If there is no such marker, then there is no reason to assume that a marker that is used exclusively to express durativity is pluractional, rather than aspectual.¹⁷

From the perspective of what has just been said, Hausa is an ideal language to study since it has a single (reduplicative) pluractional marker for all pluractional ‘meanings’.¹⁸ Apart from Hausa, another language with a single pluractional formation for all uses is Chechen. In Chechen, pluractional verbs are formed by ablaut and receive different interpretations depending on the type of the verb stem (Yu 2003). Klamath also has a reduplicative marker that, according to Lasersohn (1995, relying on the description in

¹⁷ One such case (Chechen) will be considered in section 1.3.

¹⁸ Strictly speaking, there is more than one way to derive the pluractional form: either by means of a reduplicative CVC-/CVG- prefix, or by infixing a reduplicative -CVC- in the penultimate position. Nevertheless, the latter is an archaic formation, used only with a limited set of verbs (which also allow for the more productive formation). Moreover, its use and meaning do not seem to differ in any way from the productive prefixal formation (unless lexicalized with a specific meaning; for more discussion of the pluractional formation see 2.2.7.).

Barker 1964), can have temporal as well as participant-based and, apparently, spatial readings. Unlike Hausa and Chechen, however, Klamath is reported to have a number of other pluractional markers.

Languages that have a number of specialized pluractional markers are naturally very important to study as well. Their importance lies e.g. in providing support for various distinctions made within pluractionality.¹⁹ There are languages that are reported to have two or three pluractional markers (Bole, Yurok),²⁰ but some have been claimed to have up to nine different markers of pluractionality (Cuzco Quechua, Itonama).²¹ The general strategy that should be adopted when a language has a number of highly specialized potentially pluractional markers is to examine each marker carefully to exclude the possibility that some of them represent different phenomena in fact.

This thesis is divided into three chapters. Chapter 1, investigates pluractionality in its various aspects with the goal of delimiting the phenomenon with respect to related phenomena. Several theoretical accounts of pluractionality are presented. Chapter 2 presents the Hausa pluractional data. Chapter 3, the main chapter of the thesis, presents my analysis of pluractionality in Hausa.

In this chapter, the phenomenon of pluractionality and its various aspects will be examined step by step. As already mentioned, the main goal of this thesis is to offer a detailed analysis of Hausa pluractionals. The present chapter will prepare the ground for such an endeavor by delimiting the phenomenon and making it clear what the issues are that need to be addressed whenever an in-depth investigation of the semantics of pluractional verbs is attempted. Nevertheless, this chapter can also be read independently of the rest of the thesis as a hopefully useful, even though necessarily subjective, guide into the intricacies of the phenomenon of pluractionality.

¹⁹ Cf. the discussion in section 1.6.

²⁰ Bole, has three different ways of marking pluractionality (gemination, infixation and reduplication: the first two are used exclusively for distributive readings, the last one can also be used to express repetition; Schuh & Gimba in preparation). Yurok also has more than one affix that can be considered pluractional. According to Wood & Garrett (2002) and Wood (2007) there are two pluractional markers in the language, the so-called ‘iterative’ (‘intensive’ in Wood & Garrett 2002) and ‘repetitive’, which contribute different meanings. (In addition, the form that Wood calls ‘collective’ could probably be considered pluractional too; cf. the discussion in section 1.5.2.)

²¹ Faller (2008, drawing heavily from Cusihuaman 2001) claims that Cuzco Quechua has a number of distinct pluractional markers. Faller (2008) gives a list of nine pluractional markers. It is not entirely clear from the list and the labels and translations given there that all the markers should be considered pluractional (some of the affixes might also be misanalyzed; W. Adelaar, p.c.). Itonama has also been claimed to have a number of ways of marking pluractionality. Crevels (2006) gives a table containing seven (?) pluractional markers. The differences in their use are not completely clear from the table or the examples given. In addition, one of the markers given seems to contain one of the other ones. Moreover, some of the markers can combine within a single verb. Clearly, the situation is very complex in Itonama and would require more research. Unfortunately, it will probably not be possible to study this interesting language in more depth as there were only a few native speakers left at the time the paper was written.

The discussion will begin by addressing the obvious question of the relation between verbal number and nominal number (section 1.2.). Sections 1.3. and 1.4. will be dedicated to the complicated task of teasing apart aspect, plurality and degree. Section 1.5. contains a discussion of the use of the terms ‘distributive’ and ‘collective’, both of which are frequently used in connection with pluractionality. Section 1.6. will deal with two distinctions that are often made within pluractionality: the opposition between event number and participant number, and the distinction between event-external and event-internal plurality. Section 1.7. will be devoted to a discussion of how broad the notion of pluractionality should be, as the literature has lately witnessed an explosion of the use of the term. Four theoretical accounts of pluractionality are presented in section 1.8. Section 1.9. concludes the chapter.

1.2. Relation to nominal number

The mere existence of verbal plurality next to nominal plurality brings about certain questions. Is it necessary to talk about verbal number separately from nominal number? Are the facts in the two domains different to such an extent that they require a separate treatment? Or should the notion of plurality be generalized so that it fits both nouns and verbs? In the present section, I will argue that the same distinctions can often be found with both nouns and verbs but verbal plurality is still better treated as a separate phenomenon. One of the reasons is that verbal plurality has certain properties that seem to be more typical for the verbal domain than for the nominal domain. Another reason is that the complexity of the facts is higher in the case of verbs due to the nature of events as semantic objects. Note, however, that while this type of approach will allow a better understanding of the specifics of verbal plurality, the importance of generalizing the notion of number across domains remains.²²

There exists a large literature on parallels between the nominal and verbal domains. In particular, the mass/ count distinction in nouns is often compared to the unbounded/ bounded distinction in verbal predicates. In other words, number in nouns is compared to aspect in verbs (e.g. Mourelatos 1978, Bach 1986, Krifka 1989, 1992).²³ In this section, I will not discuss parallels of this type, however. The relation between plurality and aspect will be discussed in section 1.3. The present section focuses on comparing the types of distinctions that can be found in the category of number in the two domains, with the goal of determining to what extent the number systems in the two domains are comparable.

²² The analysis of Hausa pluractionality given in Chapter 3 will in fact make the connection between verbal and nominal plurality rather transparent.

²³ According to Krifka (1992), the similarity between nominal and verbal distinctions was observed already by Leisi (1953) and the effect of the verb’s arguments on the aspectual interpretation of the sentence was first investigated by Verkuyl (1972).

Starting the comparison with the number of values the category of number can offer, nouns seem to have more options than verbs. According to Corbett (2000) nominal number can have up to five values (the possibilities being e.g. singular, dual, trial, paucal, plural), while verbal number is usually restricted to the singular vs. plural opposition.²⁴ Actually, as Corbett points out, singular vs. plural (i.e. one vs. more than one) might not be the appropriate distinction. The opposition seems to be often rather ‘one vs. several’ or ‘one vs. many’, as illustrated by the following example from the Papuan language Fasu:²⁵

- (7) a. pari popari [Fasu]²⁶
 ‘one stays’ ‘many stay’
 b. mara mora
 ‘get one’ ‘get many’

Judging from these differences only, it could seem that verbal and nominal number are rather different from each other. Nevertheless, there are also forms in the nominal domain with properties often found with pluractional verbs. In particular, these are forms that I will be calling ‘special plurals’.²⁷ Special plurals can be contrasted with simple plurals, an example of which are English nominal plurals. In English, singular count nouns are generally assumed to refer to singularities/ atoms. Plural count nouns then refer to pluralities formed by two or more such atoms (alternatively, to atoms and all the pluralities formed from them).²⁸ Nevertheless, some languages have number-neutral forms for count nouns (cf. e.g. Rullman & You 2006, Doetjes to appear among others). Indonesian is an example of such a language: *buku* can refer to both one book and plural

²⁴ Some verbs in some (e.g. North-American) languages seem to have dual forms as well (Mithun 1988, 1999; Corbett 2000). It should be said, however, that these forms might be better analyzed as so-called ‘plural-argument verbs’. These verbs are analyzed as distinct from true pluractionals by Wood (2007). This view is adopted also in this thesis (cf. the discussion in 1.6.1.). As for other number values that are rare in the verbal domain, Konso is a very interesting language to look at. The following example seems to represent a verbal paucal (Ongaye Oda 2010):

(i) ɕɪmayta-si? innaa-sini? ?i=ɕɔ-ɕɔff-ay
 old.man-DEF.M/F child-DEF.P 3=RDP-pinch.SG-PF[3.SG.M]
 ‘The old man pinched the child a few times.’

The verb form exemplified in (i) is a plural derived from a (derived) singulative (*ɕɔ-ɕɔff* ‘pinch a few times’ is derived from *ɕɔff* ‘pinch once’, which is in turn derived from *ɕɔf* ‘pinch many times’). For a comparison to parallel nominal forms in Arabic see footnote 42.

²⁵ Some languages seem to have an opposition ‘one/two vs. more than two’ (cf. Mithun 1999, Corbett 2000). As for the fact that the non-singular form of verbs is usually not specific about the precise threshold value that is required for the form to be felicitous (it is ‘several’, or ‘many’), Corbett views this “indeterminacy of the number value” as something typical for verbal number. It can be seen, for example, from the fact that the number of participants needed for the appropriate use of a plural form differs from verb to verb.

²⁶ Foley (1986:128-9), as quoted by Corbett (2000:250).

²⁷ Cf. Al-Hassan’s (1998) distinction between simple and special plurality.

²⁸ On the debate concerning the question whether atoms should be included in the plural denotation see e.g. Sauerland, Anderssen & Yatsushiro (2005).

books. It is possible to form an unambiguously plural form, by full reduplication: *buku-buku*. It is not entirely clear what the meaning of these reduplicated forms is. It seems that it can be either simple plurality or ‘plurality and variety’.^{29,30}

- (8) buku-buku buku [Indonesian]³¹
 ‘books, or different kinds of books’ ‘book, or books’

Forms that express the ‘plurality and variety’ meaning are found in many languages, usually under the label ‘distributive plurals’.³² More examples of this type of special plurality are given in (9). The form in (9a) is distributive in the sense of referring to different kinds, the form in (9b) in the sense of spatial distribution:

- (9) a. otsikhe’ta’shòn:’a otsikhè:ta’ [Mohawk]³³
 ‘various candies’ ‘sugar, candy, candies’
 b. tukô·yo’ tukô·yo’ [Quileute]
 ‘snow here and there’ ‘snow’

The situation found with pluractional verbs is often very similar. The simple form of the verb is typically number-neutral (it can be used to refer both to singular and plural events) and the pluractional form refers exclusively to plural events.³⁴ In addition, pluractionals often express that the events are distributed ‘here and there’, affect different kinds of participants etc. Consider the following examples of ‘verbal distributives’ from Mohawk:

- (10) a. Wa’kenatahrónnion’ [Mohawk]³⁵
 wa’-k-nata-hr-onnion’
 FACTUAL-1SG.AGENT-visit-ANDATIVE-DISTRIBUTIVE.PRF
 ‘I went visiting here and there’

²⁹ Whether the reduplicated form receives a simple plural or a ‘variety’ meaning seems to depend on the given lexical item (animate nouns probably tend to be interpreted as simply plural in the reduplicated form, e.g. *orang-orang* ‘people’, in contrast to nouns referring to inanimate objects where the simple form might be preferred if simple plurality is the intended meaning), but it can also vary with the area (Macdonald 1976) and it seems to be subject to historical change (Rafferty 2002, referring to Gonda 1949).

³⁰ Not all languages that have number-neutral forms necessarily have plurals with special meanings. Turkish (Göksel & Kerslake 2005) and Hungarian (Rounds 2001) have number-neutral forms of nouns but if the plural form is used it is to convey a simple plural meaning.

³¹ Macdonald (1976:34).

³² Distributive plurals are used not just to express ‘variety’. It is perhaps more appropriate to characterize distributive plurals as expressing generally higher individuation, separation, or distinctiveness (cf. Mithun 1988, 1999). The issue of individuation, especially individuation of events, will be discussed in more detail in Chapter 3. As for the term ‘distributive’ and its different uses, see section 1.5.1.

³³ Example (9a) is from Andrade (1933:187), as quoted by Mithun (1999:88), (9b) from Mithun (1999:88).

³⁴ There do exist genuine singular forms in the verbal domain, however. Two examples of languages with genuinely singular verb forms are Konso (Ongaye Oda 2010) and Papago (Ojeda 1998; to be discussed in section 1.8.4.)

³⁵ Mithun (1999:90). The translation of (10b) was modified on the basis of Mithun’s discussion of the example.

- b. Wa'khninónnion'
 wa'-k-hninon-nion'
 FACTUAL-1SG.AGENT-buy-DISTRIBUTIVE.PRF
 'I bought different things'

The example in (10a) involves distribution over various locations, the example in (10b) distribution over "assorted objects": the buying was distributed over an assortment of groceries in a shopping cart.

Distributive plurals are not the only kind of special plurals. Another type of special plurals are the so-called 'plurals of large number' (Cusic 1981), or 'plurals of abundance' (Cowel 1964):

- (11) ašja:r šajar [Arabic]³⁶
 'lots of trees' 'tree' (generic/ collective)

In (11), the additional meaning contribution is that of large quantity. Again, in the verbal domain plurality often indicates large quantity or many repetitions, rather than simple plurality in the sense 'more than one':

- (12) a. As q'iigashna twop-qissira [Chechen]³⁷
 1SG crow.PL.DAT gun-throw.PL.RP
 'I shot crows many times'
 b. mənānu mənū [Ngizim]³⁸
 'spend many years' 'spend a year'

Augmentation seems to be another possibility, as illustrated by the following example:

- (13) buyu:ta:t bayt/buyu:t [Arabic]³⁹
 'big, important houses' 'house'/'houses'

A possible verbal counterpart of this type of plural are cases where plurality (of participants in this case) combines with intensification:

- (14) Yāraa sun rur-rùudee [Hausa]
 children 3PL.PF RED-be.confused
 'The children were very confused'

The first two types, plurals with the 'various kinds' and 'large quantity' meaning effects, can be found rather easily. The third type, representing plurality in combination with augmentation/ intensification, seems to be much less common, both in the nominal and verbal domain. Furthermore, the 'various kinds' and 'large quantity' meaning effects

³⁶ Cusic (1981:18).

³⁷ Yu (2003:294).

³⁸ Schuh (1981), as quoted by Newman (to appear).

³⁹ Cusic (1981:17).

(15) ṯasmāk samak [Syrian Arabic]⁴²
‘many or various fish’ ‘fish’

(16) Naa sàs-sayi littàttàfai [Hausa]
1SG.PF RED-buy books
'I bought many different books'

(17) Ōwã nakokonat sypomp opokakosypi [Karitiana]⁴³
kid 3-DECL-break-REDUPL-VERB-NFUT two-OBL egg
'The kid broke two eggs (one at a time)'

⁴¹ Special plurals can co-exist with other plurals and (genuine) singular forms. For example, triples like the following can be found in Hausa:

(i)	mafaṛkii	màfàṛkai/mafaṛkookii	màfàṛke-màfàṛke
	'dream'	'dreams'	'all kinds of dreams'

⁴² Cowel (1964:369). Note that the plural is derived from a ‘collective’ (and not singular) form. There is a singular (singulative) form (*samake* ‘a fish’) as well, which has its own corresponding plural (*samakāt*). This plural is also referred to as the ‘plural of paucity’ (“it [...] usually implies that the things referred to are few in number and individually discriminated”; Cowel 1964:369). It is generally the ‘collective’ vs. ‘plural of abundance’ contrast that corresponds to the number-neutral vs. pluractional contrast in the verbal domain. Note, however, that Konso seems to have what could be called ‘pluractionals of paucity’, in addition to other kinds of verbal number forms. These plurals are derived from (derived) singulatives. Notice the analogy with the singulative vs. ‘plural of paucity’ contrast in the Arabic nominal system. For a discussion of the verbal number system of Konso see Ongaye Oda (2010). For more discussion on the so-called ‘broken’ vs. ‘sound’ plurals (where ‘broken’ plurals are derived by a base pattern change, e.g. *ʔasmāk*, and the ‘sound’ plurals are derived by suffixation, e.g. *samakāt*) see Ojeda (1992).

⁴³ Müller & Sanchez-Mendes (2007).

The use of the pluractional in (17) does not require the events to be highly individuated, very many or intensified. It is sufficient if there is more than one event of egg-breaking. Needless to say, Karitiana pluractionals are rather exceptional in this respect.

Finally, apart from special plurals, which exhibit the interpretations described above, descriptions of ‘collective’ forms of both nouns and verbs can also be found in the literature. The term ‘collective’ requires some caution, however, as it is used in many different senses. For instance, in the discussion above the term ‘collective’ was used to refer to number-neutral forms in Arabic. The type of ‘collectives’ relevant for the present discussion is illustrated below:

- (18) a. háiwañ [Papago]⁴⁴
 ‘one or more head of cattle belonging to the same herd’
 b. cíkpan
 ‘to work (once or more than once) at one location’

The ‘collective’ form indicates that the objects belong together in a certain way. In Papago, collective forms of nouns express that the entities referred to belong to the same household or group (18a). Collective forms of verbs can be used to indicate that the events take place in the same location (18b) (Ojeda 1998).⁴⁵ Collectives in this sense can be considered the opposite of distributives as exemplified in (9) and (10) (cf. Corbett 2000:117ff).⁴⁶

The discussion above shows that even though there are number forms in the nominal domain that do not seem to have a direct counterpart in the verbal domain (e.g. trials), it is possible to find interesting and rather extensive parallels between the two domains. This is especially the case of forms that I call ‘special plurals’, which are mainly plurals of the ‘many and/or varied’ type. Apart from those, some languages also have both nominal and verbal ‘collectives’ (non-distributives). A summary of the parallels is given in Table 1.1.:

⁴⁴ Ojeda (1998:248, 251).

⁴⁵ Mathiot (1973, 1983) describes the nominal and verbal non-distributive forms in Papago as referring to entities or actions belonging to or taking place at a single ‘locus’.

⁴⁶ Collective interpretations in this and yet another sense will be discussed in more detail in section 1.5.2.

Table 1.1.: Parallels between nominal and verbal number forms

type of ‘plural’	nouns	verbs
simple plurals	‘more than one N’ (English)	e.g. ‘V more than once’ (Karitiana; (17))
special plurals		
a) distributives	e.g. ‘various Ns’ (Mohawk; (9a))	e.g. ‘V here and there’ (Mohawk; (10a))
b) plurals of abundance	‘many Ns’ (Arabic; (11))	e.g. ‘V many times’ (Chechen; (12a))
c) augmented/ intensified plurals	e.g. ‘big/ important Ns’ Arabic; (13))	e.g. ‘pl. subj V very much’ (Hausa (14))
collectives	e.g. ‘N(s) belonging to one herd’ (Papago; (18a))	e.g. ‘V at one location’ (Papago; (18b))

Coming back to the questions posed at the beginning of this section, let us consider now the possibility of treating nominal and verbal number uniformly. Nouns often express number values that are generally not found with verbs. On the other hand, in some languages the situation in the nominal and verbal domain is very similar and therefore a single analysis for both could be considered.

Papago is a language whose nominal and verbal number systems are very much parallel. It has indeed been proposed that nominal and verbal number could be treated uniformly in this language (Ojeda 1998). Papago has singular, ‘collective’ (non-distributive) and distributive forms with both verbs and nouns, with parallel meanings. This has already been illustrated for the non-distributive forms. As for the singular and distributive forms, an illustration of the parallels is given in (19):

(19) *unitive/singular*

- a. dáikuḍ [Papago]⁴⁷
‘a single chair from a single household’
- b. héhem
‘to laugh once (at one location)’
- c. habcéʔi
‘to say something for the first time once (at one location)’

⁴⁷ Ojeda (1998:249, 251).

distributive

- d. dáḍḍaikuḍ
‘several chairs from several households’
- e. cíckpan
‘to work (more than once) at more than one location’
- f. habcécce
‘to say something for the first time more than once at more than one location’

Ojeda assumes that individuals and events can both form mereological structures (cf. Bach 1986, Krifka 1989, who extend Link’s 1983 proposal to events) and as such they can be assigned essentially the same analysis.⁴⁸ Similarly to Ojeda (1998), Bar-el (2008) proposes a uniform semantics for nominal and verbal plurality in Squamish. The plural marker itself is identical (CVC- reduplication; Bar-el 2007, 2008, van Eijk 1998).⁴⁹

- | | | | | |
|------|----|----------------------------|----------------|--------------------------|
| (20) | a. | mex-míxalh | míxalh | [Squamish] ⁵⁰ |
| | | ‘bears’ | ‘bear’ | |
| | b. | Chen tl’ex-tl’exwenk | Chen tl’exwenk | |
| | | 1S.SG REDUP-win.INTR | 1S.SG win.INTR | |
| | | ‘I’m winning all the time’ | ‘I won’ | |

Bar-el assumes that the CVC-reduplicant in Squamish is simply a plural marker, which does not specify the domain to which it applies. As such, it creates either plural individuals or plural events (Bar-el 2007, 2008).

To summarize, there do exist proposals that assign a uniform semantics to nominal and verbal plurals. However, languages in which the nominal and verbal number systems are sufficiently similar are probably very rare. Usually, the differences between the two domains are rather substantial. In Hausa, for example, the plurality in the verbal domain is clearly not simple plurality, in the sense of ‘more than one’. By contrast, nominal plurals are generally simple plurals.⁵¹ In addition, there are other differences between the two domains, e.g. in the obligatoriness of plural marking. In general, it is to be expected that different languages will have different combinations of nominal and verbal number systems. As a consequence, for most languages, the idea of a uniform analysis for both nominal and verbal plurality is not very plausible. In addition, there are other reasons for treating pluractionality as a phenomenon in its own right. In particular, this kind of approach allows for focusing on the interesting issue of the relation between pluractionality and aspect, which is often touched upon in the literature. This issue is specific to verbs. The relation to aspect will be the topic of the following section. Before

⁴⁸ A more detailed discussion of Ojeda’s proposal is given in section 1.8.4.

⁴⁹ Cf. also Mithun (1988) for other North American languages, in some of which the same marker can be found also on adjectives.

⁵⁰ Bar-el (2008:33,38).

⁵¹ But see the more detailed discussion of nominal plurality in Hausa in section 2.2.5.2.

moving on there, however, it is worth stressing that despite the fact that pluractionality is probably best treated as a separate phenomenon, the study of pluractionality should be seen as contributing to our understanding of plurality in general.

1.3. Relation to aspect

The issue of the relation between aspect or Aktionsart and pluractionality is an important but also a complicated one, which is reflected by the lack of clarity on the distinction between these notions in the literature. This lack of clarity starts with the terminology, since various researchers use the terms aspect and Aktionsart differently. Therefore, I will start by trying to get some of the terminological confusion out of the way (subsection 1.3.1.). Subsection 1.3.2. will then review how the connection between pluractionality and aspect has been described in the literature. One of the main points of this section will then be that event plurality, including iterativity, is independent of the perfective vs. imperfective and bounded vs. unbounded distinctions (subsection 1.3.3.). As the other main point of this section has to do with iterative readings, I will first separate them from habitual readings, which are necessarily unbounded (subsection 1.3.4.). The claim will then be that iterative readings can have more than one source and, as a result, do not necessarily involve pluractionality. Basically, both aspectual categories and pluractionality, while representing separate phenomena, can give rise to iterative interpretations (subsection 1.3.5.). At the end of the section, I will extend the discussion to the issue of durative/ continuous readings (subsection 1.3.6.). Subsection 1.3.7. concludes the discussion.

1.3.1. Terminological issues

Let us start by looking at how aspect and Aktionsart are defined and how different authors relate pluractionality to these notions. Comrie (1976:3) gives the following definition of aspect (which is based on the definition given by Holt 1943): “As the general definition of aspect, we may take the formulation that ‘aspects are different ways of viewing the internal temporal constituency of a situation’.” Comrie adds to this in a footnote that the distinction between aspect and Aktionsart is drawn in two different ways, depending on the tradition. In both traditions aspect involves grammaticalization of the relevant semantic distinctions and Aktionsart represents lexicalization of the distinctions. The difference is that for Slavicists Aktionsart involves lexicalization by means of derivational morphology, while in the non-Slavicist tradition it is not important how the distinctions are lexicalized (Comrie 1976:6-7). To that it should be added that also the ‘relevant semantic distinctions’ are not the same, which will be made more explicit in the following paragraphs.

In the Slavicist tradition, Aktionsart refers to lexical classes of verbs such as ‘ingressive’, ‘delimitative’, ‘resultative’, ‘perdurative’, ‘cumulative’, ‘distributive’, ‘attenuative’,

‘semelfactive’ etc., which are derived from the basic verb by means of various affixes, mainly prefixes.⁵² A possible classification of different Aktionsart meanings can be found in Isačenko (1968). Isačenko distinguishes Aktionsarten with phase meaning, quantitative meaning, distributive meaning, and iterative meaning. Unlike aspect, which Isačenko considers a grammatical category with two values (perfective and imperfective),⁵³ Aktionsart is not ‘binary’. Verbs of different Aktionsarten do not form pairs, they are generally either perfectiva or imperfectiva tantum, as illustrated below (the relevant affixes are underlined).⁵⁴

- (21) *aspectual pairs* [Czech]
- | | | |
|--------------------------|---|-------------------------------|
| a. <i>imperfective</i> | | <i>perfective</i> |
| vař-i-t | > | <u>u</u> -vař-i-t |
| cook-SUF-INF | | PFV-cook-SUF-INF |
| ‘to cook/ to be cooking’ | | ‘to cook’ |
| b. <i>perfective</i> | | <i>secondary imperfective</i> |
| za-vař-i-t | > | za-vař- <u>ova</u> -t |
| PREF-cook-SUF-INF | | PREF-cook-IPFV-INF |
| ‘preserve (e.g. fruits)’ | | ‘to be preserving’ |
- (22) *Aktionsarten*
- | | |
|------------------------------|--------------|
| a. <i>perfectivum tantum</i> | |
| <u>po</u> -vař-i-t | DELIMITATIVE |
| DEL-cook-SUF-INF | |
| ‘cook for a little while’ | |

⁵² Cf. Isačenko (1968).

⁵³ The claim is not completely unproblematic for Slavic languages, where the perfective vs. imperfective distinction is only partly ‘grammatical’ or ‘inflectional’ (cf. Dickey 2000; also e.g. de Swart’s 2011b observation that the distinction between lexical and grammatical aspect is not always easy to establish in languages like Russian). Every verb is either perfective or imperfective and there are clear diagnostics for (im)perfectivity but pure aspectual pairs are rather rare. Perfective verbs are commonly derived from imperfective ones by prefixation. However, most prefixes carry some lexical meaning as well so they cannot be considered pure markers of perfectivity. In Czech, pure aspectual pairs are either pairs where the perfective form is derived by a purely perfectivizing prefix, where the imperfective form is derived from an underived perfective form, or where the imperfective form is derived from a derived perfective form (these are called secondary imperfectives). Nevertheless, even though the opposition between the perfective and imperfective aspect is not instantiated by pure aspectual pairs throughout the verbal system, aspect is still to be considered a grammatical category. By contrast, different Aktionsarten are lexical categories (cf. also Petr 1986, Grepl et al. 1995).

⁵⁴ SUF - stem suffix, INF – infinitive suffix, PFV – purely perfectivizing prefix, PREF – lexical prefix, IPFV – imperfectivizing suffix, DEL – delimitative prefix. Notice that the form in (22b) can be analyzed as being derived by a circumfix consisting of *po*- and *-áva*- (one of the reasons for not considering this a secondary imperfective derived from a *po*-prefixed verb is that there is no verb **pomrkat*).

b. *imperfectivum tantum*po-mrk-áva-t

REPETITIVE-ATTENUATIVE

DEL-wink-IPFV-INF

‘to wink at somebody (repeatedly, usually discreetly)’

The verbs in (21a) represent a case where the perfective form is derived from the imperfective one by means of a semantically ‘empty’ perfectivizing prefix. The aspectual pair in (21b) is formed by a derived perfective verb and its corresponding secondary imperfective form (*zavařit* ‘preserve’ is derived from the imperfective verb *vařit* ‘cook/boil’). The verbs in (22), on the other hand, do not have aspectual counterparts. There is no secondary imperfective **po-vař-ova-t* derived from *povařit*. Likewise, *pomrkávat* does not have a perfective counterpart: **pomrkat*.

As for the other, non-Slavicist tradition, the term Aktionsart is generally used interchangeably with the term ‘aspectual classes’, and as such it refers to categories such as activities, accomplishments, states or achievements (Vendler 1967, Dowty 1979, Mourelatos 1978, Bach 1986 among many others). Smith (1991) refers to these classes using the term ‘situation aspect’, or ‘situation types’, which she contrasts with viewpoint aspect.⁵⁵ The term ‘viewpoint aspect’ (or just ‘viewpoint’) is used to talk about the distinction between viewing a situation as a whole – perfective viewpoint – or focusing on a part of a situation only – imperfective viewpoint. By considering ‘situation aspect’ a type of aspect, the term aspect broadens considerably (Smith 1991:3).^{56,57}

“Aspect traditionally refers to the presentation of events through grammaticized viewpoints such as the perfective and imperfective. Recently, as scholars have come to appreciate the inter-relation between viewpoint and situation structure, use of the term has broadened to event structure or Aktionsart. Both viewpoints and situation types convey information about temporal factors of situations such as beginning, end, and duration.”

To conclude the terminological discussion, the terms aspect and Aktionsart are used quite differently by different authors. What is crucial for the present discussion, however, is that when verbal number or pluractionality is said to belong to Aktionsart or aspect, it

⁵⁵ Smith adds semelfactives to the four traditional types. In her view, categories like inchoative, causative, resultative etc. belong to a classification that is orthogonal to that of situation types. She also distinguishes derived situation types: habitual and multi-event situation types, which belong to the classes of statives and activities (Smith 1991).

⁵⁶ Verkuyl (1993, 1999) proposes the term ‘aspectuality’ to cover both what has traditionally been called aspect and Aktionsart. For arguments for keeping the two types of aspect separate cf. Richardson (2007).

⁵⁷ Other names for Aktionsart in the non-Slavicist tradition are ‘temporal constitution’ (Krifka 1989, 1992), or ‘predicational’, as opposed to ‘grammatical’, aspect (e.g. Verkuyl et al. 2004). Note, however, that for Verkuyl (1972 and subsequent work) ‘inner aspect’ is not lexical but rather compositional, in contrast to e.g. Comrie’s definition of Aktionsart at the beginning of this subsection. Thus, it might be appropriate to distinguish three types of aspect in fact: lexical aspect, telicity and viewpoint aspect (Borik 2002:12-13).

generally means that it is a type of lexical or situation aspect, not a type of grammatical or viewpoint aspect. To avoid confusion, I will use the terminology in my own discussion of the relation between pluractionality and aspect as follows. To refer to the perfective vs. imperfective distinction, I will use the term ‘viewpoint aspect’. The term ‘Aktionsart’ will be used essentially as in the Slavicist tradition, since the categories of lexical aspect distinguished in the non-Slavicist tradition are better referred to by the terms ‘aspectual classes’ or ‘situation types’. Nevertheless, when discussing iterativity both the terms ‘Aktionsart’ and ‘situation aspect’ can be used since iterativity has been subsumed under lexical aspect in both traditions (cf. Smith 1991).

After discussing the terminology, the focus can now be moved to how the connection between pluractionality (mainly of the iterative type) and aspect/ Aktionsart has been understood in the literature.

1.3.2. Pluractionality vs. aspect in the literature

In Dressler (1968), the terms ‘verbal plurality’ and ‘iterative Aktionsart’ are used interchangeably. Also for Cusic (1981), event plurality basically belongs to Aktionsart. Essentially the same approach can be found in Wood (2007:10): “I will argue that there is a close relationship between pluractionality, aspect and Aktionsart, and that pluractional categories are perhaps best understood as a type of Aktionsart”. Wood uses the term ‘aspect’ in the sense of ‘viewpoint’ and Aktionsart is for her independent of viewpoint. This implies that pluractionality should also be independent of viewpoint. In this connection, note the interesting observation by Dressler that there is an affinity between iterative Aktionsart (i.e. verbal plurality) and imperfective aspect but that iteration and perfective aspect do not exclude each other.⁵⁸ Finally, according to Corbett (2000), event number looks very much like aspect.⁵⁹ Corbett distinguishes two types of verbal number: event number and participant number. Event number refers roughly to repeated events and participant number to cases where the plural form of a verb is used to signal that the event has plural participants. The two types of number can be illustrated by the following examples.⁶⁰

(23) *event number*

- | | | | | |
|----|---------------------------|-------------|------------------|-------------------------|
| a. | As | q'iigashna | twop-qwessira | [Chechen] ⁶¹ |
| | 1SG | crow.PL.DAT | gun-throw.WP | |
| | ‘I shot crows’ | | | |
| | | | | |
| b. | As | q'iigashna | twop-qissira | |
| | 1SG | crow.PL.DAT | gun-throw.PLR.WP | |
| | ‘I shot crows many times’ | | | |

⁵⁸ Dressler (1968:60). An example of a perfective plural verb will be given below.

⁵⁹ Corbett does not use the term Aktionsart but it is presumably lexical aspect/ Aktionsart that he has in mind.

⁶⁰ The event number vs. participant number distinction will be discussed in more detail in section 1.6.1.

⁶¹ Yu (2003:294). WP – witnessed past.

participant number

- c. (Nee) ne-nua [Huichol]⁶²
 1.SG 1.SG-arrive.SG
 ‘I arrived’
- d. Tiiri yihuuta-ti me-niu?aziani
 children two-SUBJ 3.PL-arrive.PL
 ‘Two children arrived’

According to Corbett (2000:247), “repeated versus non-repeated action is a classic aspectual distinction” and thus it could be taken as a type of verbal aspect. Still, he claims, there are reasons for treating verbal number separately (Corbett 2000:247):

“First because it is worth noting the parallelism between number for the noun (number of entities) and aspect for the verb (number of events). Second, because the way in which number of this type is marked on the verb may also serve other purposes, which may be harder to distinguish from other types of number, in particular it may mark verbal number of the participant type [...]. And third, because for certain language families there is a tradition of using the term ‘plural verb’ in such instances and so this usage should be discussed.”

In accordance with Corbett’s (2000) first point, Bar-el (2008) suggests that in Squamish, the verbal and nominal number are to be treated as one phenomenon (cf. section 1.2. above). Note, however, that Corbett (2000) is only considering the idea that verbal number is a type of aspect for event number. As such, the possibility to analyze verbal number as aspect basically only exists for iterative cases. It would be rather non-standard to try to analyze the participant-based cases (e.g. (23d)) as aspect. This can be taken as a strong argument against subsuming pluractionality under (situation) aspect/ Aktionsart, as pluractional verbs are not only used to refer to repeated events but often also to events with plural participants. As a matter of fact, researchers who make a strong connection between aspect and pluractionality usually only deal with iterative/ temporal cases (e.g. Van Geenhoven 2004, Laca 2006). In this thesis, I adopt the position that pluractionality is separate from situation aspect/ Aktionsart exactly because pluractionality is not primarily about the temporal structure of events, while aspect in general is. In addition, investigating pluractionality in a broader context of the study of plurality can bring insights that would be lost if pluractionality was considered just a type of situation aspect/ Aktionsart.

In the next subsection, I will show that even though it might be a matter of debate whether a subset of pluractional cases is to be understood as a type of situation aspect/ Aktionsart or not, pluractionality is clearly independent of viewpoint aspect and the

⁶² Comrie (1982:99), as quoted by Corbett (2000:253).

bounded/ unbounded distinction (contra e.g. Van Geenhoven 2004, Alexiadou et al. 2007).⁶³

1.3.3. Pluractionality is independent of viewpoint aspect and the bounded vs. unbounded distinction

In order to see that verbal plurality is independent of viewpoint aspect, let us start with a few examples from Czech. Czech does not have pluractional verbs. However, it has verbs that (unambiguously) express iterative action.⁶⁴ The examples in (24) illustrate that both perfective verbs, which are used to talk about bounded events, and imperfective verbs, used to talk about unbounded events, can refer to plural events:

- (24) a. Za-klepal na dveře PERFECTIVE [Czech]
 PREF-knock.PFV on door
 ‘He knocked on the door’
 N.B. more than one knock
- b. Po-skakoval po chodniku IMPERFECTIVE
 PREF-jumped.IPFV on sidewalk
 ‘He jumped/ was jumping on the sidewalk’
 N.B. repeated little jumps, hopping

The example in (24a) refers to more than one knock: the sentence cannot be used if the person knocks on the door only once. The prefix makes the verb perfective, however, and gives an idea of a limit: the number of the knocks is rather small. The resulting event is thus bounded. Sentence (24b) also contains a plural verb: the verb expresses a plurality of small jumps. In this case, the verb is imperfective and refers to an unbounded event.

Similarly, pluractional verbs in Hausa can co-occur with both perfective and imperfective tense-aspect markers, which means that they can also get both bounded and unbounded readings:

- (25) a. Mutàanên sun zaz-zàunaa PERFECTIVE [Hausa]
 people.the 3PL.PF RED-sit.down
 ‘The people sat down’
- b. Mutàanên sunàa zaz-zàunâwaa IMPERFECTIVE
 people.the 3PL.IMPF RED-sit.down.VN
 ‘The people are/ were sitting down’

⁶³ These authors claim that pluractionality leads to unboundedness/ atelicity. Cf. Van Geenhoven (2004:142-3): “Pluractional predicates are like mass nouns (i.e., cumulative) and it is this that makes them unbounded and therefore atelic”. See also section 1.8.3.

⁶⁴ Filip & Carlson’s (2001) claim that Czech does have pluractional markers is discussed in the next subsection.

Both sentences contain pluractional forms and refer to plural events. Sentence (25a) refers to a completed event of a number of people sitting down. Sentence (25b) presents the action as an ongoing one: the people are in the process of sitting down.

These examples show that verbs referring to plural events can co-occur both with imperfective and perfective markers and that the plurality can be both bounded and unbounded. I conclude, then, that pluractionality is independent of the distinction between bounded and unbounded events.

1.3.4. Habitual readings

Before proceeding to the discussion of the different sources of iterative interpretations, it is important to separate habitual readings from iterative ones. The relevance of discussing habitual readings follows from the fact that pluractional verbs have been claimed to give rise to this type of interpretation in some languages. Consider the following examples:

- (26) a. Yok legaayo' ku mewihl [Yurok]⁶⁵
 here pass.ITR ART elk
 'The elk come through here'
- b. Chen tl'ex-tl'exwenk [Squamish]⁶⁶
 1S.SG REDUP-win.INTR
 'I'm winning all the time'

Rather than there being pluractionals that are interpreted exclusively habitually, it seems more correct to say that pluractional forms that are assigned iterative interpretations can often receive habitual readings as well.⁶⁷

- (27) Chen kwel-kwelesh-t ta sxwi7shn [Squamish]⁶⁸
 1S.SG REDUP-shoot-TR DET deer
 a. 'I shot the deer several times'
 b. 'I hunt for a job'

Habitual sentences are necessarily unbounded ('imperfective' in Comrie's 1976, 'stative' in Smith's 1991 terminology). Iterative interpretations are different from habitual interpretations in that they can involve an event that is repeated a limited number of times (a bounded event, possibly expressed by a perfective form), or an unlimited number of times (an unbounded event, expressed by an imperfective form). In

⁶⁵ Wood (2007:146).

⁶⁶ Bar-el (2008:33).

⁶⁷ Another example of a language in which a pluractional generally interpreted as iterative has also habitual uses is West Greenlandic (Van Geenhoven 2005, footnote 2).

⁶⁸ Bar-el (2008:34).

“In some discussions of habituality, it is assumed that habituality is essentially the same as iterativity, i.e. the repetition of a situation, the successive occurrence of several instances of the given situation. This terminology is misleading in two senses. Firstly, the mere repetition of a situation is not sufficient for that situation to be referred to by a specifically habitual (or, indeed, imperfective) form. If a situation is repeated a limited number of times, then all of these instances of the situation can be viewed as a single situation, albeit with internal structure, and referred to by a perfective form. [...] Secondly, a situation can be referred to by a habitual form without there being any iterativity at all.”

1.3.5. Sources of iterative readings

(28) a. Fluffy was jumping (from bed to bed)
 b. Fluffy skákal z postele na postel [Czech]
 Fluffy jumped.IPFV from bed to bed

(i) Vypije jednu skleničku vodky denne
drinks-PF one glass vodka day
'S/he drinks one glass of vodka a day'

⁷⁰ Cf. also Wood (2007:10), who, with reference to the English progressive, points out that “aspectual categories which are not inherently pluractional can [...] produce interpretations of repetition when combined with certain types of events”.

It is the presence of the progressive/ imperfective forms in (28a-b) what triggers the iterative reading. The iterative interpretation is not the only possible interpretation of the progressive/ imperfective: the sentences could also be interpreted as referring to Fluffy's being in the middle of the action.⁷¹ However, the iterative interpretation is much more plausible, due to the short duration of the event of jumping. I believe that the correct approach to these cases is to see the iterative interpretation as a result of the situation being presented as an ongoing action. In other words, these cases do not involve pluractionality.

While cases where the iterative interpretation is the result of the predicate being in the progressive/ imperfective should be relatively easy to identify, the situation is more complicated in the case of iterative or frequentative Aktionsart. Cases like the following one quite clearly belong to the realm of aspect:

- (29) Fluffy skák-áva-l do vody z tohoto prkna [Czech]
 Fluffy jump-FREQ-3SG.M.PST into water from this board
 'Fluffy used to jump into the water from this board'

The sentence in (29) refers to a more or less regularly repeated action in past. It is not simple iteration: the frequentative form is rather used to indicate a habit. Frequentatives are imperfective in Czech (and Slavic in general) but, unlike in (28b), the repeated action meaning is not just one of the possible interpretations of the imperfective aspect. Rather, the iterative meaning is unambiguously contributed by the use of the frequentative suffix.⁷² Note, however, that while in Czech, the frequentative suffix is clearly aspectual in nature, markers of iterativity in other languages might be more difficult to analyze as either aspectual or pluractional.⁷³

This raises the question whether it is possible to determine if an iterative interpretation is a result of pluractionality or iterative Aktionsart. As mentioned already in subsection 1.3.2., pluractionals generally give rise not only to iterative but also participant-based and other readings. I suggest, then, that the question whether the given marker marks exclusively iterativity or whether it has other uses as well can be used as a criterion. If the iterative interpretation is the only interpretation of the given marker I suggest that it

⁷¹ The Czech sentence also has a habitual reading.

⁷² The connection between iterativity and imperfective aspect is very interesting. Old Slavic had morphological iteratives, which were reanalyzed as simple imperfectives as the new aspectual system with the opposition perfective – imperfective developed. This means that the iterative meaning became only one of the possible meanings of these originally exclusively iterative forms. As a consequence of the change in the aspectual system, imperfectives that were not morphologically iterative started to be able to express iterative meanings as well and in some cases even replaced the older morphological iteratives (Němec 1958). Note, however, that while iteratives/ frequentatives are typically imperfective, iteration is not necessarily associated with imperfective aspect (cf. Němec 1958, Dressler 1968, Comrie 1976).

⁷³ An example of a study analyzing markers expressing exclusively iteration (in West Greenlandic) as pluractional is Van Geenhoven (2004). This proposal will be discussed in detail in section 1.8.3. The opposite case also exists. Markers that are clearly pluractional, expressing both iterative and participant-based meanings, are sometimes considered markers of iterative aspect (e.g. Foley 1986:148 for Kiwai, a Papuan language).

is better to treat the marker as expressing iterative Aktionsart, unless other facts indicate otherwise.⁷⁴ A typical pluractional will have other uses apart from the temporal ones.

To summarize, iterative cases require caution since iterativity can have several distinct sources: pluractionality, iterative Aktionsart and imperfective aspect. In other words, these three phenomena are distinct from each other, yet they can lead to a similar result in certain cases.

1.3.6. Durative readings

The final issue to be dealt with within the pluractionality vs. aspect discussion is the issue of durative/ continuous readings.⁷⁵ Some authors mention durative/ continuous interpretations as possible interpretations of pluractional verbs (e.g. Cusic 1981, Yu 2003; cf. also Van Geenhoven 2005 and the so-called continuative marker in West Greenlandic). Two examples illustrating this type of interpretation are given below (Houser et al. 2006):

- (30) a. Nüü mana'wi sa'a [Mono Lake Pauite]⁷⁶
 I for.a.long.time cook.DUR
 'I cook for a long time'
- b. Tümpi kattü paa kuppa [Tümpisa Shoshone]
 rock sit.DUR water in
 'The rock is sitting in the water'

The question raised by examples of this type is whether continuous readings can be considered plural. The terms 'durative' or 'continuous' would normally belong to the domain of (situation) aspect, not plurality.⁷⁷ Similarly to the cases of iterative interpretations, then, the general strategy should be as follows. Whenever a pluractional marker is reported to have a durative/ continuous reading, such cases should be considered carefully to exclude that possibility that the so-called pluractional marker is in fact an aspectual marker.

In this connection, an interesting language to look at is Chechen. In Chechen, pluractional verbs are formed by stem vowel alternation. They are claimed to have three kinds of interpretations: iterative, distributive and durative, with the iterative interpretation being the most typical one (Yu 2003, Wood 2007). The durative interpretation can be exemplified by the following example:

⁷⁴ Forms expressing iteration that should be analyzed as marking verbal number and not iterative aspect can be found e.g. in Papago (cf. section 1.8.4.).

⁷⁵ In fact, this issue is also connected to the discussion of the connection between plurality and degree, which is the topic of section 1.4.

⁷⁶ Houser et al. (2006:3,7).

⁷⁷ Similar readings can also arise as a result of modification by degree expressions, which is an issue to be discussed in the next subsection.

- (31) Beer pxinna minuotiahw c'iizira / *c'euzira [Chechen]⁷⁸
 baby five.OBL minute.LOC whine.PLL.WP/ whine.WP
 'The baby whined for five minutes'

If the whining lasts longer than just a moment, the pluractional has to be used. The data are quite surprising from the point of view of English, where *whine* is an activity verb and as such compatible with durative adverbials. However, in Chechen, the non-pluractional verb can refer only to an instantaneous event and to express a duration the pluractional form has to be used. Wood describes the non-pluractional verbs as referring to a 'minimal unit' of action. The class of verbs with this behavior includes verbs of motion that can be translated as 'crawl' or 'run'. Unlike the type of verbs represented by example (31), the motion verbs do not refer to instantaneous events. According to Wood, they rather refer to events that are somehow bounded (by a goal, time etc.). As such, they can also be said to refer to bounded units in the non-pluractional form, just like the type of verbs exemplified in (31):

- (32) a. So tykana vedira [Chechen]⁷⁹
 1.SG.ABS store.DAT V.run.WP
 'I ran to the store'
- b. So cwana sahwiahw idira
 1SG.ABS one.OBL hour.LOC run.PLL.WP
 'I ran (went running) for one hour'

It can be concluded from these facts that the non-pluractional verbs are indeed not activity verbs, contrary to what one might be inclined to think based on their English translation alone. As a consequence, the so-called durative cases are not durative in fact. Rather, they should be understood as involving repetition, where what is repeated is the 'minimal unit' of action. Given the fact that these minimal events are internally homogeneous, so to speak, simple repetition without gaps between the events gives rise to readings indistinguishable from durative readings. Nevertheless, the issue cannot be resolved completely, as there are cases that seem to be genuinely durative and not just masked repetitions:

- (33) As hara eeshar shina minuotiahw liiqira [Chechen]⁸⁰
 1SG.ERG DEM song two.OBL minute.LOC sing.PLL.WP
 'I sang this song for two minutes (the song may not have been completed)'

In (33), it is not clear whether repetition is involved. Given that the song may not have been even completed, it is not clear what the repeated minimal unit of the event would be.

⁷⁸ Wood (2007:222). PLL – pluractional, WP – witnessed past tense.

⁷⁹ Wood (2007:224).

⁸⁰ Wood (2007:228).

To conclude, I suspect that in most cases the so-called durative uses of pluractional verbs either turn out to be masked repetitions or that the verbal forms are in fact not pluractional but rather express durative Aktionsart. However, at this point I do not have enough evidence for making any definite conclusions and thus I leave the issue open.⁸¹

1.3.7. Conclusion

In this section, I discussed the relation between pluractionality and aspect. I argued that pluractionality is not a type of Aktionsart/ situation aspect (contra e.g. Cusic 1981, Wood 2007). The main reason is that the temporal-like interpretations form only a subset of all pluractional interpretations. Pluractionality is not primarily concerned with the temporal structure of events. Rather, it expresses plurality of events, and event repetition is just one type of event plurality. I also argued in this section that pluractionality is independent of viewpoint aspect and the bounded vs. unbounded distinction (contra e.g. Van Geenhoven 2004, 2005). Pluractionals can in principle be combined both with perfective and imperfective aspect and can give rise to both bounded and unbounded interpretations. Pluractionality is thus distinct from both lexical and grammatical aspect. Nevertheless, both types of aspect, on the one hand, and pluractionality, on the other hand, can give rise to iterative interpretations. It may be very hard to decide whether a given iterative interpretation is a result of pluractionality or iterative Aktionsart. A suggestion made here was that cases with exclusively temporal interpretations are better analyzed as aspectual rather than pluractional.

1.4. Relation to degree

As mentioned in the introduction to this chapter, pluractional verbs have sometimes been called ‘intensive verbs’. Moreover, pluractionals typically express meanings that go beyond simple event plurality and one of the additional meanings found with pluractionals is intensification (or other degree-like effects). Both these facts suggest that there is a natural connection between event plurality and gradability. In this section, I will argue that discussing gradability in connection with pluractionality is relevant in two respects. First, the interpretations that pluractionals give rise to could at least in some cases also be analyzed as resulting from degree modification. This means that the possibility exists that markers that are usually analyzed as marking event plurality should be analyzed as degree expressions instead. If that were the case, the use of the term ‘intensive verbs’ would in fact be justified. I will argue below, however, that this hypothesis is not supported by the available pluractional data. A degree analysis would predict the existence of many non-plural interpretations, which is a prediction that is not borne out.⁸² The second way in which gradability enters the discussion is related to the

⁸¹ The issue is not very pressing for the present thesis, as Hausa pluractionals do not give rise to durative interpretations.

existence of degree effects accompanying event plurality, which are reported for different types of pluractionals. The degree effects are generally of two types: intensification and detensification. Both types of cases will be described below.

This section is divided into five subsections. Subsection 1.4.1. is a discussion of the fact that degree expressions sometimes seem to give rise to plural interpretations. Subsection 1.4.2. deals with the question to what extent it is justified to use the term ‘intensive verbs’. In particular, cases that seem to involve intensification without the event being plural are discussed there. After that I turn to cases where intensification is a meaning effect found in addition to event plurality (subsection 1.4.3.). Finally, cases where event plurality is accompanied by some form of detensification or decrease are dealt with (subsection 1.4.4.). Subsection 1.4.5. concludes the discussion.

1.4.1. Degree expressions and plurality

There is a class of expressions that can be called degree expressions, some of which combine with different lexical categories and can give rise to rather different interpretations depending on what type of predicate they combine with (cf. Doetjes 1997, 2004, 2007). Thus, when combined with a plural count noun, as in (34a), or a mass noun, as in (34b), a degree expression like the Czech *hodně* ‘a lot’ gives rise to an increased quantity interpretation. When combined with an abstract noun, as in (34c), on the other hand, the change in the interpretation is on the qualitative, rather than quantitative scale, resembling the cases in which *hodně* combines with certain adjectives (34d).

- (34) a. *hodně ponožek* [Czech]
 ‘a lot of socks’
 b. *hodně pudinku*
 ‘a lot of pudding’
 c. *hodně lásky*
 ‘a lot of love’
 d. *hodně intuitivní*
 ‘very intuitive’

Hodně can combine with verbal predicates as well. Again, the interpretation depends on the type of predicate. With gradable verbs like (35a), the increase is on the scale of intensity. With other (eventive) verbs, it could be interpreted as longer (overall) duration (35b),⁸² or more occasions (35c):

⁸² Cf. section 1.3.6., where durative cases are discussed.

⁸³ The kind of interpretation that degree expressions like *hodně* ‘a lot’ in combination with verbs like *spát* ‘sleep’ (activity verbs) give rise to is ‘spend a lot of time V-ing’ rather than ‘V for a long time’. In other words, there can be interruptions as long as the ‘global amount’ of V-ing is large (cf. Doetjes 2007) and thus the type of reading cannot be strictly speaking called durative/ continuous.

- (35) a. *hodně obdivovat* [Czech]
 ‘admire a lot’
 b. *hodně spát*
 ‘sleep a lot’
 c. *hodně chodit do kina*
 ‘go to the cinema a lot’

Notice that *hodně*, like other degree expressions, combines with mass or plural predicates (34a-b), and not with singular count predicates (cf. Doetjes 1997), as witnessed by the ungrammaticality of **hodně ponožky* ‘a lot of sock’. It is harder to see this with verbs, at least in languages like English, since the verb forms are generally the same both when they refer to a single event (*go to the cinema once*) and when they refer to many events (*go to the cinema a lot*). However, sometimes, the morphology of the verb makes things more transparent, as exemplified by the following contrast found in Czech:

- (36) a. **jít hodně do kina* [Czech]
 go.DIR a.lot to cinema
 b. *chodit hodně do kina*
 go.NONDIR a.lot to cinema
 ‘go to the cinema a lot’

In (36), both forms are imperfective. The difference is that the verb form in (36a) is the so-called ‘determinate’ form and the one in (36b) is the ‘indeterminate’ form of the verb (cf. Isačenko 1968, Timberlake 2004; other terms are ‘directed’ and ‘non-directed’). In the present context, the non-directed form refers unambiguously to multiple events of going to the cinema, the directed one to a one-time event. Only the non-directed form, being interpreted as plural, is compatible with a degree expression like *hodně*. This shows that degree expressions do not create plurality but rather require it in order for the complex expression to be interpretable. This means that the modified predicate has to be either unambiguously plural or number-neutral. In the latter case, the presence of a degree modifier forces the plural interpretation by excluding the singular one.

The behavior of degree expressions is relevant for the discussion of pluractionality because cases like (36b), containing expressions like *hodně* ‘a lot’, get a ‘many events’ interpretation. Moreover, the other interpretations found with verbal predicates modified by degree expressions – longer duration and intensification (cf. (35)) – can sometimes be found in descriptions of pluractional verbs, even though less often than iteration. In principle, then, the question could be asked whether what is called pluractional morphology could possibly be reinterpreted as degree morphology. The prediction would be that the resulting interpretation would depend on the type of verbal predicate. For example, *sleep* in combination with a degree morpheme with a meaning comparable to ‘a lot’ would get an interpretation like ‘spend a lot of time sleeping’. Gradable verbs

like *love* in combination with such a morpheme would be interpreted as ‘love intensely’ and *go* in *go to the cinema* as ‘often go (to the cinema)’ etc. The question is whether the available data on pluractionals support the idea that what is called pluractional morphology is in fact degree morphology. The answer has to be negative. The reason is that, apart from the fact that it is not clear how a degree analysis would account for participant-based readings, such an analysis would predict the existence of many non-plural interpretations. This is not the case, however. In particular, genuine durative readings are hard to find with uncontroversially pluractional verbs (see subsection 1.3.6). In addition, intensification typically only accompanies event plurality and is usually not the sole meaning contribution of a pluractional.^{84,85}

Before concluding this subsection, I would like to discuss one more type of case where degree and event plurality interact in an interesting way and where it also might not be clear what brings about the plural interpretation. These are certain classes of verbs in Czech that have degree/ measure prefixes and a plural denotation at the same time. Consider the examples below:

- (37) a. Na-nosil sem židle [Czech]
 PREF-brought here chairs
 ‘He brought (a lot of) chairs’
 b. Děda po-kašlával celé odpoledne
 grandpa PREF-coughed whole afternoon
 ‘Grandpa coughed a bit every now and then/ intermittently all afternoon’

Filip & Carlson (2001) consider the prefix *na-* to be a pluractional marker.⁸⁶ Similar claims could in principle be made about the prefix *po-* in (37b), which expresses attenuation: the verb as a whole looks very much like pluractionals of the repetitive-attenuative type which will be discussed in subsection 1.4.4. However, I believe the correct interpretation of the contribution of the prefixes is rather that of ‘high degree’ in the case of *na-* and ‘low degree’ in the case of *po-*.⁸⁷ The plurality is required by the degree prefix but it is the imperfective form of the verb the prefix combines with that should be understood as its source. Recall that degree expressions in general require mass or plural denotations (cf. subsection 1.4.2.) and that one of the uses of imperfective forms in Slavic is to express iteration (cf. subsection 1.3.5.). Thus, I consider these prefixes different from pluractional markers. However, these prefixed verbs resemble the

⁸⁴ Some potential examples of ‘pure intensification’ interpretation will be discussed in the following subsection.

⁸⁵ Note that it could still be the case that some of the ‘pluractional’ cases with durative interpretation are in fact not pluractionals but rather verbs with a degree morpheme. This explanation would be quite plausible in cases in which the morpheme in question cannot be used to express participant-based plurality, for example, and especially in cases in which the morpheme has other readings that are more clearly degree-related. See Moravcsik (1978:321) for some potential cases of reduplicative degree morphology.

⁸⁶ They make the same assumption for the distributive prefix *po-*, which is different from the *po-* in (37b) and will be discussed briefly in section 1.5.1.

⁸⁷ As I argue in Součková (2004), following Filip (2000).

kind of plural verbs that will be the focus of the last two subsections of this section: cases where (high or low) degree accompanies pluractionality.

1.4.2. Intensive verbs?

The term ‘intensive verbs’, which is sometimes used to refer to pluractional verbs, especially in older literature (but also in Schaefer 1994, Garrett 2001a), suggests that these forms are used to express that the meaning of the predicate is somehow intensified. This subsection deals with the question whether the use of this term is at least partly justified. Generally, it seems clear that this is not an adequate characterization of these verbs (cf. Newman 2000). However, it is necessary to distinguish between cases where intensification is the sole meaning contribution of the given marker and those where it is an additional meaning effect that accompanies event plurality. The first type is extremely rare, even though such cases can occasionally be found (cf. Dressler 1968, Schaefer 1994, Wood 2007). The second type seems to be more common. The latter type will be dealt with in the next subsection. In this subsection, I will discuss potential cases of the first type since those are the cases in which there is no event plurality involved and for which, then, the term ‘intensive’ would be appropriate.

As already mentioned, it is generally hard to find clear cases of (pure) intensification, even though intensification is a kind of interpretation often listed as one of the meanings of pluractionals. For many examples where the use of a pluractional marker results in an ‘intensified’ interpretation the question should be asked whether the high degree interpretation is genuine or only apparent, that is, derivable from plurality. An example of ‘derived intensity’ could be the following sentence that Frajzyngier (1965) gives as an example of intensified action:

- (38) (Wata raana John yaa faadoo dàgà kân itàacee... [Hausa]⁸⁸
 ‘One day John fell off a tree...’)
 ya kùk-kùuje kafàrsà
 3SG.M.RELPF RED-scrape leg/foot.his

Frajzyngier translates the sentence as ‘(One day John fell off a tree) and hurt his foot very badly’. However, as already pointed out by Dressler (1968:99), the ‘intensification’ effect in this example follows rather from the multiplicity of the injuries (the leg/ foot was hurt in many places). And indeed, it seems that many examples cited in the literature as cases of intensification could be of this type, i.e. of the type where the ‘intensity’ follows from multiplicity of the (sub)events. This is particularly clear with verbs that refer to breaking, cutting, hitting etc. Nevertheless, there are cases where the high degree interpretation cannot be easily derived from plurality. An example from Yurok, where the base verb *mmry* means ‘be pretty’, is given in (39):

⁸⁸ Frajzyngier (1965:48), the glosses are mine.

- (39) Kwesi segep noohl ‘o ge’s, to’ ch’ume’y [Yurok]⁸⁹
 CONJ Coyote then LOC think CONJ how
 ‘u-mrgmry k’i we’yon
 3-pretty.ITR ART girl
 ‘Then Coyote thought, “how very pretty that girl is”’

A similar example from Niuean is given in (40):

- (40) a. Ne lika a ia ke tule e akau [Niuean]⁹⁰
 PAST fear ABS she SBJTV high ABS tree
 ‘She is afraid of being up the tree’
 b. Ne lilika a ia ke tule e akau
 PAST fear.RD ABS she SBJTV high ABS tree
 ‘She is intensely afraid of being up the tree’

Do examples like these suggest that at least some pluractionals could indeed be described as having ‘intensive’ semantics and as such they should be analyzed in terms of degree rather than plurality? The question is hard to answer because the number of undisputable degree cases is typically very small in any given language and thus it is not easy to see whether the meaning effect observed is regular, or whether these verb forms are simply lexicalized with such meanings.

1.4.3. Intensification in addition to event plurality

There are two types of cases in which one can speak of a high degree effect accompanying event plurality with pluractionals. The first type is not only very common, but actually even typical of pluractionality. It is the type of cases where the pluractional is used to refer to many, rather than just plural events:

- (41) a. Mutàanee sun fiĩ-fítoo [Hausa]
 people 3PL.PF RED-come.out
 ‘many people came out’
 b. Taa mà-màaree shi
 3SG.F.PF RED-slap him
 ‘She slapped him many times’

In the sentences above, the use of the pluractional implies that the number of the individual subevents is large. This type of effect could be analyzed as a high degree effect, in accordance with the observations made in subsection 1.4.1.⁹¹ The other type of cases where high degree effects are found in combination with event plurality are cases

⁸⁹ Wood (2007:192).

⁹⁰ Haji-Abdolhosseini et al. (2002:485). SBJTV – subjunctive, RD – reduplication.

⁹¹ A parallel claim is made in Henderson (2010) for Kaqchikel.

where each of the individual subevents is intensified. This can be illustrated by the following example from Hausa:

- (42) Yâraa sun rur-rùudëe [Hausa]
 children 3PL.PF RED-be.confused
 ‘The children were very confused’

The interpretation typically assigned to sentence (42) is that there was a plural event (one for each child) and each of the individual events was an event of being very confused. Note that the plurality meaning is obligatory when the reduplicative marker is used and that the high degree effect is not present in the non-pluractional form:

- (43) a. *Yaaròn yaa rur-rùudëe
 boy.the 3SG.M.PF RED-be.confused
 intended: ‘The boy was very confused’
 b. Yâraa sun ruudëe
 children 3PL.PF be.confused
 ‘The children were confused’

Example (43a) shows that the reduplicated form is incompatible with a singular subject, while sentence (43b) illustrates that the non-pluractional form does not have an intensified meaning.

Two of the meaning effects listed as typical additional properties of pluractionals in the introduction to this chapter were ‘large number of events’ and ‘intensification’ (and other degree effects). I suggested above that these two properties are in fact related. In the following subsection, I will discuss cases that are the opposite of the cases just discussed. In particular, different cases of pluractionals will be discussed where event plurality is accompanied by some notion of diminution or decrease. Before that, however, let us have a look at what the nature of the connection might be between event plurality and intensification. I give some suggestions as to how one type of meaning can evolve into the other, which will be supported by a few remarks found in the literature.

According to Wood (2007:15), “there is no necessary connection between plural number and intensity”, despite the fact that “intensive and attenuating meanings are relatively common as secondary meanings of categories indicating repetition or some other type of clearly plural event meaning”. I agree with the claim that that the connection is not necessary. However, it is interesting that pluralization and intensification often do go hand in hand in the case of pluractionals. In addition, it seems that it is natural for degree interpretations to evolve into plural interpretations and vice versa. One could speculate that markers that start out as expressing degree meanings can develop into plural markers. A possible reflex of such a development in a given language could be the existence of a limited number of pluractionals that are lexicalized with high degree interpretations. Support for this idea can be found in Wood (2007). When discussing cases of Yurok verbs with pluractional morphology and intensified meanings, Wood

(2007:193) mentions that this class of verbs is very limited “and almost all examples are from archival material”. Her speakers, when confronted with these examples found in the earlier literature either rejected the forms, interpreted them as indicating repetition, or did not see a difference between the pluractional and non-pluractional forms. In other words, for those speaker these forms were not examples of intensification.

There is also evidence for the existence of a shift from plurality to degree. The fact that plurality can be interpreted as intensification was shown already in (38), where the seriousness of the event of scraping one’s foot or leg follows from the multiplicity of injured parts. Wood (2007:193) also mentions a similar kind of reinterpretation as a possible source of intensification meanings: “[t]he emotion verbs are a possible bridging context to get from plural event meaning to intensification. Any action which when repeated has a cumulative effect could possibly lead to an intensification meaning. In Yurok the emotion verbs seem to be the most robust class of genuinely intensive meanings for the Iterative infix”. Schaefer (1994) mentions yet another possible way of the emergence of intensification meanings in pluractionals. In her discussion of Vedic ‘intensives’, she suggests that intensification can emerge as a result of iteration with a certain class of verbs. She gives as a possible development the following transition: iteration (e.g. repeated sound) → iteration + intensification (e.g. repeated sound that is louder at the same time) → intensification (e.g. louder sound).⁹² Nevertheless, note that, however plausible this type of transition might be, the marginal status of cases that involve exclusively intensification (cf. subsection 1.4.2.) seems to suggest that the last step of this type of meaning shift is not very easy. Plurality remains the core meaning of pluractional verbs even if intensification can sometimes emerge next to it.

1.4.4. Detensification in addition to event plurality

Cases of pluractionals where event plurality combines with some notion of decrease are common cross-linguistically. These cases can be divided into several subtypes. Perhaps the most common subtype can be represented by the English verb *nibble*. Verbs of this type involve repetition combined with diminution: the events that are repeated are basically ‘smaller’ copies of the event referred to by the base verb. Note that these cases in fact combine meanings translatable as ‘a little’ and ‘a lot’ within a single verb: the result is small events repeated many times.⁹³ Cusic (1981:81) calls this type ‘diminutive’: “the repetition decreases the size or importance of the units of action, as if to keep a constant overall quantity while increasing the number”. Perhaps a more adequate label is ‘repetitive-attenuative’ (cf. (22b)). This type can be represented by the following example:

⁹² The transition from iterative to intensified meanings, as suggested by Schaefer (1994), involves a stage where plurality (iteration) combines with intensification, which is a type of interpretation illustrated in the Hausa example (42) above.

⁹³ This means that these cases also illustrate the ‘large number of events’ property of pluractionals, discussed in the previous subsection.

- (44) a. kočisneki [Sierra Nahuat]⁹⁴
 ‘wants to sleep’
 b. kokočisneki
 ‘continually wants to catch little naps’

This type of verbs can also be found in many languages that are generally not considered to have pluractional verbs, like Dutch, French and Italian. The following examples from French and Italian show a very similar kind of effect:⁹⁵

- (45) a. mordiller mordre [French]⁹⁶
 ‘to nibble’ ‘to bite’
 b. piagnucolare piangere [Italian]
 ‘to whimper’ ‘to cry’

Cusic (1981) mentions a number of other kinds of plural verbs whose interpretations are related to decrease (the plural meaning is not always very clearly present, however). One of them is the ‘tentative’ type:

- (46) a. ce:’gol [Quileute]⁹⁷
 ‘he pulled’
 b. ciye:gol
 ‘he pulled a little’

Cusic’s (1981:82) characterization of tentative readings is the following: “the action is performed half-heartedly or with less effort than expected”. Another from this family of readings is the ‘conative’ reading: “repetitive action falls short of producing some desired result” (Cusic 1981:82):

- (47) a. barar [Saho]⁹⁸
 ‘to fly’
 b. barrar
 ‘to flutter’

The last type are the ‘incassative’ cases: “there is no attempt to do anything in particular, merely an aimless or undirected activity” (Cusic 1981:84):

⁹⁴ Key (1960:131), as quoted by Cusic (1981:82).

⁹⁵ According to Tovená & Kihm (2008), these cases do not represent real derivations. Some of their reasons for this claim are the lack of the simple form in many cases, the large number of different phonological strings realizing the pluractional pseudo-suffix, together with the unpredictability regarding which phonological string is used in any given case. Note also that comparable verbs can be found in other European languages as well; cf. the Czech example from in (37b) involving the verb *pokašlávat* ‘cough a little every now and then’.

⁹⁶ Tovená & Kihm (2008:15-16).

⁹⁷ Andrade (1933/38:190), as quoted by Cusic (1981:83).

⁹⁸ Tauli (1958:141), as quoted by Cusic (1981:83).

- (48) a. wit [Zoque]⁹⁹
 ‘walk’
 b. witwitnay
 ‘to walk aimlessly’

It is perhaps disputable whether all the types given by Cusic as examples of cases involving decrease should indeed be understood as involving decrease or detensification. The goal of this subsection, however, is only to demonstrate that cases in which event plurality combines with decrease do exist. As for the repetitive-attenuative pluractionals (or, the ‘diminutive’ type, in Cusic’s terms), note that those could be likened to cases of reduplicated adjectives where the semantic effect of reduplication is lowering of the degree of the property expressed by the non-reduplicated form or distributing the property in small portions all over the place (the diminutive/ dispersive interpretation, in Kouwenberg & LaCharité’s 2005 terminology):

- (49) yala-yala/ yelo-yelo [Jamaican Creole]¹⁰⁰
 ‘yellowish, yellow spotted’

Kouwenberg & LaCharité (2005:538) suggest that these cases of reduplication, which seem to involve decrease, in fact represent the same principle as cases involving increase, namely the ‘more of the same’ principle. “These J[amaican] C[reole] data provide a clue for the possible source of the diminutive reduplication: more of the same form indeed stands for more of the same meaning, but in the case of *yala-yala/ yelo-yelo*, more means many occurrences distributed over a single surface”. This resembles very much the way the repetitive-attenuative type of pluractionals is often characterized. In other words, Kouwenberg & LaCharité’s (2005) formulation, just like the way Cusic (1981) characterized these cases,¹⁰¹ makes it clear that the notion of decrease or detensification is tightly connected to the main meaning contribution of these forms, which is plurality.

1.4.5. Conclusion

This section was devoted to a discussion of the relation between pluractionality and gradability. The two phenomena are connected in several different ways. First, degree semantics could in principle be considered an alternative to plurality in explaining some of the facts. However, there is strong evidence that pluractional verbs should be analyzed in terms of event plurality rather than degree. Second, the connection between pluractionality and gradability is manifested by the existence of degree effects accompanying event plurality. One type of cases is the type where the meaning effect added to event plurality is high degree or intensification. The other type is the opposite

⁹⁹ Wonderly (1951:157), as quoted by (Cusic 1981:84).

¹⁰⁰ Kouwenberg & LaCharité (2005:538).

¹⁰¹ According to Cusic (1981:81), “the repetition decreases the size or importance of the units of action, as if to keep a constant overall quantity while increasing the number”. Cf. also Tovená & Kihm (2008).

of the first one: event plurality is accompanied by detensification or diminution. The fact that the same type of marker can give rise to two contradictory interpretations might seem rather puzzling. In Chapter 3, I will suggest that the two types of degree-like effects, as manifested in Hausa, have different sources.

1.5. Distributive and collective interpretations

The present section has two goals. One is terminological, namely to point out that some of the important terms used in discussions of pluractionality are used in different senses and show what the different uses are. These terms are ‘distributive’ and ‘collective’. The other goal is to indicate how these notions relate to pluractionality.

1.5.1. Distributive interpretations

When nominal or verbal plurality is discussed in the descriptive literature, the term ‘distributive plural’ is sometimes used. What is usually meant by this can be seen from the following quote from Boas (1911a:37-38):

“It would seem that, on the whole, American languages are rather indifferent in regard to the clear expression of plurality, but they tend to express much more rigidly the ideas of collectivity or distribution. Thus the Kwakiutl, who are rather indifferent to the expression of plurality, are very particular in denoting whether the objects spoken of are distributed here or there. When this is the case, the distribution is carefully expressed. In the same way, when speaking of fish, they express by the same term a single fish and a quantity of fish. When, however, they desire to say that these fish belong to different species, a distributive form expressing this idea is made use of.”

From this quote it can be seen that the term distributive plurals usually expresses notions like distribution ‘here and there’, belonging to ‘different kinds of’ etc. Some examples were already given in section 1.2. Two of them are repeated below:

- (50) a. buron-buron [Malay]¹⁰²
 ‘various birds, birds of all sorts’
 b. dāḍ-ḍaikuḍ [Papago]¹⁰³
 ‘several chairs from several households’

Distributive forms are not only found with nouns but also in the verbal domain:

¹⁰² Gonda (1949:178), as quoted by Niepokuj (1997:67).

¹⁰³ Ojeda (1998:249).

- (51) a. cickpan cíkpan [Papago]¹⁰⁴
 ‘to work at more than one location’ ‘to work at one location’
- b. mijaja’wi mija [Mono]¹⁰⁵
 ‘to go separately’ ‘to go’
 N.B. in different directions or at different times
- c. tyhkanawi tyhka ‘to eat’
 ‘to eat in several places’

However, as Lasersohn (1995) points out, the way the term ‘distributive’ is used in the descriptive literature differs from the way it is used in the formal semantics literature. The term distributive, as used in formal semantics, is not unrelated to the one described above but it is not identical to it either. Basically, a predicate applies distributively to its plural argument if it applies to every atomic entity in that plurality (cf. Scha 1981, Link 1983, Schwarzschild 1996, Landman 2000 among others).¹⁰⁶ Consider the following sentence, for example:

- (52) The boys carried the piano upstairs

The sentence in (52) has a distributive reading, according to which the predicate *carried the piano upstairs* holds of every atom in the plurality denoted by *the boys*. In other words, the sentence is true if every boy carried the piano upstairs on his own. The sentence in (52) is actually ambiguous: it also has a different reading, a collective one, according to which the predicate *carried the piano upstairs* holds of the whole group. On that reading, the sentence is true if the boys carried the piano upstairs together, in a collective action. Collective readings will be discussed in more detail in the next subsection. Apart from ambiguous cases like the one above, there are also inherently distributive predicates like *walk* or *sleep*. These predicates always hold of every atom in the plurality if they hold of the plurality as a whole. On the other hand, there are inherently collective predicates like *gather* or *meet* that only hold of collections.

In search of an answer to how the two notions of distributivity relate to pluractionality, let us start by looking at a verbal prefix that is also called ‘distributive’, namely the Czech verbal prefix *po-*. The sense in which this prefix is distributive is not exactly the same as either the one used in the descriptive literature, or the one used in formal semantics. Rather, it seems to be a combination of the two. Consider the following examples:

¹⁰⁴ Ojeda (1998:251).

¹⁰⁵ Lamb (1957:274), as quoted by Houser et al. (2006:6).

¹⁰⁶ An example of how this can be captured is given below (Schwarzschild 1996:61):

(i) $x \in \llbracket D(\alpha) \rrbracket$ iff $\forall y [(singularity(y) \wedge y \in x) \rightarrow y \in \llbracket \alpha \rrbracket]$

D stands for ‘distributive operator’ but the actual technical details of the how distributivity should be captured do not play a role here.

- (53) a. Marie po-zavírala okna [Czech]
 Marie DISTR-closed windows
 ‘Marie closed (all) the windows one by one’
 b. Jablka po-padala
 apples DISTR-fell
 ‘The apples fell down one by one’

The sentence in (53a) says that Marie closed all the windows present in the context, one by one. Sentence (53b) can be used in a situation in which (all) the apples (on a tree) fell down, in several successive apple-falling events. Notice that even though the predicates in (53) can be said to be distributive in the formal semanticists’ sense,¹⁰⁷ this type of distributivity is not sufficient to make the use of *po*-verbs felicitous. For instance, if all the apples fall down at the same time, it is true of each one of them that it fell down and by that the predicate counts as distributive, given that verbs like *fall down* are inherently distributive. However, such a context would not allow for a felicitous use of (53b): the apples cannot fall down simultaneously if the situation is described by the verb *popadat* (cf. also Filip & Carlson 2001).¹⁰⁸ This kind of distributivity can perhaps be better described by using expressions like ‘individually’ or ‘one at a time’, rather than simply ‘each’. Thus one could say that distributive *po*-verbs are distributive in the sense used in formal semantics but in addition they are also distributive in the descriptivists’ sense, requiring a distribution of the individual events in time.

Turning to pluractional verbs now, Kaqchikel pluractionals of the type illustrated below seem to be strictly distributive (in the formal semanticists’ sense):

- (54) X-e'-in-q'ete-la ri ak'wal-a' [Kaqchikel]¹⁰⁹
 CP-A3p-E1s-hug-PDIST the child-PL
 ‘I hugged the children individually’

For the sentence to be felicitous, the children have to be hugged strictly individually. If any subset of the children receives a group hug the pluractional cannot be used (Henderson 2010).¹¹⁰ In this case, it also means that the hugs are distributed in time. As

¹⁰⁷ It is probably more precise to analyze these predicates as forcing ‘near-distributivity’, rather than strict distributivity. In (53a), the most natural scenario is indeed the one in which the windows are closed one by one. Nevertheless, if two of them are closed simultaneously, the sentence can still probably be uttered felicitously. Similarly, it is possible that not all the apples in (53b) fell down – perhaps one or two stayed on the tree.

¹⁰⁸ Filip & Carlson (2001) analyze distributive *po*- (and cumulative *na*-) as a pluractional marker, which in my view is not an adequate way to look at it. The reason is that the distributive prefix itself is not responsible for the plural interpretation of the verb. Rather, it is the imperfective form of the verb (*zavíra(t)*), as opposed to the perfective *zavřít(t)* – cf. also the discussion around the examples in (37)). The distributive prefix *po*- requires plurality, it operates on it, but does not create it (cf. Romanova 2006) and thus it should not be considered pluractional.

¹⁰⁹ Henderson (2010:43).

¹¹⁰ Not all pluractionals are distributive in this sense. It will be shown in Chapter 2 that Hausa pluractionals do not require distributivity to atomic individuals.

can be seen from the following example, however, the distribution in time and/or space is typical for pluractionals even if it is not required by world knowledge:¹¹¹

- (55) Mutàanee sun fĩf-fĩtoo [Hausa]
 people 3PL.PF RED-come.out
 ‘Many people came out’
 N.B. either one by one/ in small groups or out of different houses

For the pluractional form to be felicitous, it is not necessary for the people to come out necessarily one by one, it could also be in smaller groups. Alternatively, if the subevents are simultaneous, it is understood that the people came out of different houses. However, for the pluractional form to be acceptable, the people should not simultaneously come out of a single house. This is so despite the fact that predicates like *fĩtoo* ‘come out’ are inherently distributive. Thus, similarly to the case of the distributive prefix *po-*, the individual events should be distributed in time and/or space, i.e. the pluractional predicate is distributive in the descriptivists’ sense.¹¹²

To summarize, distributivity is an important notion in the study of pluractionality. I have shown that the term distributive is used in at least two different senses in the literature and that they are both relevant for the study of pluractionality. At least some pluractionals are distributive in the formal semanticists’ sense (Kaqchikel). What seems to be more characteristic of pluractionality, however, is that the individual subevents of the plural events pluractionals refer to are distributed in space and/or time or they are clearly individuated in some other way. In fact, distributivity in this sense can be taken to be one of the typical meanings pluractionals express in addition to (simple) event plurality (cf. the characterization of the ‘typical pluractional’ in (2)).

1.5.2. Collective interpretations

Distributivity can hardly be discussed without mentioning collectivity at the same time. However, there are two further reasons for discussing collectivity in the context of pluractionality. First, some forms that are called ‘collective’ in the literature might be pluractional in nature. The second point is more general: it is necessary to understand collective interpretations to know where to draw the line between singular and plural interpretations. As will be shown below, however, authors do not quite agree on how collective interpretations should be defined.

In order to detect collective readings, collective adverbials are often used. The most common one is probably *together* but there are others like *as a group*, *collectively* etc. In (56) several different uses of *together* from Lasersohn (1995, chapter 11) are listed.

¹¹¹ This type of example will be given a more detailed analysis in Chapter 3, section 3.5.3.

¹¹² For a similar case cf. also Matthewson (2000) and her description of the pluractional-like distributive element *pelpála7* in St’át’imcets.

- | | | |
|------|--|-----------------------|
| (56) | a. John and Mary lifted the piano together | COLLECTIVE ACTION |
| | b. John and Mary sat together | SPATIAL PROXIMITY |
| | c. John and Mary stood up together | TEMPORAL SIMULTANEITY |
| | d. John and Mary went to the movies together | SOCIAL ACCOMPANIMENT |
| | e. John and Mary work together | COORDINATED ACTION |

Even though all the examples given here might be taken to represent ‘collective’ readings in a broad sense, only (56a) refers to true collective action. In fact, predicates like *stand up* or *go to the movies* are inherently distributive predicates, hence, no true collectivity is even possible (Lasersohn 1995:194):

“Unlike lifting a piano or lifting 500 pounds, going to Cleveland or to the movies is not something a group of individuals can do without the individual members of the group also doing it. That is to say, going somewhere is not something a group can do in authentically collective manner; *go* is a lexically distributive predicate.”

Basically the same approach to collective action can be found in Landman (2000): collective predication is singular predication – a semantically singular predicate applies to a group atom. In sentences like (56a) above, the NP *John and Mary* shifts its interpretation from a sum, a plural entity, to a group, a singular entity, and as such can participate in singular predication. Inherently distributive predicates only have individual atoms in their extension, not group atoms, which means that they cannot be interpreted collectively. Thus, also for Landman, only (56a) would be a true collective action, as the predicates in the other sentences are inherently distributive.

Kratzer (2003) has a slightly different view on collectivity. Predicates like *sit together*, *stand up together*, *go to Brazil together* (i.e. cases corresponding to (56b-d)) are all collective for her as well. Her account of collectivity relies on the notion of ‘substantive groups’ (Kratzer 2003:34).¹¹³

“With activities like sitting, standing up, or going to Brazil, spatial proximity of the agents and temporal closeness and coordination of their actions contributes essentially to establishing them as substantive groups, and their actions as collective actions.”

Thus, for Kratzer, the line separating collective action from other cases is drawn differently: at least all of (56a-d) are considered collective, probably including (56e) as well.

¹¹³ Kratzer characterizes collective events and states as follows: “Actions by substantive groups satisfy the Single Agent Constraint, and states of substantive groups satisfy an analogous Single Possessor Constraint” (Kratzer 2003:32).

It can be expected that different expressions will be sensitive to different senses in which an event can be collective. Thus, the collectivity *together* selects is rather broad, for example, and as such includes more than collective action in the strict sense (as in Lasersohn 1995 and Landman 2000). For other expressions, the division line might be drawn somewhere else. In particular, assuming that pluractional verbs cannot be used to describe singular events, they might be expected not to be used to talk about collective events. The immediate question is, however, ‘collective’ in what sense? For example, are pluractionals used in exactly those situations in which *together* cannot be used? Or do the contexts in which *together* can be used overlap with contexts in which pluractionals can be used? Do pluractionals in different languages differ from each other in this respect?

It will be shown in Chapter 3 that for the purpose of delimiting the contexts in which Hausa pluractionals can be used, the definition of collectivity will have to be different both from that of Kratzer (2003) and that of Lasersohn (1995) and Landman (2000). However, also other languages provide evidence that there are different ‘shades’ of collectivity and that pluractional verbs are clearly incompatible with some of them, whereas others may combine with the pluractional semantics quite well. The facts described below suggest that there are even cases where the pluractional requires a certain ‘degree’ of collectivity.

Faller (2008) lists a number of different pluractional markers used in Cuzco Quechua, one of them, *-(pu)na-*, being a morpheme that can express ‘joint action/accompaniment’.¹¹⁴

- (57) Asi-puna-ku-n-ku pay-kuna pura [Cuzco Quechua]¹¹⁵
 laugh-PA-REFL-3-PL (s)he-PL amongst
 ‘They are laughing together/ with each other’

When discussing this type of pluractionals, Faller (2008:11) states that joint action is “to be understood as each member of a group being an agent of their own event, while at the same time, the individual events form a single event in some sense”. She also explicitly mentions that none of the Cuzco Quechua pluractional affixes can denote truly collective action as in *Mary and John carried the piano upstairs*, on the reading where they carry the piano together, collectively. Thus, it seems that a truly collective, and as such singular, interpretation is incompatible with pluractionality in Cuzco Quechua but a broader notion of doing something together is compatible with it. Moreover, it seems that Cuzco Quechua is not the only language with this kind of marker. Wood (2007),

¹¹⁴ Treating *-(pu)na-* as a separate morpheme is not unproblematic, as it never occurs by itself but only in combination with *-ku-* (Willem Adelaar, p.c.; the form of the morpheme is rather *-(pu)naku-*; Faller herself mentions the (almost) obligatory co-occurrence of *-(pu)na-* with *-ku-*). Nevertheless, the point is probably still valid that verbs containing the sequence *-(pu)naku-* are pluractionals that combine the notion of event plurality with what could be labeled as ‘accompaniment’.

¹¹⁵ (Faller 2008:4). PA – pluractional.

(58) Kelew hes ho helomey-e'm-o'w? [Yurok]¹¹⁶
 2PL INTERR PST dance-COLL-2PL
 'Have you folks been dancing?'

To summarize, I suggest that in order to understand the conditions under which pluractional verbs can be used, at least true collective action should be distinguished from other kinds of ‘collective’ readings. If pluractional verbs refer to plural events the event expressed by them cannot be truly collective because those are presumably singular. On the other hand, other types of ‘collectivity’ are not necessarily excluded and in fact, it seems that some pluractionals might actually require a certain kind of ‘togetherness’ to be present in the situation, despite the participants being involved in their own events, as discussed above in relation to the Cuzco Quechua *-(pu)naku-* verbs and the Yurok ‘collective’ form.

1.6. Internal distinctions

¹¹⁶ Wood (2007:163).

distinctions that have been made within pluractionality. The first distinction to be discussed is the distinction between event number and participant number, which was introduced by Corbett (2000). The second distinction, also commonly accepted in the literature, is the distinction between event-external and event-internal pluractionality, originating in Cusic (1981).

1.6.1. Event number vs. participant number

Corbett (2000), makes a distinction between event and participant number. He uses the term ‘event number’ to refer to ‘multiple’ events, which basically means repeated events.¹¹⁷ The term ‘participant number’, by contrast, refers to cases of verbs that require multiple participants. Corbett compares these cases to what he calls classificatory verbs.¹¹⁸ Classificatory verbs are verbs that are semantically compatible with a restricted set of nouns. For instance, a given verb may combine only with nouns referring to round/ flat/ live objects as illustrated in (59). Classificatory verbs can be found e.g. in Amerindian languages.¹¹⁹ Verbs that are marked for participant number are similar in the sense that they are compatible only with certain nouns: nouns referring to plural objects. Thus, the verb form in (59d) combines with plural objects, “whether live or not, round or flat” (Corbett 2000:248).

- (59) a. l^voy [Klamath]¹²⁰
 ‘to give a round object’
 b. n^ooy
 ‘to give a flat object’
 c. ks^voy
 ‘to give a live object’
 d. sʔewan?
 ‘to give plural objects’

¹¹⁷ It also covers cases that Corbett describes as ‘continuous repetitive action’, an example of which would be *patter*, or ‘durative iteration’, represented by *gnaw*.

¹¹⁸ This is an idea found already in Boas (1911b:381); cf. Durie (1986).

¹¹⁹ Cf. also Mithun (1999:84-5): “A large number of North American languages show lexical distinctions of number. The Koasati verb roots contain number specification as part of their basic meanings. The Koasati verb *wali:na*, for example, is used for a single person or animal running alone, while the verb *tólkan* is used for a group running together. The two verbs denote what are categorized as different kinds of events. (A few English verbs also imply a plurality of participants, such as *stampede* or *scatter*, though the lexicon has not developed in the same systematic way.) The verbs that show such alternations tend to represent situations in which the number of participants is viewed as significantly affecting the nature of the action or state [...]”. Mithun (1988:214) also points out that these pairs of verbs are not related by ‘suppletion’, which is the term sometimes found in the literature. Suppletion is an allomorphic alternation, but these verbs are not related inflectionally. Rather, she uses the term ‘stem alternation’ (and in Mithun 1999 ‘verb alternation’) and takes it to be a relation between two separate lexical items.

¹²⁰ Barker (1964:176), as quoted by Mithun (1988:214-215).

Corbett notes that some languages have both types of verbal number and may use the same formal device for both. In spite of that, he considers event number and participant number two distinct types of verbal number. Below I will argue, however, that it is probably more adequate to treat cases like (59d) as a phenomenon distinct from pluractionality. Once these cases are excluded from pluractionality, there might be little evidence for making a fundamental distinction between event and participant number.

Wood (2007) calls verbs comparable to the one in (59d) ‘argument-numbered’ or ‘plural-argument’ verbs. These are verbs that take plural arguments and have singular argument counterparts, which usually have a different stem:

- | | | | | |
|------|----|----------------|----------------|---------------------------|
| (60) | a. | mok’vdeba | daixocebian | [Georgian] ¹²¹ |
| | | ‘someone dies’ | ‘they die’ | |
| | b. | chyuuk’wen | rek’iin | [Yurok] ¹²² |
| | | ‘to sit’ | ‘to sit (pl.)’ | |

As Wood points out, these (pairs of) verbs represent a limited set in any language. They are often e.g. verbs of motion or posture. In Wood’s view, these verbs are potentially related to pluractionals but distinct from true grammatical pluractionality. This is a view that I adopt here as well. As a consequence, I conclude, together with Wood (2007), that the category of participant number, as discussed by Corbett, might in fact comprise two rather different types of verbs. One type would be ‘plural-argument’ verbs of the type illustrated in (60). These are indeed comparable to classificatory verbs, as suggested by Corbett (2000) and others before. These verbs are quite different from regular pluractional verbs by not being derived by productive morphological markers. It is even possible to compare plural-argument verbs to pairs like the English *kill* vs. *massacre*, where the two forms are morphologically unrelated. The other type would be pluractional verbs derived (more or less) productively and regularly which refer to events involving plural participants. I suggest that this latter type does not need to be distinguished from event number. Pluractional verbs express event plurality and there is no reason to assume that the plurality cannot in principle be manifested as a plurality of participants, locations and times alike. In other words, it is no coincidence that many languages use a single marker for iterative/ temporal and participant-based cases.^{123,124}

¹²¹ Aronson (1990:406), as quoted by Wood (2007:46).

¹²² Garrett, Blevins & Conathan (2005), as quoted by Wood (2007:46).

¹²³ Corbett (2000:246) expresses the intuition behind distinguishing event and participant number by saying that “there is a difference between one singer singing a song (once or several times) and several singers singing it: singing in a choir is different from singing a solo”. One can add to this, however, that singing in a choir is not the only possible way in which many people can be involved in an event of singing. They could also sing the song one by one, at different times, which then, just like in the case of one singer singing a song repeatedly, would simply be many events of song-singing.

¹²⁴ Another piece of evidence for the suggestion the two types of ‘participant number’ are distinct from each other comes from the fact that some languages have both productive participant-based pluractionals and a limited set of pairs of verbs of the type illustrated in (60). Cf. Newman (1990:57): “In addition to the normal

Nevertheless, things might be more complicated than this. Newman (1990) suggests that pluractionals in present-day Chadic languages derive from two distinct derivational categories in Proto-Chadic: ‘iteratives’ and ‘pluractionals’. Those that he calls ‘iteratives’ correspond to Corbett’s event number. Newman reconstructs the marker as a suffix **-tV*. The category labeled as ‘pluractionals’ corresponds to Corbett’s participant number. For this category it is much less clear what the Proto-Chadic marker was but the most likely possibility is prefixal CV-reduplication. Considering that both of these categories were presumably formed regularly, by distinct markers, this could be seen as evidence for Corbett’s distinction. Note, however, that it is possible to find iterative, frequentative or habitual affixes even in languages that do not have pluractional markers in a stricter sense (e.g. in Slavic). Therefore, morphemes that mark exclusively iteration, even in pluractional languages, could be considered aspectual, rather than pluractional. This seems to be the case in Tangale, for example. According to Newman (1990), quoting Kidda (1985), Tangale has two different derivations, just like Proto-Chadic. One derivation is called iterative by Newman and it is described as marking repeated action. The other one marks plurality of objects but also frequentative action. This could be taken to mean that only the second marker is a genuine pluractional marker (expressing both event and participant number) and the first one is an aspectual morpheme.

To conclude, I suggest that it is hard to find convincing evidence for making a fundamental distinction between event and participant number. The clearest cases of pluractionality are cases where the plurality of events can be manifested in a variety of ways: as iteration, by multiple participants, locations etc. If a language has verb forms that express exclusively participant number these might be what Wood (2007) calls plural-argument verbs, which should probably not be considered pluractional. Similarly, if a language has a form that expresses exclusively iteration and thus could be considered an exponent of Corbett’s event number only, it is always a question whether the form is actually aspectual in nature, rather than pluractional. In addition, it would be rather artificial to distinguish between the two types of verbal number in languages like Hausa where the same pluractional form can express both types of plurality and where it would actually be hard to clearly separate them, as will be shown in Chapter 3.

1.6.2. Event-external vs. event-internal pluractionality

As shown in the previous subsection, Corbett (2000) considers the main distinction within verbal plurality to be the distinction between event and participant number. However, other researchers see the main split somewhere else. For Cusic (1981), Wood (2007) and others the main distinction is the distinction between event-internal and event-external plurality. Cusic distinguishes ‘phases’, ‘events’ and ‘occasions’. Based on this hierarchy he defines event-internal and event-external plurality. Event-internal

pluractionals, Podoko, like a number of other Chadic languages, also has a few suppletive plural stems (e.g. ‘kill’ sg *ked-*, pl *pahl-*)”.

plurality refers to plurality of phases within a single event: “the units of action are conceived of as confined to a single occasion, and to a single event on that occasion” (Cusic 1981:78). An example is *nibble* in English. By contrast, in the case of event-external plurality, the events are many and either distributed over multiple occasions or restricted to a single one: “the units of action are potentially distributable, though not necessarily distributed, over multiple occasions” (Cusic 1981:79). *Bite repeatedly* or *always bite* might be given as examples.^{125,126} Cusic’s system will be discussed in more detail in section 1.8.1.

The definitions of event-internal and event-external plurality given by Cusic might seem straightforward but in fact it is not completely clear where the division line between the two types of cases should be drawn. The case of controversy are pluractional verbs derived from semelfactives with meanings like ‘knock’, ‘hit’, ‘scratch’, ‘kick’, ‘slap’ etc. These verbs, in their plural form or use, refer to a series of usually quickly repeated short events: repeated knocking, hitting or kicking. I will refer to these verbs as the *knock*-type verbs and I will contrast them with the *nibble*-type verbs, which differ from the *knock*-type verbs in that the same verb stem cannot be used to describe the subevents forming the plural event. To use English for illustration of the contrast, notice that the verb *knock* can be used to describe both a single knock and a series of knocks (as in *he knocked on the door*) whereas *nibble* can only describe a plural event, a series of small bites, and the individual subevents have to be described by a different predicate, for example *take a small bite*.¹²⁷ English is not a pluractional language, however (the *-le* suffix is not productive anymore), thus it is better to look at corresponding examples in other languages. The form in (61a) can be taken as an example of the *nibble*-type. (61b) is an example of the *knock*-type:

- (61) a. *nibble*-type
 barrar barar [Saho]¹²⁸
 ‘flutter’ ‘fly’
 b. *knock*-type
 bubbùgaa bugàa [Hausa]
 ‘hit repeatedly’¹²⁹ ‘hit’

¹²⁵ Other terms Cusic (1981) uses to talk about the distinction are ‘repeated’ events (for event-external plurality) and ‘repetitive’ events (for event-internal plurality). This terminology, however, only applies to cases of temporal pluractionality.

¹²⁶ The three levels – phase, event and occasion – are not reflected by a three-way distinction, however. According to Cusic, event-level and occasion-level repetition are commonly expressed by the same form.

¹²⁷ The English verb *nibble* is not the best example of this type. Apart from the fact that the *-le* derivation is not productive anymore, the main reason is that at least some speakers can use *nibble* to refer to a single small bite. A better example would be the French *mordiller* ‘nibble’ (< *mordre* ‘bite’). However, I will continue using *nibble* as the label for the type, since this example is commonly used in the literature.

¹²⁸ Tauli (1958:141), as quoted by Cusic (1981:83).

¹²⁹ Note that this is not the only possible interpretation of the form: participant-based interpretations are also possible.

In (61a), the pluractional form is derived by gemination. It is an example of a *nibble*-type pluractional: the individual subevents cannot be described by the same verb stem, the simple verb *barar* ‘fly’, since they are not complete events of flying. Rather, they are quickly repeated smaller events of wings moving up and down, as if they were attempts to fly. By contrast, in (61b), the individual subevents of the plural event referred to by the pluractional can be described by the same verb stem, the verb *bugàa* ‘hit’.

Coming back to the controversy around the status of the *knock*-type verbs, the division between event-external and event-internal plurality is unclear already in Cusic (1981). According to his definition these cases should be considered event-external, as the “units of action” are potentially distributable over multiple occasions. However, a complicating factor is that even though the individual knocks of repeated knocking do not have to be restricted to a single occasion, they typically are. In fact, Cusic himself mentions cases of the *knock* type as examples of event-internal plurality (the Russian *stuchat* ‘hammer/knock’).¹³⁰ In contrast to the unclear classification of the *knock* type in Cusic’s system, Wood (2007) is explicit about considering these pluractionals event-internal. The main reason is that the individual subevents of repeated knocking, for example, are perceived as belonging together, as forming a kind of whole. In Wood’s view, “event-internal pluractional categories provide a construal which groups repeated occurrences (i.e. profiles the whole), where event-external pluractionals profile the individual occurrences at the expense of the higher-order whole” (Wood 2007:95). Factors favoring grouping of occurrences – repetitions – are (temporal and spatial) proximity, similarity (of the repeated events), common goal or completion, common cause and typical or inherent repetition. Thus, the main argument is cognitive by nature.¹³¹

For Wood (2007), just like for Cusic (1981), the distinction between event-external and event-internal pluractionals is the most basic distinction within pluractionality (verbal plurality). This predicts that there should be languages that make use of different pluractional markers for the two types. In fact, Wood (2007), following Garrett (2001a), claims that Yurok is such a language. The formation arguably expressing event-external plurality is called ‘iterative’ (-eg-) and the formation expressing event-internal plurality (reduplication) is called ‘repetitive’.¹³²

¹³⁰ It should be noted that *stuchat* is not a pluractional verb. It is simply an imperfective form that can have both the iterative as well as the progressive meaning.

¹³¹ As for linguistic evidence, Wood argues that pluractionals of the *knock* type, just like those of the *nibble* type, can only take singular or collective arguments. Nevertheless, she does not show convincingly that this is indeed true for her Yurok data that she classifies as event-internal.

¹³² The division into the two pluractional meanings does not match the ‘repetitive’/ ‘iterative’ division perfectly, however; cf. Wood (2007).

- (62) a. *event-external*
 Yok legaayo' ku mewihl ITERATIVE [Yurok]¹³³
 here pass.ITR ART elk
 'The elk come through here'
- b. *event-internal*
 Kich pegpegoh ku 'yohlkoych' REPETITIVE
 PERF split.REP ART log
 'I made the log into kindling (split it multiple times)'

The sentence in (62a) describes an event that is repeated over an extended period of time. Example (62b), on the other hand, involves a rather quick repetition of log-splitting events. Notice that the example of the event-internal formation involves a verb of the *knock*-type, as the vast majority of Wood's 'repetitive' examples do. Even though Wood gives no (clear) examples of the *nibble*-type pluractionals, those would be clearly considered event-internal as well, as in such cases the individual subevents form a (perceptual/ cognitive) whole even more clearly.¹³⁴

A different view is taken by Tovená & Kihm (2008). In their paper, the *knock* type is explicitly described as hard to classify as either event-internal, or event-external: these verbs constitute a special case because the individual subevents can be described by the same verb. By contrast, the *nibble* type is clearly event-internal. The following examples from French and Italian are like *nibble*. Tovená & Kihm analyze them as event-internal pluractionals:

- (63) a. chantonner chanter [French]¹³⁵
 'hum' 'sing'
- b. mordiller mordre
 'nibble' 'bite'
- c. piagnucolare piangere [Italian]
 'whimper' 'cry'
- d. dormicchiare dormire
 'slumber' 'sleep'

The *nibble* type is clearly different from event-external pluractionals – and also from the *knock* type, it should be stressed – mainly in that the *nibble*-type verbs require argument identity across phases and in that the individual phases are not easily accessible (they cannot be counted, for example). The argument identity requirement of verbs like *mordiller* 'nibble' can be described by saying that "a single nibbling cannot include little bitings by different people" (Tovená & Kihm 2008:22). If the relevant argument is the

¹³³ Wood (2007:146,148).

¹³⁴ In Greenberg (2010), the verbal forms in Modern Hebrew that are analyzed as event-internal pluractionals include cases both of the *nibble* and *knock* type.

¹³⁵ Tovená & Kihm (2008).

internal argument, *mordiller* ‘nibble’ cannot be used to describe a situation when a person takes a single small bite from different apples. The second property, the inaccessibility of the phases, can be illustrated by the following example from Italian:

- (64) Alla riunione, ha mordicchiato due volte la matita [Italian]¹³⁶
 at meeting has nibbled two times the pencil
 ‘During the meeting, s/he nibbled the pencil twice’

N.B. two internally plural events, not a plural event consisting of two bites

The sentence means that there were two events of nibbling, i.e. two internally plural events, not that the plural event consisted of two bites.

To summarize the views found in the literature, even though some authors consider the distinction between event-internal and event-external pluractionals basic, it is unclear where the division line should be drawn. In particular, it is not clear where the *knock*-type pluractionals belong. The *nibble* type is clearly event-internal. Pluractionals that describe events taking place on different occasions are clearly event-external. However, the status of the *knock* type is rather unclear. Thus, descriptively speaking, at least three (possibly more) types of pluractional verbs can be distinguished along the event-external/ internal dimension: the clear internal type (*nibble*), the repetitive type, derived from semelfactives (*knock*), and clear external cases. The answer to the question where the line between event-internal and event-external plurality should be drawn – between *nibble* and *knock*, or between *knock* and uncontroversial external cases – depends crucially on the definition of event-internal plurality one adopts. If the criterion is, for example, whether one can describe the individual subevents by the same verb stem that is used in the pluractional, the line goes between *nibble* and *knock*. If it rather matters whether the individual subevents can be grouped easily or form a whole from the cognitive perspective, then the line goes between the *knock* type and clear external cases, where the subevents have bigger ‘gaps’ between them.¹³⁷ Note also that it is possible for different languages to group different types of pluractionals differently. Some languages might have a distinct form for the *nibble*-type pluractionals, distinguishing them formally from the other types, or having these as the only type of plural verbs in fact (French and Italian). Other languages might put *nibble* and *knock* together (Modern Hebrew). Still others might fail to mark the event external vs. event-internal distinction altogether (Hausa; cf. Chapter 3). In Chapter 3 (section 3.6.2.), I will suggest an explanation for some of the variation by proposing an explanation for the variable behavior of pluractionals derived from semelfactives like *knock*.

To conclude, as in the case of the event number versus participant number distinction, the event-external versus event-internal distinction is not as simple and clear-cut as it

¹³⁶ Tovená & Kihm (2008:23); the glosses are my own.

¹³⁷ The criteria for event-internal pluractionality adopted in this thesis are presented in section 3.5.4.2. of Chapter 3.

might seem at first sight. I do believe that the distinction is of theoretical relevance, however.¹³⁸ In Chapter 3, I will discuss how the distinction applies to the Hausa data.

1.7. Limits of pluractionality

Originally, pluractionality was a term coined for languages that have dedicated markers to express event plurality, be it reduplication, (other kinds of) affixes or any other morphological option. Pluractionality was considered a phenomenon present in many Amerindian, African, or Asian languages, i.e. basically all over the world, but virtually absent in (Indo-)European languages. However, with the increased interest in the phenomenon, especially among theoretical linguists, many new cases of ‘pluractionality’ have emerged, often in more familiar languages. Thus, sometimes the term ‘pluractionality’ is used also when discussing languages that would not traditionally be considered pluractional and/or in cases where the ‘pluractional’ marker is not a morpheme. In some cases, phenomena that used to be analyzed in terms of aspect or Aktionsart, especially iterativity, are now being reanalyzed as cases of pluractionality. Basically, several types of these ‘new’ cases can be distinguished. A first type involves verbs in Indo-European languages that have been claimed by some to employ pluractional morphology. A second type would be cases where pluractionality is marked by something else than an affix on the verb, i.e. some other element in the sentence, or a special construction. A third type would be cases where event plurality is not marked at all and where it is thus only understood. In the following paragraphs these possibilities are briefly discussed one by one.

Let us start with cases of verb forms and affixes in Indo-European languages that have been analyzed as pluractional, in particular Slavic and Romance. Filip & Carlson (2001) argue that the distributive prefix *po-* and the cumulative prefix *na-* in Czech are pluractional markers. Thus, according to Filip & Carlson (2001), example (65) involves pluractionality:

- (65) Marie *po-zavírala* okna [Czech]
 Marie DISTR-closed windows
 ‘Marie closed the windows’
 N.B. all of them, one by one

Contra Filip & Carlson (2001), Romanova (2006) suggests that the distributive prefix *pere-*, the Russian counterpart of the Czech distributive prefix *po-*, does not contribute pluractionality. However, she argues that the (imperfective) stem it combines with does.

¹³⁸ Linguistic arguments should be assigned more importance than cognitive/ perceptual ones, however.

- (66) a. Sobaka pere-kusala vsex detej [Russian]¹³⁹
 dog DIST-bit^P.SG.FEM all.PL.ACC children.ACC
 ‘The dog bit all the children (one after another)’
 b. pere-kusatj ‘bite all one by one’
 c. kusatj.IMPF ‘bite/ be biting’

Thus, according to Romanova, verbs like the one in (66c), which are traditionally considered to be simply imperfective, should be analyzed as pluractional. In section 1.3.5., I argued that imperfective verbs are indeed to be interpreted as referring to plural (iterated) events in certain contexts but that that type of interpretation arises as a consequence of the imperfectivity of the stem, rather than the presence of a pluractional operator. Recall that imperfective verbs have also non-plural, e.g. progressive, interpretations. Romanova’s (2006) proposal illustrates a recent more general tendency to analyze iteratively interpreted verb forms as pluractional. Tovená & Kihm’s (2008) suggestion that the French and Italian verbs of the type *mordiller/ mordicchiare* ‘nibble’ are event-internal pluractionals has already been mentioned. As for Latin, Garrett (2001b; as paraphrased in Wood 2007:130) suggests that verbs of the type *adventāre* ‘approach’, related to *advenīre* ‘arrive’, are event-internal pluractionals where the preparatory phases of the events are repeated or extended.

Let us now move on to the second type. These are cases that have been analyzed as involving pluractionality but in which the pluractional meaning is not carried by a verbal morpheme. Instead, it is contributed by other elements in the structure. The following example from Zimmermann (2003) represents a case that is quite far from typical cases of pluractionality.

- (67) The/ An occasional sailor strolled by

Zimmermann (2003) suggests that sentences like (67) involve a pluractional operator, carried by the combination of the determiner and the adjective *occasional*. The adjective incorporates in the determiner, creating a complex quantifier, and that is how it can scope out of its DP. A case resembling the occasional construction is discussed by Matthewson (2000). She discusses a distributive element *pelpála7* in St’át’imcets (Lillooet Salish). Matthewson shows that *pelpála7* shares some core properties with pluractional markers in that it requires there to be a set of subevents which are temporally separated from each other. However, unlike more familiar pluractional markers, which are affixes on verbs, *pelpála7* may appear inside a DP (apart from having and adverbial use):¹⁴⁰

¹³⁹ Romanova (2006:226).

¹⁴⁰ Matthewson shows that *pelpála7*, even in its DP internal use, is not like *each*, though. The subevents have to be temporally separated, they cannot be simultaneous; cf. also the Czech example in (53b) where the apples have to fall down one by one, not simultaneously.

- (68) [Pelpála7 i smelhmúlhats-a] cat-an'-táli ta tíipvl-a [St'át'imcets]¹⁴¹
 [DISTRIB DET.PL woman(PL)-DET] lift-TR-TOP DET table-DET
 'The women lifted the table one at a time'

As Matthewson herself points out, *pelpála7* bears some similarity to *occasional* in the *occasional* constructions. Both *pelpála7* and *occasional* have pluractional properties and take a nominal as well as a VP argument. However, in Matthewson's formulation, *pelpála7* is claimed to be similar to pluractional markers rather than being one itself.

Another case of extending the notion of pluractionality outside its usual domain is Van Geenhoven's (2004, 2005) claim that frequency adverbs in English are overt pluractional markers. The relevant type of construction is exemplified by (69) below (Van Geenhoven 2005:120):

- (69) Bill sang the anthem once in a while/ frequently/ every now and then

Van Geenhoven proposes that frequency adverbs in English contribute pluractional star operators, comparable to those contributed by (temporal) pluractional affixes in languages like West Greenlandic (to be discussed in more detail in section 1.8.3.). Similarly, in a direct reaction to Van Geenhoven (2004, 2005), Laca (2006) proposes that Spanish aspectual periphrases with *andar/ ir* contribute pluractional operators. An example is given below:

- (70) María anda preguntando por ti [Spanish]¹⁴²
 María walk.PR asking about you
 'María is/ has been asking [repeatedly] about you'

Laca analyzes these as cases of temporal pluractionality, contributed by operators *FREQ* and *INCR* corresponding to *andar* and *ir*, respectively.

Finally, there exist analyses that postulate the existence of non-overt pluractional operators. Most notably, Van Geenhoven (2004, 2005) assumes such an operator for English sentences like the following one (Van Geenhoven 2004:168):

- (71) John hit a golf ball into the lake for an hour

On Van Geenhoven's analysis, there is a silent pluractional operator on the verb that is responsible for the repeated event interpretations.¹⁴³

The list of proposals suggesting that various phenomena in various (traditionally non-pluractional) languages should be analyzed as involving pluractionality given here is by no means exhaustive. The purpose of the paragraphs above is only to illustrate what

¹⁴¹ Matthewson (2000).

¹⁴² Laca (2006).

¹⁴³ Cf. also Alexiadou et al. (2007) and subsequent work by G. Iordăchioaia and E. Soare (e.g. Iordăchioaia & Soare 2008), Beck & von Stechow (2007), Beck (2010) where also other constructions are analyzed as containing a pluractional operator.

kinds of expressions or constructions have also been analyzed as pluractional, in other words, how much the coverage of the term has expanded recently.

To summarize the discussion on the use of the terms ‘pluractional’ and ‘pluractionality’ outside their usual domain, there is an increasing amount of literature analyzing various linguistic data as involving pluractionality that were not understood as pluractional before. This raises the question of how broad the notion should be. In this thesis, I choose an approach according to which ‘pluractionality’ is a term reserved exclusively for cases in which event plurality is marked directly on the verb. In addition, pluractionals typically have other than iterative uses, most notably they also express meanings involving plural participants. This means that constructions that express exclusively temporal meanings are probably better analyzed as aspectual in nature. As a consequence, I propose that the cases discussed in this section do not represent pluractionality in this stricter sense.¹⁴⁴ Instead, I suggest that the broader term ‘event plurality’ should be used to refer to such cases. The term ‘event plurality’ is broad enough to cover all the cases discussed in the previous paragraphs, even those where the source of the plural interpretation should be analyzed as aspectual in nature. I believe that it is useful to preserve the connection between pluractionality and other types of event plurality but it is also important to see what is specific to pluractionality as a narrower phenomenon.

In the next section, I will turn to some of the most influential theoretical accounts of pluractionality.

1.8. Theoretical accounts of pluractionality

This section introduces four theoretical accounts of pluractional verbs. I will start with a discussion of the first elaborate system proposed to capture various kinds or categories of verbal plurality, namely Cusic (1981). This study has been used since then as an important source of information on pluractionality cross-linguistically. Next, perhaps the most influential account of pluractionality will be discussed, namely that of Lasersohn (1995). Following Lasersohn’s (1995) analysis, the proposal of Van Geenhoven (2004, 2005) will be discussed. Her proposal does not make reference to events as primitives of the semantics, as Lasersohn’s does, but rather relies on interval semantics. Finally, I will present Ojeda’s (1998) analysis of distributive verbs and nouns in Papago.

¹⁴⁴ A possible exception is the *mordilleri/ mordicchiare* ‘nibble’ type discussed in Tovená & Kihm (2008) since these cases could perhaps be considered morphological derivations, however limited their productivity is. Note, however, that Tovená & Kihm (2008) actually argue against a derivational analysis of these cases. Cf. footnote 95.

1.8.1. Cusic (1981)

Probably the first work giving a detailed systematic account of verbal plurality and categorization of the various interpretations of plural verbs is Cusic (1981). Pluractional verbs can have a wide range of readings. Cusic (1981:74) gives the following list of possible meanings of plural verbs:¹⁴⁵

- (72) repetitiveness, repeated occasions and events, persistent consequences, habitual agency, distributed quality, inchoativity, cumulative result, intensity, plurality of sites of action, duration, continuity, conation, distribution, celerativity/retardativity, augmentation, diminution

To make sense of the variation in meaning, Cusic proposes that it results from the interaction of four parameters. From this interaction, a typology can be derived. The four parameters are the following: (1) the event ratio, i.e. phase/ event/ occasion, parameter, (2) the relative measure parameter, (3) the connectedness parameter, and (4) the distributive parameter.

The ‘event ratio’ parameter concerns the level at which the repetition takes place. Cusic assumes three distinct levels: ‘phases’, ‘events’ and ‘occasions’. Repetition can involve any of them. If the repetition takes place at the level of phases, the result is a ‘repetitive’ action or event-internal plurality (e.g. *nibble*). If the repetition takes place at the level of events or occasions, the result is ‘repeated’ action or event-external plurality (e.g. *read the book again and again*). Notice that Cusic’s three-way distinction between phases, events and occasions actually gives rise only to a two-way distinction in the kind of verbal plurality: event-internal vs. external plurality. As Cusic points out, repetition at the event level is rarely formally distinguished from repetition at the occasion level.

Two comments could be made here. First, if there is never a formal distinction between event- and occasion-level repetition, it seems reasonable to eliminate the occasion level as a level relevant for pluractionality. Second, Cusic only speaks of repetition. However, one can also imagine a non-temporal flavor of the event-internal vs. external distinction, e.g. with respect to the event’s participants. To give an example, a plural event of breaking something could be conceived of as targeting a single object, resulting in breaking the object into pieces. This would be a case of event-internal plurality. Alternatively, the plural event can be applied to many objects, resulting in breaking each of the objects once or several times. This would then be a case of event-external plurality. The event-ratio parameter and the distinction following from it (the distinction between event-internal and event-external plurality) are considered the most important. The other parameters serve to cross-classify these two main categories.

¹⁴⁵ “The plural verb shows, as well, certain relations we would not be likely to associate with event plurality at all: with perfectivity, causativity, and plurality of subject or object noun phrases” (Cusic 1981:74-75).

The ‘relative measure’ parameter is used for further subcategorization of verbal plurality, depending on the size of the units (phases/ events), number of repetitions, degree of effort etc. The primary distinction is between decrease and increase: in size, number of repetitions, effort or some other aspect of the event. Within repetitive action, decrease gives rise to categories like ‘diminutive’ (73a), ‘tentative’ (73b), ‘conative’ (73c) or ‘incassative’ (73d) (all exemplified already in 1.4.4.):

(73)	a.	kokočisneki ‘continually wants to catch little naps’	kočisneki ‘wants to sleep’	DIM	[Sierra Nahuatl] ¹⁴⁶
	b.	ciye:gol ‘he pulled a little’	ce:’gol ‘he pulled’	TENT	[Quileute] ¹⁴⁷
	c.	barrar ‘to flutter’	barar ‘to fly’	CON	[Saho] ¹⁴⁸
	d.	witwitnay ‘to walk aimlessly’	wit ‘walk’	INCASS	[Zoque] ¹⁴⁹

By contrast, increase can lead to ‘intensive’ (74a), ‘augmentative’ (74b) or ‘cumulative’ (74c) readings:

(74)	a.	tlatlania ‘to ask insistently’	tlania ‘to ask’	INTENS	[Nahuatl] ¹⁵⁰
	b.	corii ‘to cut a lot of wood’	cori ‘to cut’	AUGM	[Luiseño] ¹⁵¹
	c.	qwoqʷot ‘to cough something up’	qwo ‘to cough’	CUMUL	[Pomo] ¹⁵²

As for the repeated action, the relative measure parameter provides two options: “small or precise count”, and “large or indefinite count”. In the case of small or precise count, the possible categories are, for instance, ‘duplicative’ (75a), ‘alternative’ (75b) and ‘discontinuative-dispersive’ (75c):

(75)	a.	minge?tu i. ‘he (the same) came a second time’ ii. ‘he (another) came also’	min- ‘come’	DUPL	[Zoque] ¹⁵³
------	----	--	----------------	------	------------------------

¹⁴⁶ Key (1960:131), as quoted by Cusic (1981:82).

¹⁴⁷ Andrade (1933/38:190), as quoted by Cusic (1981:83).

¹⁴⁸ Tauli (1958:141), as quoted by Cusic (1981:83).

¹⁴⁹ Wonderly (1951:157), as quoted by Cusic (1981:84).

¹⁵⁰ Garibay (1961:31), as quoted by Cusic (1981:84).

¹⁵¹ Jacobs (1975:95), as quoted by Cusic (1981:85).

¹⁵² Moshinsky (1974:46), as quoted by Cusic (1981:86).

¹⁵³ Wonderly (1951:157), as quoted by Cusic (1981:89).

- | | | | | |
|----|--|---------------------|-------|------------------------------|
| b. | loho:m'loho:ma't
'he goes in and out' | loho'm
'enter' | ALTER | [Tubatulabal] ¹⁵⁴ |
| c. | sesi:ya
'he sees now and then' | se:'ya
'he sees' | DIS | [Yuma] ¹⁵⁵ |

Readings that involve “a large or indefinite count” are, according to Cusic, better discussed in the context of the distributivity parameter (note that these are the most typical cases of pluractionality). One case that is discussed, however, is the ‘customary-occupational-habitual’ category:

- | | | | | |
|------|-------------------------|----------------|-----|-----------------------|
| (76) | kattar
'be a robber' | katar
'rob' | OCC | [Saho] ¹⁵⁶ |
|------|-------------------------|----------------|-----|-----------------------|

The ‘connectedness’ parameter concerns the degree of continuity between the repetitions, with one extreme of the continuum being total connectedness – continuous, rather than repetitive, readings – and the other one involving discontinuous, discrete, separate actions. An example of a category representing a high degree of connectedness is the ‘durative-continuative’ reading (repetitive action readings):

- | | | | | |
|------|------------------------------|----------------------|-----|---------------------------------|
| (77) | yoyoweh
'they kept going' | yoweh
'they went' | DUR | [Sierra Nahuatl] ¹⁵⁷ |
|------|------------------------------|----------------------|-----|---------------------------------|

As for the opposite end of the continuum, a low degree of connectedness can be exemplified by categories such as ‘duplicative’ or ‘alternative’ (repeated action readings; (75a-b)).

Finally, the ‘distributive’ parameter concerns how the individual actions are distributed in time or space. Cusic (1981:102) defines distribution as follows (cf. also 1.5.1.):

“The general idea of distribution is separation in time, space, or some other way, of actor from actor, action from action, object from object, property from property, and so on. In relation to our idea of plurality as internal complexity and external multiplicity, distributivity can be thought of as a function which takes the internally or externally complex entity, redivides it into its separate bounded units, and assigns these units to temporal loci, spatial loci, or matches them one-to-one with other bounded units.”

The possible values of the distributive parameter are: distributive in time, distributive in time and/or space, (non-distributive) and collective. The distributive parameter is an important one for Lasersohn (1995), who relies on Cusic’s descriptions to a large degree,

¹⁵⁴ Voegelin (1935:108), as quoted by Cusic (1981:90).

¹⁵⁵ Andrade (1933/38:189), as quoted by Cusic (1981:92).

¹⁵⁶ Tauli (1958:141), as quoted by Cusic (1981:93).

¹⁵⁷ Key (1960:131), as quoted by Cusic (1981: 87).

as well as for the present thesis. Nevertheless, it is also at this point that Cusic's discussion becomes less clear. One of the problematic points is that there is no value for distribution to participants, even though this is one of the most common cases.¹⁵⁸ Certain inconsistencies of Cusic's system are revealed at this point as well. First, as Cusic himself notes, the event ratio parameter was already defined in terms of repetition, which means distribution in time. However, according to the distributive parameter, this should be in fact only one of the options – at least distribution in space should be another possibility. Moreover, as Lasersohn points out, Cusic classifies some of the readings (tentative, intensive, augmentative, excessive) as non-distributive, despite the fact that he defines them in terms of repetition, that is, distribution in time. It could also be added that Cusic's use of the terms 'distributive', 'non-distributive' and 'collective' in general is not very clear.¹⁵⁹

Finally, in relation to the discussion in section 1.7., note that in Cusic's understanding, verbal plurality includes more than pluractionality as delimited in this thesis. Not only morphemes that are affixed to verbs can make them plural: "in some cases we will also want to consider certain kinds of adverbial specifications to be plural formants because of their semantic relation to the range of meanings associated with the morphologically plural verbs" (Cusic 1981:72).¹⁶⁰

To summarize, Cusic (1981) suggests that the wide range of readings available for plural verbs can be derived from the interaction of four parameters. Each of these parameters has a different role, namely, to distinguish event-internal and external plurality (event ratio parameter), set the relative size, effort, number of repetitions etc., specify the continuity among the individual events and determine whether the events are distributed to different times and/or locations, or not. Cusic's typology has been taken as a starting point by Lasersohn (1995) and others. In the next subsection, Lasersohn's analysis will be presented.

1.8.2. Lasersohn (1995)

Lasersohn devotes one chapter of his 1995 book to pluractional markers. He starts off with a remark that these morphemes are frequently discussed in the descriptive and diachronic literature but rarely in formal semantics (needless to say, that has changed since 1995). He gives a few characterizations of pluractional markers as found in the descriptive literature and concludes that "pluractional markers attach to the verb to

¹⁵⁸ Cf. also the quote above. Lasersohn (1995) hypothesizes that Cusic (1981) does not list this as a separate value for the distributive parameter because it is subsumed under distribution in space-or-time.

¹⁵⁹ Initially Cusic only claims that some of the readings are more distributive than others. In the summary of the discussion of the distribution parameter, however, he puts the 'less distributive' readings under the label 'non-distributive'. Also, the general repeated action reading is, surprisingly, taken to have a collective interpretation. Cf. also Lasersohn's (1995) discussion of Cusic's system.

¹⁶⁰ For Cusic, verbal plurality is a very broad notion. In Chapter 5, he discusses various ways in which verbal plurality can be expressed in English (e.g. by means of duration adverbials, the progressive etc.).

indicate a multiplicity of actions, whether involving multiple participants, times, or locations” (Lasersohn 1995:240). The starting point of his analysis is, then, based on the view that pluractional verbs refer to multiple events, which is an idea that can be formalized as follows:

$$(78) \quad V\text{-PA}(X) \Leftrightarrow \forall e \in X[V(e)] \ \& \ \text{card}(X) \geq n$$

A pluractional verb holds of a group of events if and only if its corresponding simple verb holds of each event in the group (and the number of events in the group/set exceeds a certain number). (78) leaves out a lot of detail, however. If one wishes to capture the range of meanings expressed by pluractionals some kind of parametrization is needed. Therefore, Lasersohn goes on to discuss various parameters along which pluractional meanings can vary. He takes Cusic’s (1981) system as the basis and attempts to capture (some of) the meanings Cusic assigns to pluractional markers, pointing out that any individual pluractional morpheme will probably show only a subset of the described readings. Lasersohn enriches the basic formula step by step. To capture the difference between repeated and repetitive events, i.e. event-external vs. event-internal pluractionality, he allows for two possibilities with respect to what predicate applies to the individual subevents: either the basic verb itself (V), or a lexically specified predicate. The first option applies in the case of repeated events and the latter one in the case of repetitive events, expressed by verbs like *nibble*. In the case of *nibble* the predicate applying to each of the subevents would not be the same verb: it would be something like *take a small bite*. This captures the event-ratio parameter of Cusic’s.

$$(79) \quad V\text{-PA}(X) \Leftrightarrow \forall e \in X[P(e)] \ \& \ \text{card}(X) \geq n$$

repeated: $P=V$

repetitive: P is fixed lexically

An important point with respect to Cusic’s use of the terms ‘repeated’ vs. ‘repetitive’ is the following (Lasersohn 1995:256; cf. also the discussion of Cusic’s system above):

“Note that although the terms *repeated* and *repetitive* specifically suggest temporal repetition, the question of whether $P=V$ is completely independent of whether the pluractional marker takes a temporal reading. We obtain an alternation even in the case of spatial readings, participant-based readings, or completely non-distributive readings.”

The distribution over participants, locations or times (the distributive parameter) is captured once the non-overlap condition is added:

$$(80) \quad V\text{-PA}(X) \Leftrightarrow \forall e, e' \in X [P(e) \& \neg f(e) \circ f(e') \& \text{card}(X) \geq n]$$

temporal distribution: $f = \tau$ (temporal trace function)

spatio-temporal distribution: $f = K$ (function that is actually a pair of functions mapping events to their times and locations)

participant-based distribution: $f = \theta$ (theta roles)

The non-overlap condition ensures that the times, locations or participants (which can all be in the range of f) of the individual events do not overlap. Then, in order to get truly separate running times, locations or participants, the non-overlap condition needs to be strengthened by adding the separateness condition, which states that e.g. each two running times or locations have to be separated by a time or location at which no event that can be described by the basic predicate takes place.¹⁶¹

$$(81) \quad V\text{-PA}(X) \Leftrightarrow \forall e, e' \in X [P(e) \& \neg f(e) \circ f(e') \& \exists x [\text{between}(x, f(e), f(e')) \& \neg \exists e'' [P(e'') \& x = f(e'')]] \& \text{card}(X) \geq n]$$

N.B. In the case of continuous readings, the separateness clause is negated:

$$\neg \exists x [\text{between}(x, f(e), f(e')) \& \neg \exists e'' [P(e'') \& x = f(e'')]]$$

(81) is the final version of the formula – the ‘skeleton of an analysis’ that is meant to cover a subset of Cusic’s readings. Lasersohn explicitly mentions that formalizing Cusic’s relative measure parameter, concerned with the size, intensity etc., of the events is no easy matter and leaves the issue open (Lasersohn 1995:255).¹⁶²

“A detailed formalization of Cusic’s relative measure parameter, concerned with the size, intensity, etc., of the events in the set satisfying the pluractional verb, would take us too far afield; this parameter involves the interaction of a wide variety of non-logical notions, not all of which seem to play the same role in the overall semantics of pluractional morphemes. As the barest start on an analysis of these notions, we might posit a series of measure functions on events, yielding values based on size, degree of effort, effectiveness, etc. We could then add an optional condition to the semantics of pluractional morphemes, requiring certain minimum or maximum values for these functions, depending on the specific reading desired. In some cases, however, it may be the setting of n , rather than the value of one of those measure functions, which is at issue.”

¹⁶¹ Lasersohn (1995:255) comments on the applicability of the separateness condition to participant-based cases: “As far as I can tell, the issue of continuity does not arise in connection to participant-based readings”. I will show in section 3.5.4. of Chapter 3, however, that the issue of continuity does arise even there.

¹⁶² For Hausa, these issues will be dealt with in the section devoted to the special character of pluractionals: section 3.7.

As mentioned in the introduction to the section, Lasersohn's analysis has been very influential. Another proposal that is often cited in the literature is one that is very similar to Lasersohn's, but in contrast to it, it does not make use of events as primitives in the theory and connects pluractionality to atelicity.

1.8.3. Van Geenhoven (2004, 2005)

Van Geenhoven's (2004, 2005) starting point is different from that of Lasersohn's. Van Geenhoven does not set out with the goal of proposing a formula that would capture all possible meanings that are found with pluractionals cross-linguistically. The main goal of her 2004 paper is to propose a new account of frequentativity.¹⁶³ Van Geenhoven interprets frequentative markers (in West Greenlandic Eskimo) in terms of temporal pluractionality (building on Stump's 1981 insight that frequentativity involves temporal distribution) and gives an interval-based analysis of these markers, which she then compares to Lasersohn's event-based semantics.

In West Greenlandic, there are several frequentative markers: *-tar-*, *-qattaar-*, *-llattaar-* for neutral, high and low frequency respectively.¹⁶⁴

- (82) a. *-tar-*
 Nuka ullaa-p tunga-a tama-at [West Greenlandic]¹⁶⁵
 N.ABS morning-ERG direction-3SG.ABS all.3SG
 saniuqut-tar-puq
 go.by-tar-IND.[-tr].3SG
 'Nuka went by repeatedly for the whole morning'
- b. *-qattaar-*
 Qaartartu-t sivisuu-mik qaar-qattaar-put
 bomb.ABS-PL lengthy-INS explode-qattaar- IND.[-tr].3PL
 'Bombs exploded again and again for a long time'
- c. *-llattaar-*
 Angu-llattaar-puq
 seal.catch-llattaar- IND.[-tr].3SG
 'He caught a seal from time to time'

Van Geenhoven proposes that the frequency marker adds two meaning components: it pluralizes the verb and it distributes the plurality of subevent times over the overall event time (in such a way that it brings in a hiatus between every two subevent times). The semantics she assigns to *-tar-* is as follows (Van Geenhoven 2004:158):

¹⁶³ Dowty (1979), Krifka (1989, 1992) being the old accounts that she directly reacts to.

¹⁶⁴ Bittner & Trondhjem (2008:23) argue that "Van Geenhoven (2004) conflates the process suffix *-qattar* with the habitual suffix *-tar*, misidentifying both as markers of 'temporal pluractionality'", which is, according to them, a contradiction in terms.

¹⁶⁵ Van Geenhoven (2004:146-7).

(83) $\text{-tar-} \Rightarrow \lambda V \lambda t \lambda x (\ast^t V(x) \text{ at } t)$

where $\ast^t V(x) \text{ at } t = 1$ iff

$$\exists t'(t' \subseteq t \wedge V(x) \text{ at } t' \wedge \text{number}(t') > 1 \wedge \forall t''(t' \subseteq t \wedge V(x) \text{ at } t'' \rightarrow \exists t'''(t'' \subseteq t \wedge (t''' > t' \vee t''' < t') \wedge V(x) \text{ at } t''' \wedge \exists t''''(t' < t'''' < t'' \vee t' > t'''' > t'' \wedge \neg V(x) \text{ at } t''''))))$$

Notice that the formula in (83) is very similar to the one in (81), that is, the analysis proposed by Lasersohn (1995). The first part of the formula says that there is more than one interval in which V holds of x . In addition, (83) also states there is a ‘hiatus’: between any two intervals at which V holds of x , there is an interval at which V does not hold of x . This part is clearly parallel to Lasersohn’s separateness condition.

As mentioned above, *-tar-* is only one of the frequency markers found in West Greenlandic. There are also *-qattaar-* and *-llattaar-*, expressing high and low frequency, respectively. Van Geenhoven proposes that these are temporal pluractional operators as well, labeled ‘flower star’ and ‘stripe star’, respectively. Compared to *-tar-*, these operators would have an additional clause in their semantics specifying whether the frequency involved is high or low (by stating that the number of subevent times is large or small: ‘number(t') is large/ small’).

Van Geenhoven compares her approach to that of Lasersohn’s (1995). She admits that the way in which she defines pluractional markers is reminiscent of his. As shown in the previous subsection, for Lasersohn, the denotation of a pluractional verb is a non-empty set of events such that every two events are separated from each other. This is very similar to how Van Geenhoven analyzes pluractionality, with the difference that she does not make use of events. According to Van Geenhoven the idea behind event semantics is to capture the similarities between the nominal and verbal domain. However, Van Geenhoven argues that it is not necessary to work with events to capture the similarities. Thus, she prefers to use an interval-based semantics. Nevertheless, it is important to note that Van Geenhoven’s goal is only to capture the semantics of temporal pluractionality, or what she calls frequentative aspect. For that an interval-based semantics might be sufficient. Lasersohn aims at covering a wider range of uses, i.e. also spatial and participant-based readings, and those are much harder to analyze without reference to events.¹⁶⁶

¹⁶⁶ There are also verb markers in West Greenlandic that express ‘succession’ (‘ V one by one’; Van Geenhoven 2004:151-2). These markers would be very interesting to look at in more detail, precisely because they are not purely temporal. On page 186-7, Van Geenhoven suggests that these markers are “instances of temporal pluractionality which express repetition and increase”, or, “temporal distribution, of a kind that goes hand in hand with the distribution of individuals”. Note, however, that examples involving distribution to event participants are exactly the type of examples for which interval semantics is not sufficient.

In relation to the question of what should be included in the notion of pluractionality, it is important to say that for Van Geenhoven, English sentences like the one in (84) also contain a pluractional operator of the type defined above in (83).

- (84) a. John found his son's tricycle in the driveway for six weeks
b. John hit a golf ball into the lake for an hour

It is a frequency operator very similar to *-tar-* in West Greenlandic, also attached to the verb, the difference being that the operator is silent in English.¹⁶⁷ In addition, languages like English also have overt markers of pluractionality, for example, frequency adverbs (e.g. *repeatedly*).¹⁶⁸

- (85) Mary discovered a flea/ fleas on her dog repeatedly for a month

This issue has already been discussed in 1.7. Including or not including cases like (84) and (85) in pluractionality is a matter of definition. In section 1.7., I argued for a more restricted use of the term.

Another important aspect of Van Geenhoven's approach is related to the issue discussed in section 1.3., namely the relation between pluractionality and aspect. In particular, for Van Geenhoven (2004:142-3), pluractional predicates are necessarily atelic: "Pluractional predicates are like mass nouns (i.e., [they have] cumulative [reference]) and it is this that makes them unbounded and therefore atelic".¹⁶⁹ This means that, in Van Geenhoven's view, frequentative readings are atelic by means of being pluractional. Van Geenhoven goes even further, however. Not only does she say that pluractional predicates are atelic but also that (all) atelic predicates are pluractional (Van Geenhoven 2004:161).

"By integrating frequentativity into the family of atelic aspects, atelicity is put in a new perspective. In particular, the source of atelicity is now identified as pluractionality, that is, as plurality in the domain of verbs. In my view, an atelic predicate is a pluractional predicate and it is this kind of predicate that is selected by an atelic adverbial."

This claim is made even more explicit in her 2005 paper where she interprets as pluractional all of the following: (silent) frequentative, continuative ('she sang continuously all night long') and gradual aspect ('he is getting bigger and bigger'), activities and states, imperfective aspect and frequency adverbs. In other words, Van Geenhoven postulates the existence of different pluractional operators for all these cases.

¹⁶⁷ Van Geenhoven (2004:154-5) comments on her approach as follows: "I thus assume that although languages differ in their morphosyntactic means to express pluractional mechanisms, these mechanisms nonetheless apply crosslinguistically. What I show specifically is that silent frequentative in English is a case of implicit pluractionality".

¹⁶⁸ The silent verb-level pluractional marker and frequency adverbs – overt markers of pluractionality – have slightly different properties – cf. Van Geenhoven (2004).

¹⁶⁹ This is a view held by some researchers and one that I have argued against in 1.3.3.

Note that in the case of activities and states, e.g. verbs like *sleep*, she talks about inherent (or lexical) pluractionality. As a result, in Van Geenhoven's view, the aspectual value of the predicate, that is, its (a)telicity, is not due to the nature of its nominal argument (as for e.g. Krifka 1989, among many others; Van Geenhoven 2004:179):

“Rather, the aspectual value is determined by the presence of an implicit pluractional marker in the first place. [...] Hence, the true source of atelicity is the cumulative nature of a pluractional predicate rather than the cumulative nature of its complement.”

To summarize, Van Geenhoven offers a new view on frequentativity and other ‘aspects’ by analyzing them in terms of (temporal) pluractionality. Among other things, she argues for a virtual identification of pluractionality and atelicity. Van Geenhoven deals basically only with temporal interpretations. She proposes an interval-based account of them, which is in fact very similar to Lasnik's event-based account. However, unlike Lasnik's proposal, Van Geenhoven's account is not suitable for participant-based cases.

1.8.4. Ojeda (1998)

The last proposal to be discussed in this section is Ojeda's (1998) analysis of the semantics of different number forms in Papago. Ojeda's paper is not primarily concerned with verbal plurality: the starting point of his discussion is the number oppositions in the nominal domain. However, as the situations in the two domains are largely parallel, the analysis is applicable equally well to nouns and verbs.

The basic fact about the number system in Papago is that it has two types of contrasts: roughly, singular vs. plural and non-distributive vs. distributive.¹⁷⁰ The number of actual number forms that express these two basic contrasts depends on the class the particular lexical item belongs to. Both nouns and verbs can thus be divided into several distinct classes depending on the particular number forms they can occur in. Basically, three types of cases can be found, both with nouns and verbs.

First, some nouns and verbs exhibit singular vs. plural contrasts of the type familiar from the English-type nominal plurals. This is the contrast between forms labeled ‘singular’ vs. ‘non-singular’ in the case of nouns and ‘unitive’ vs. ‘non-unitive’ in the case of verbs:

(86)	<i>nouns</i>		
	<i>singular</i>	<i>non-singular</i>	[Papago] ¹⁷¹
a.	bán	bá·ban	
	‘coyote’	‘coyotes’	

¹⁷⁰ Ojeda (1998) relies on descriptions in a series of studies by Mathiot (e.g. Mathiot 1983).

¹⁷¹ Ojeda (1998:248-249, 251).

*verbs**unitive*

- b. *héhem*
 ‘to laugh once (at
 one locations)’

non-unitive

- héhhem*
 ‘to laugh more than once (at one
 or more than one location)’

Second, some nouns and verbs mark a contrast between ‘non-distributive’ (also sometimes called ‘collective’) and ‘distributive’ forms:

(87) *nouns**non-distributive*

- a. *háíwañ*
 ‘one or more head of
 cattle belonging to the
 same herd’

distributive

- háhaiwañ*
 ‘head of cattle belonging
 to more than one herd’

verbs

- b. *cíkpan* *cíckpan*
 ‘to work (once or more ‘to work (more than once) at
 than once) at one location’ more than one location’

Finally, some verbs and nouns have a three-way distinction: singular, non-distributive plural and distributive plural. The labels used for nouns are ‘singular’, ‘plural’ and ‘distributive’. In the case of verbs the labels used are ‘unitive’, ‘repetitive’ and ‘distributive’.

(88) *nouns**singular*

- a. *dáikuḍ*
 ‘a single chair
 from a single
 household’

plural

- dáḍaikuḍ*
 ‘several chairs
 from a single
 household’

distributive

- dáḍḍaikuḍ*
 ‘several chairs
 from several
 households’

*verbs**unitive*

- b. *habcéʔi*
 ‘to say something
 for the first time
 once (at one
 location)’

repetitive

- habcéce*
 ‘to say something
 for the first time
 more than once
 at one location’

distributive

- habcécce*
 ‘to say something
 for the first time
 more than once at
 more than one location’

As the situation in the two domains is so similar, Ojeda (1998) proposes a mereological analysis that applies to both nouns and verbs (in the spirit of e.g. Bach 1986, Krifka 1989, who extend Link’s 1983 proposal to events). The lexical roots are assumed to denote atoms and their sums. In the case of nouns the atoms are individuals, in the case

of verbs they are events. Singulars denote atomic individuals/ events and (proper) plurals denote sums of (non-identical) individuals/ events. This is sufficient to account for the singular vs. plural contrast of the type known from languages like English. To account for the non-distributive vs. distributive contrast, the notion of equivalence has to be introduced. The idea of two individuals or events being equivalent corresponds to Mathiot's (1983) notion of belonging to the same 'locus'. Being equivalent can thus mean belonging to the same household or herd in the case of nouns (e.g. the non-distributive form in (87a)). In the case of verbs, the events are equivalent if they take place at the same location. Being non-equivalent, on the other hand, means belonging to different households, herds or locations, depending on the class of the lexical item.

Distributive forms such as those in (87) and (88) are, then, analyzed as denoting sums of non-equivalent atoms. As for the non-distributive forms, their denotation depends on whether there is a two-way or a three-way contrast. If the non-distributive forms contrast only with distributive forms, as in (87), their denotation includes both atomic individuals/ events and sums of equivalent atoms. In cases in which there is a three-way contrast between singulars, non-distributive plurals and distributive plurals, as in (88), the denotation of the non-distributive form does not include atoms.

Notice that Papago verbal forms that could be considered pluractional are of different types. A first type are the so-called 'non-unitive' forms, which are simply plural: they denote sums of (non-identical) event atoms. It is not specified whether the events are equivalent or non-equivalent, that is, whether they take place at the same location or at different locations. A second type are the 'distributive' forms which denote sums of non-equivalent events, i.e. events that take place at different locations. Finally, there are 'repetitive' forms which denote sums of equivalent events, which means sums of events that take place at the same location. What connects all the plural forms is the fact that they all denote sums of events.¹⁷²

In comparison to the other proposals presented in this section, Ojeda's analysis has several specific features. First, it is the fact that his analysis is not limited to verbal plurality. Ojeda explicitly mentions this when he compares his own analysis to that of Lasersohn's (1995), which is applicable only to verbs. Second, (non-)equivalence is a very general and flexible notion. The exact nature of equivalence relation is not specified in the semantics of distributive plurality itself.¹⁷³ This makes it possible to capture

¹⁷² In connection with the discussion in section 1.3.5., where I argued that it might often be very hard to determine whether the source of an iterative interpretation is pluractionality or aspect/ Aktionsart, note that Papago 'repetitive' and 'non-unitive' forms are clearly not aspectual. The verbal forms with iterative interpretations are to be analyzed as instantiating verbal number, as they are perfectly parallel to the nominal plural forms.

¹⁷³ According to Ojeda (1998:261), it is not essential to specify the content of the notion of equivalence, since "the notion of equivalence involved in the semantics of (non)distributives is identified not by the grammar of Papago but by other aspects of Papago culture – say, the importance of owners or makers of tools, the importance of herds of cattle, and so on".

various ‘flavors’ of distributive plurality, e.g. the ‘here and there’ type and the ‘different kinds’ type alike, without complicating the meaning of the distributive plurals themselves. Third, in Ojeda’s account, the connection between regular and distributive plurals is captured in a very elegant way. Regular plurals are described as plurals based on the notion of identity, while distributive plurals are based on the notion of non-equivalence. Identity, however, is just a special type of equivalence relation (Ojeda 1998:260):

“Now, a notion of non-equivalence on a set is nothing more and nothing less than a binary relation which is reflexive, symmetric, and transitive on the set. But identity is a binary relation which is reflexive, symmetric, and transitive on any set. Identity is, therefore, an equivalence relation. It is, in fact, the strictest form of equivalence – the one which holds only between an entity and itself. It now follows [...] that plural forms are a particular, limiting, case of distributive forms or, equivalently, that distribution is a generalization of plurality.”

In my understanding, distributive plurals are a special case of plurality, rather than the other way round, since while identity is a special case of equivalence, non-equivalence is a special case of non-identity. Nevertheless, the point is that under Ojeda’s analysis the connections between English-type nominal plurals and Papago distributive plurals (both nominal and verbal) becomes rather transparent.

This summary of Ojeda’s (1998) proposal concludes the section. From the proposals presented here, Lasersohn’s (1995) and Ojeda’s (1998) accounts played the most important role in the development of the analysis of Hausa pluractionals presented in this thesis. As such, they will be partly discussed again in section 3.9. of Chapter 3 where I compare various aspects of my proposal to other proposals in the literature.

1.9. Conclusion

Recently, pluractionality has been receiving more and more attention. The main goal of this chapter was to introduce the concept of pluractionality and delimit it with respect to related phenomena. I argued that even though there are striking parallels between nominal and verbal number (and even though it is desirable to try to find generalizations applicable to plurality in general) it makes sense to study pluractionality as a phenomenon in its own right. I also discussed the question of where one should draw the boundaries between pluractionality, aspect and gradability. I argued that sometimes it is hard to see what the source of certain interpretations is because iterativity, for instance, can be of pluractional as well as aspectual nature. Apart from arguing that there is an overlap in interpretations that plurality and aspect can give rise to, it was shown that pluractionality is independent of viewpoint aspect and (un)boundedness. The role of

degree in connection to pluractionality is important as well. One of the reasons is that cases in which plurality and degree effects cooccur in pluractionals are rather common.

The general discussion related to how pluractionality should be delimited was followed by a discussion of the terms ‘distributive’ and ‘collective’, which both play an important role in the literature on plurality. The different uses of the terms were distinguished and some suggestions were made as to how the notions relate to pluractionality. The next issue discussed was what distinctions should be made within pluractionality. I argued that there is not much evidence for making a distinction between event number and participant number. As for the event-external versus event-internal distinction, there is disagreement in the literature where exactly the boundary lies. The point of controversy are mainly pluractionals of the *knock* type. The general discussion of pluractionality was concluded by considering what the phenomena are that the term should cover, which is a reaction to the recent explosion of the use of the term. I argued for restricting the term pluractionality to cases where event plurality is signaled directly by the form of the verb and suggested that caution is required in purely temporal cases.

Finally, I presented four theoretical accounts of pluractionality. First, I described Cusic’s system. Cusic (1981) was the first in-depth study of verbal plurality and his classification of the various readings has been often quoted and used in later studies. Probably the most influential formal account, and one that takes Cusic (1981) as its basis, is the event-based account of Lasersohn (1995). Van Geenhoven’s (2004, 2005) analysis is comparable to Lasersohn’s, with the difference that her account is interval-based and as such it is not suited for participant-based cases of pluractionality. Finally, Ojeda (1998) is one of the very few proposals that treat the number distinctions in the nominal and verbal domain uniformly and discuss explicitly the relation between regular and distributive plurals.

In the next chapter, I will turn to the presentation of the data that will be analyzed in Chapter 3, namely, pluractional verbs in Hausa.

Chapter 2: Pluractionality in Hausa

2.1. Introduction

The goal of this chapter is to present some basic information on Hausa and introduce the data that will be analyzed in Chapter 3. The data are with a few exceptions my own, collected at various points between 2007 and 2010. Roughly half of the overall amount of data came out of a number of elicitation sessions with various native speakers of Hausa living in Europe. These speakers are from different parts of Hausaland, one from Niger, the rest from Nigeria. The other half was collected during my field trip to Sokoto, Nigeria, in August – September 2009. Even though the speakers I have consulted speak different dialects, I have no reason to think that the use of pluractional verbs is subject to dialectal variation.¹ There is a lot of variation but it seems to be a matter of individual idiolects and personal preferences, rather than dialects, since there is as much variation within the judgments of speakers of the same dialect as across dialects. As inter-speaker variation is something rather typical of Hausa pluractionals, it will be discussed throughout the chapter and a brief summary of the individual points of variation will be given in section 2.8.4. In the rest of this introduction a few general remarks concerning the variation will be made.

One general observation that can be made about how speakers vary in their use of pluractionals is that there are what I will call ‘conservative’ and ‘liberal’ speakers. Naturally, this distinction is gradual and thus one cannot speak of two clearly separate groups of speakers. Nevertheless, ‘conservative’ vs. ‘liberal’ is a distinction that can provide some insight into the ways speakers’ judgments vary. Below I discuss three different aspects or dimensions in which speakers can be conservative or liberal.

First, conservative speakers seem to require rather special contexts for an appropriate use of the pluractional form. Essentially, this means that for conservative speakers pluractionals clearly express meanings that go beyond simple event plurality. By contrast, liberal speakers often assign pluractionals interpretations that are simply plural (cf. the characterization of what I consider typical pluractionals and the distinction between the basic meaning and additional meanings of pluractionals given in (2) in Chapter 1).

¹ It should be said, however, that probably none of the speakers I consulted speaks a ‘pure’ dialect. They are all rather well educated people, as a consequence of which their language is influenced by the standard variety of Hausa. However, as already mentioned, dialectal differences do not seem to play a role in the interpretation (or formation) of pluractional verbs. Nevertheless, they can play a role in the choice of the particular lexical item (verb that serves as the basis for the pluractional formation) the speakers use to express the given meaning.

The second aspect or dimension seems connected to the first one. It has to do with the extent of the regularity of the formation. For conservative speakers, the pluractional formation is clearly derivational and subject to restrictions. Such speakers do not derive pluractional forms equally easily from all verbs. They often reject forms that seem coined, that is, that are not recognized as commonly used or ‘well-established’. For a very small number of speakers the pluractional form is special to the extent that it does not seem to be productive at all. It almost seems that such speakers accept only a few lexicalized cases. In contrast, liberal speakers form pluractionals very regularly, to the extent that for some of them the formation has almost an inflectional character. There are few idiosyncrasies in their data and only few forms are rejected as non-existent.

Finally, some speakers are conservative in the sense that they accept pluractionals only in optimal contexts. This means that many forms are rejected for essentially pragmatic reasons, for instance, because the pluractionals were used to describe situations that do not arise naturally. Other speakers are more flexible in accepting unusual contexts or they even themselves invent scenarios that make sentences with pluractionals felicitous. Such speaker are willing to accept more cases than conservative speakers are and can thus be said to be more liberal.²

This brief and necessarily schematic characterization of the ‘conservative’ vs. ‘liberal’ speaker distinction does not exhaust the topic of inter-speaker variation. It should rather serve as a general background against which the individual points of variation can be evaluated. Concrete examples of idiolects, including the discussion of how their individual features are related to each other, will be given in section 3.8. of Chapter 3.

The chapter is organized as follows. First, I present some general information on Hausa and its grammatical system, which will be concluded by introducing the pluractional formation (section 2.2.). After that, the actual pluractional data will be presented. I start by discussing in some detail the plurality requirement and its different components (section 2.3.). Section 2.4. is dedicated to a discussion of the status of iterative interpretations. Section 2.5. deals with data showing that the number of events referred to by pluractionals should not be specified precisely but it should be large. Following that, some data will be presented that challenge the idea that a plurality of events analysis is sufficient for a proper treatment of Hausa pluractionals, namely pluractional verbs with high degree interpretations (section 2.6.). Section 2.7. discusses how certain meaning aspects of pluractional verbs interact with each other. Section 2.8. deals with some remaining issues, the most important of which is the inter-speaker variation in judgments. Section 2.9. concludes the chapter.

² Note that the distinction between conservative and liberal speakers is not a distinction between older and younger speakers. In fact, I have no evidence for saying that the differences in the use of pluractionals depend on the age of the speaker. Similarly, there seems to be no clear correlation between the conservativeness and the gender of the speaker.

³ Alternatively, vowel length can be marked by a macron: *sūnā* ‘name’.

b. tone:	high (no accent mark)	<i>maza</i> ‘quickly’
	low (grave accent)	<i>dà</i> ‘with’ ⁴
	falling (circumflex)	<i>zân</i> ‘I will’ (1SG.FUT)

The consonant system is quite rich, thanks to the existence of glottalized, palatalized and labialized sets. Several special characters and digraphs are used in Hausa.⁵

(2)	ɓ	laryngealized bilabial stop
	ɗ	laryngealized alveolar stop
	ƙ	glottalized velar ejective
	ɾ	coronal tap/roll
	ts	ejective coronal sibilant
	ʔ	glottal stop
	ɥ	laryngealized semivowel

The Hausa phonological system plays a minor role in the discussion of pluractional verbs. I will only discuss it where relevant.

2.2.2. Sentence structure

In this section the basics of the sentence structure in Hausa are discussed. The focus of the discussion is on the basic elements forming a sentence, the main clause types and the tense-aspect-mood system. For this and the following five subsections, I am relying on the descriptions given by Newman (2000) and Jaggar (2001). Most of the examples given in these sections are taken from these two grammars.⁶

As illustrated in (3) below, Hausa is an SVO language, with an inflection-carrying element (INFL) between the subject and verb.⁷ INFL carries subject agreement and the tense/ aspect/ mood information (TAM, see below). Hausa is a pro-drop language, which means that a sentence can start directly with INFL if the subject is recoverable from the context.

⁴ Note that the tone is marked only on the first vowel if the vowel is long, e.g. *bàa* ‘negative marker’.

⁵ There are two R’s in Hausa. An ‘r’ with no diacritic is a retroflex flap. The glottal stop is marked only in non-initial positions. Apart from the use of special characters, other differences in comparison to the English orthography include the following: *c* is pronounced as *ch* in *church* and *g* is always pronounced as *g* in *get*. In addition, there are geminate consonants, which are indicated by double letters. In the case of geminates of consonants represented by digraphs such as *ts* only the first letter of the digraph is doubled: *tsaitsuàya* ‘stop.PLC’.

⁶ The glosses are my own.

⁷ This element is called person-aspect complex (PAC) in Newman (2000) and Jaggar (2001) and auxiliary in Hartmann (2008).

- (3) S INFL V O
 (Tàlaatù) takàn dafà àbinci
 (Talatu) 3SG.F.HAB cook food
 ‘(Talatu)/ she cooks food’

Not only subjects but also objects can be dropped easily if they are recoverable from context:

- (4) INFL V
 Kaa gyaaràa?
 2SG.M.PF fix
 ‘Did you fix (it)?’

Apart from verbal clauses, there are also two kinds of clauses in Hausa that do not contain a verb (i.e. not even a covert one). One type of non-verbal clauses are clauses that do not contain either a verb or INFL, for instance, equational (5a) or existential clauses (5b):⁸

- (5) a. Shii (bàa) mahàukàcii (ba) nèe EQUATIONAL
 he NEG crazy NEG STAB.M
 ‘He is (not) crazy’
 b. Àkwai ruwaa EXISTENTIAL
 there.is water
 ‘There is water’

The second type of non-verbal clauses are clauses that contain INFL but no verb. These are e.g. possessive (6a) or locative (6b) constructions, or clauses with the so-called statives (6c), which are assumed to be non-verbal (cf. subsection 2.2.4.):

- (6) a. Kanàa dà mootàa? POSSESSIVE
 2SG.M.IMPF with car
 ‘Do you have a car?’
 b. Yanàa gidaa LOCATIVE
 3SG.M.IMPF home
 ‘He is at home’
 c. Sunàa zàune STATIVE
 3PL.IMPF seat.ST
 ‘They are seated’

⁸ The stabilizer (STAB) is a copula-like element used in equational sentences, but it also functions as a focus marker (if it is indeed the same element; cf. Green 2007). The masculine and plural form of the stabilizer is *nèe* and the feminine form is *cee*. The tone is polar, i.e. opposite to that of the preceding syllable (cf. example (5a) above).

Having introduced the basic facts about clauses and the elements they are constituted by, the rest of the subsection will be devoted to verbs and the tense/ aspect/ mood system.

The most basic fact about verbs is that they do not inflect for tense, aspect or modality and do not carry agreement markers.⁹ Instead, this kind of information is encoded in the already mentioned INFL marker. INFL is composed of the tense/ aspect/ mood (TAM) morpheme and the subject agreement morpheme (person, gender and number). These two morphemes are sometimes clearly identifiable (or even written as separate words), as in the future form (7a), but often the two parts cannot be really distinguished, as in the perfective form (7b):

- (7) a. Bà(a) zaa mù iyà zuwàa ba FUTURE
 NEG FUT 1PL be.able come NEG
 ‘We won’t be able to come’
 b. Naa ci goofò PERFECTIVE
 1SG.PF eat kolanut
 ‘I ate a kolanut’

Tense and aspect are not realized as separate categories in Hausa. Rather, together with mood they constitute components of a single conjugational system: tense/ aspect/ mood (TAM). The TAM marker forms part of the INFL element, as demonstrated above. The TAM paradigms can be divided into three (syntactically determined) categories: general (affirmative clauses and *yes-no* questions), relative (focus, relativization and *wh*-questions) and negative (both general and focus negative clauses).¹⁰ The basic division is between imperfective and other than imperfective TAMs. Imperfective TAMs do not combine with verbs in the strict sense but rather with verbal nouns (comparable to the *-ing* forms of the English progressive), locative or stative predicates or possessive

⁹ There is one verb form that does express grammatical features that are otherwise marked by the INFL morpheme, however: the imperative. The imperative is available for second person singular only (ia). In all other cases, commands have to be expressed by using the subjunctive TAM (ic). In fact, the subjunctive is a more common way to express commands in the second person singular as well (ib). As for the form of the imperative, it is usually segmentally identical to the non-imperative form but the tone is usually LH (overriding the tone of the non-imperative use):

- (i) a. tàashì! < taashì IMPERATIVE
 ‘get up!’ ‘get up’
 b. kà/ki taashì SUBJUNCTIVE
 ‘(you.SG.M/F) get up’
 c. kù taashì
 ‘(you.PL) get up!’

¹⁰ Only a subset of all TAMs have three distinct forms. In some TAMs, a single form is used in all three categories. In addition, some TAMs are restricted to certain categories.

constructions.¹¹ Table 2.1. presents six variants of a single sentence, demonstrating six different TAM paradigms.

Table 2.1.: TAMs

	perfective	imperfective
general	Audù yaa fitoo Audu 3M.SG.PF come.out 'Audu came out'	Audù yanàa fitôwaa Audu 3M.SG.IMPF come.out.VN 'Audu is coming out' ¹²
relative	Audù (nee) ya fitoo Audu (STAB) 3SG.M.RELPF come.out 'It is Audu who went out'	Audù (nee) yakêe fitôwaa Audu (STAB) 3SG.M.RELIMPF come.out.VN 'It is Audu who is coming out'
negative	Audù bai fitoo ba Audu 3SG.M.NEGPF come.out NEG 'Audu didn't go out'	Audù baa yaa fitôwaa Audu 3SG.M.NEGIMPF come.out.VN 'Audu isn't going out'

As already mentioned above, the other, non-TAM, component of INFL reflects the person, gender and number features of the subject. This information is thus not encoded in the verb itself. This point is important in connection with pluractionality, since participant-based pluractionality could in principle be confused with agreement. In Hausa, however, the situation is very clear: pluractionality is marked on the verb, whereas agreement never is.

In the following subsection, more information on verbs is given. In particular, the subsection discusses the so-called 'grade system'.

2.2.3. Verb grades

As indicated in the previous subsection, Hausa verbs are not morphologically marked for person, number or tense/ aspect/ mood. However, they do in some cases change their form depending on the syntactic environment. The syntactic environment relevant for the choice of the appropriate form is determined by what follows the verb. If the verb has no object or if the object has been fronted the so-called 'A-form' is used. If the verb is followed by a pronominal direct object it is necessary to use the 'B-form'. In cases when the verb is followed by a noun in the direct object position the appropriate form is the 'C-form'. The 'D-form' is used if an indirect object follows the verb. An example of a verb and its different forms is given in Table 2.2. below.

¹¹ Saying that imperfective TAMs are only used with non-verbal predicates is not quite precise because in some cases the verbal form is actually used, instead of a verbal noun, namely, if an object follows (cf. the discussion of verbal nouns below). Both Newman (2000) and Jaggar (2001) use the term 'infinitive phrase' for such combinations of verbs and their objects in imperfective sentences, probably to be able to make a generalization that would cover all imperfective sentences, namely, that they do not contain finite verbs.

¹² The time-reference point is fixed by adverbials or context, for example. If no context is provided, the default time reference is the time of speaking.

Table 2.2.: Forms of the verb *sàyaa* ‘buy’

A (pre-zero)	B (pronominal d.o.)	C (nominal d.o.)	D (i.o.)
sàyaa	sàyee	sàyi	sayàa/sayaĩ

The verb *sàyaa* ‘buy’ exhibits a distinct morphological form in each of these four syntactic environments. This is not the case for all verbs. The number of distinct forms and their exact shape depend on the morphological class the particular verb belongs to. These morphological classes are called ‘grades’.

Verb grades are thus morphological classes of verbs that share certain formal and partly also semantic characteristics. There are eight grades described in the grammars, which can be divided into ‘primary grades’ and ‘secondary grades’. The primary grades are grades 0 to 3. Each of these grades is defined by certain formal characteristics, such as the final vowel and tone pattern. The following simplified characteristics of the primary grades can be given. Grade 0 are mostly monosyllabic verbs that typically end in *-i* or *-aa*, like *ci* ‘eat’ or *shaa* ‘drink’. Grade 1 contains both intransitive and transitive *a(a)*-final verbs, such as *dafàa* ‘cook’. Grade 2 verbs are all transitive verbs. They demonstrate the greatest variability in form, as exemplified in the table above. Grade 3 is an exclusively intransitive grade containing *a*-final verbs, like *fita* ‘go out’. Grades 4 to 7 are called secondary grades. The secondary grades, unlike the primary grades, can generally be characterized semantically as well, apart from being defined by certain formal features. Grade 4, the ‘totality’ grade, contains both transitive and intransitive verbs that “indicate an action totally done or affecting all the objects” (Newman 2000:629), e.g. *sayèe* ‘buy up’. Grade 5 verbs, called ‘efferential’ by Newman (traditionally ‘causative’) indicate “action directed away from the speaker” (Newman 2000:629), e.g. *zubaĩ* ‘pour out’. It is characteristic for these verbs that “semantic direct objects” require the use of the oblique marker *dà*, as in *yaa zubaĩ dà giyàa* ‘he poured out the beer’. Grade 6 verbs are called ‘ventive’ by Newman. They end in *-oo* and indicate action “in the direction of or for the benefit of the speaker” (Newman 2000:629), e.g. *daawoo* ‘come back’. Grade 7 indicates “an agentless passive, middle voice, action well done, or the potentiality of sustaining action” (Newman 2000:629), depending on the TAM. They end in *-u*, as in *dàfu* ‘be well cooked’. Despite the fact that secondary grades can be partly characterized semantically, it is often hard to provide a label that would cover all cases. Note that many verb stems occur in different grades, giving rise to slightly different meanings and uses. Typically, a verb will occur in one primary grade and possibly several secondary ones. The following table demonstrates that for the stem *say-* ‘buy’.¹³

¹³ The citation form is the A form.

Table 2.3.: Verb stem say- ‘buy’ in different grades

verb	grade	meaning
sàyaa	gr2	‘buy’
sayèe	gr4	‘buy up’
sayañ	gr5	‘sell’
sayoo	gr6	‘buy and bring’
sàyu	gr7	‘be well bought’

2.2.4. Deverbal categories

This section discusses three deverbal categories that are relevant for the discussion of pluractionality because they can be derived from pluractional as well as from non-pluractional verbs. When they are derived from pluractional verbs the derivation preserves the pluractional semantics. These categories are statives, adjectival participles and verbal nouns.

The so-called ‘statives’ are forms regularly derived from verbs by replacing the final vowel with a tone-integrating suffix $-e)^{LH}$.¹⁴ The nature of statives is not completely clear to me. They are often translated as present or past participles:

- (8) a. dàfe < dafàa
 ‘cooked’ < ‘cook’
 b. gùje < gudù
 ‘running, on the run’ < ‘run’
 c. kwànce < kwântaa
 ‘lying down’ < ‘lie down’

Newman (2000) considers these forms adverbial. Nevertheless, adverbs usually do not follow prepositions, while statives can (the preposition *à* meaning ‘in/at’):¹⁵

¹⁴ A tone-integrating suffix is a suffix with an associated tone melody that overrides the tones of the base the suffix is attached to. The tone pattern imposed by the suffix is indicated by the superscript following a right bracket.

¹⁵ Consider also the following characterization in Jaggar (2001:651): “[s]tatives denote the terminal state or condition resulting from the completion of a verbal action and are functionally equivalent to manner adverbs”. Jaggar’s formulation is rather cautious – he does not state directly that statives are adverbs. However, his definition is not quite precise either. Looking at the example in (8b), it is clear that the action has not been completed yet. Parsons (1981:30ff) calls statives VANS: ‘verbal adverbial nouns of state’. Newman (2000) rejects this because in his view there is nothing that would justify labeling statives as nouns. However, the fact that statives often follow the preposition *à* is exactly the right kind of evidence for treating statives as essentially nominal.

- (9) Naa gan shì à ãrùbùuce
 1SG.PF see him PREP write.ST
 ‘I saw him writing’

As shown already above, a stative can also be the main predicate of a sentence:

- (10) Sunàa (à) zàune
 3PL.IMP (PREP) sit.ST
 ‘They are seated’

In such cases the stative can either follow the imperfective INFL morpheme directly or it is preceded by the preposition *à*.

Apart from statives, verbs generally allow the derivation of a corresponding adjectival past participle. Past participles are derived by a tone-integrating suffix *-aCCee*^{LHH} and have a distinct masculine, feminine and plural form, like other adjectives.

- (11) dàfafee *m./* dàfaffiya *f./* dàfàffuu *pl.* < dafàa
 ‘cooked’ ‘cook’

An adjectival participle can be used in the same constructions as other adjectives:

- (12) a. Shinkaafãr baa dàfaffiya ba cèe
 rice.the NEG cooked NEG STAB
 ‘The rice is not cooked’
 b. wani hòotoo sàatacce
 some picturestolen
 ‘a stolen picture’

In (12a), the participle is used as an equational predicate. In (12b) it functions as a (post-nominal) modifier of a noun.

The most important deverbal category that can be derived both from simple and pluractional verbs is the so-called ‘verbal noun’. Verbal nouns are used in imperfective sentences instead of verbs, which cannot follow imperfective TAMs (as discussed in subsection 2.2.2.; but see below). Two types of verbal nouns are distinguished: weak and strong.¹⁶

Strong verbal nouns are either regular – their form can be predicted from the grade of the verb – or irregular. If followed by a direct object, a so-called linker is attached to the verbal noun. The linker has two forms: *-n* for masculine verbal nouns and *-r* for feminine verbal nouns.¹⁷

¹⁶ As a rule, weak verbal nouns are derived from grades 1, 4, 5, 6, and 7 and strong verbal nouns from grades 0, 2, and 3.

¹⁷ The genitive linker, or simply linker, is generally translated as ‘of’. It is an element connecting e.g. two NPs in possessive constructions (*màata-r Bellô* ‘Bello’s wife’, lit. wife.of Bello) or an adjective with a following

- ¹⁸ The grave accent mark (‘’) preceding *-waa* means that there is a floating tone associated with the suffix. A floating tone attaches to the immediately preceding syllable. If the tone of the preceding syllable is H, the attachment of the floating L tone produces a fall, as in (14a). If the tone is L, it remains L.

2.2.5.1. Dynamic nouns

Dynamic nouns are nouns referring to actions. They form ‘light verb constructions’ with *yi* ‘do’, a semantically empty verb:

- | | | | |
|------|-----------------|-------------------|------------------|
| (15) | <i>yi aikii</i> | <i>yi màgànáà</i> | <i>yi wàasaa</i> |
| | do work | do talking | do playing |
| | ‘work’ | ‘talk’ | ‘play’ |

In the imperfective TAM, dynamic nouns can also directly follow INFL, just like verbal nouns. However, these cases are usually analyzed as involving a deletion of the verbal noun corresponding to *yi* ‘do’:

- | | | | |
|------|----|------------------------|---------------------------------|
| (16) | a. | <i>Baa sàa kuukaa</i> | (< <i>baa sàa yin kuukaa</i>) |
| | | NEG 3PL.IMPF crying | |
| | | ‘They are not crying’ | |
| | b. | <i>Sunàa kàdè-kàdè</i> | (< <i>sunàa yin kàdè-kàdè</i>) |
| | | 3PL.IMPF drumming | |
| | | ‘They are drumming’ | |

Despite the fact that dynamic nouns, when used in imperfective sentences without *yin*, can be almost indistinguishable from verbal nouns, they are essentially just regular nouns and not even necessarily deverbal. This also means that while there are ‘pluractional verbal nouns’ – verbal nouns formed on the basis of pluractional verbs (cf. subsection 2.2.7.) – there are no ‘pluractional dynamic nouns’. Nevertheless, in some cases, the so-called ‘frequentative’ form is available, which can be used with a pluractional-like interpretation. In fact, the reduplicated form in (16b) above is a frequentative. These forms will be discussed in more detail in the following subsection, since they are better discussed in the context of plural formation.

2.2.5.2. Number

From the perspective of the morphology employed, plural formation in Hausa is exceedingly complex. There are about 40 surface plural forms, reducible to roughly 14 major classes. In some cases, a single noun can have several plural forms. In addition (and possibly as a result of this), there is substantial dialectal and idiolectal variation. On the other hand, from the semantic point of view, the nominal number system is relatively simple, with a two-way opposition between singular and plural. The use of a plural form is generally obligatory to express plural meanings, just like in English. However, when modified by numerals and some other expressions of quantity singular forms are sometimes preferred.¹⁹ Below is an example of a noun, its plural form and the forms it can take when modified by a numeral:

¹⁹ The facts are rather complicated here. Speakers differ in how they use plural forms of nouns, not only when modified by numerals and other quantity expressions – some prefer singular, others plural forms – but also in

- (18) a. tàmbàye-tàmbàye (< tàmbayàa ‘to ask’)
 ‘questions/ repeated questioning’
 b. ciwàce-ciwàce (< ciwòò ‘illness’)
 ‘illnesses’
 c. bùushe-bùushe (< buusàa ‘to blow’)
 ‘playing music’
 d. gine-gine (< ginàa ‘to build’)
 ‘buildings’

- (i) a. mākāraṇtun càn gùdaa biyu (sg. mākāraṇtaa)
schools.the there unit two
'those two schools'
- b. kwalabaṛ mǎn-jaa gùdaa shidà (pl. kwalàabee)
bottle.of palm.oil unit six
'six bottles of palm-oil'

²⁰ Newman (2000) mentions that these forms are sometimes called ‘pseudoplurals of diversity’. According to my own data (cf. also Al-Hassan 1998:180) these are indeed not just regular plurals but rather express meanings like ‘different kinds of’. Some nouns can actually form both a regular plural form with a simple plural meaning and a ‘frequentative’, or ‘pseudoplural’ form that differs slightly from the regular plural. For example, *māfārkiī* ‘dream’ can have a regular plural *māfārkoókii* ‘dreams’ and also a pseudoplural form *māfārke-māfārke*, which, at least according to some speakers, means ‘all kinds of dreams’, with a rather negative connotation (i.e. bad dreams), and not simply ‘dreams’.

- e. shùuke-shùuke (< shuukàa ‘plant’)
 ‘plant/crops’

Despite the fact that in some cases the frequentative seems to be the only plural form a noun can get, it is not a regular plural. As can be seen from (18), most frequentatives are derived from verbs. Even if there is no corresponding verb, the frequentative is often derived from an underlying verbal form, that is, from a form containing a verbalizing suffix *-ta* (/t/ palatalizes to /c/ before the /-e/ suffix; cf. (18b)). Nevertheless, sometimes these forms are derived directly from nouns (*irii* ‘kind’ > *ire-ire*).

As already mentioned above, frequentatives can refer either to objects or events, and in some cases to both. For example, *shùuke-shùuke* in (18e) can refer both to plants/crops (objects) and to a “repeated occurrence of an event or activity” (Jaggar 2001:86), in this case many events of planting something.²¹

- (19) Manòomii yanàa shùuke-shùuke
 farmer 3SG.M.IMPF plant. FREQ
 ‘The farmer is planting (various crops)’

Jaggar explicitly mentions that as such these forms can be considered nominal equivalents of pluractional verbs, which denote a plurality of action.²²

2.2.5.3. Determiners and modifiers

Hausa makes use of various determiners or determiner-like elements.²³ A noun in its bare form can receive both a definite and indefinite interpretation (20a). Nevertheless, Hausa can also make use of a ‘definite determiner’ (20b) and a ‘specific indefinite determiner’ (20c):

- (20) a. yaaròo
 ‘a/ the boy’

²¹ Notice that the frequentative can directly follow the imperfective INFL morpheme, just like other dynamic nouns – cf. examples (16) above.

²² Notice the expression ‘various’ in the translation of (19), which suggests diversification/ high individuation. A similar effect can also be found in the following example from Jaggar (2001:87; forms that I gloss IMP, used in impersonal constructions, are labeled ‘4th person’ in Newman 2000 and Jaggar 2001; *ta* is a particle used to express repetition):

- (i) Anàa ta sòoke-sòoke-n gwamnati
 IMP.IMPF TA [criticism(s).FREQ]-of government
 ‘They (different factions) are criticizing the government’

Here the idea of different factions can only come from the use of the repetitive-frequentative form. It seems that, just like pluractional verbs, frequentatives refer to multiple events that are somehow differentiated from each other. In the case of (i), the events are differentiated by having different agents.

²³ Cf. Zimmermann (2008).

- b. yaaròn
‘the boy’
- c. wani yaaròo
‘a certain/ some boy’

The so-called ‘definite determiner’ is probably better referred to as ‘previous reference marker’. It is generally translated as *the*, which is just the closest equivalent, however. According to Newman (2000:143), “the exact meaning and uses of the [definite article] are not entirely clear”. Note also that the meaning of this element is probably changing as its use seems to be more common nowadays than before, perhaps under the influence of English. The form of the definite determiner is -*n* for masculine and plural and -*ĩ* for feminine nouns.²⁴ *Wani* m., *wata* f., *wa(dan)su* pl. ‘some’ are even more clearly not indefinite articles, which can be seen also from the fact that they can stand on their own (Newman 2000 calls them ‘specific indefinite demonstratives’):

- (21) Wata taa iyàa
 someone.F 3SG.F.PF be.able
 ‘Someone is able’

Apart from the determiners discussed above, Hausa has a distributive universal quantifier (22a) and a non-distributive universal quantifier, comparable to *all* in English (22b):

- (22) a. koowàné yaaròo
 ‘every boy’
 b. duk yàraa/ duk yârân yàraa dukà/ yârân dukà
 ‘all boys/ all the boys’ ‘all boys/ all the boys’

Koowàné m. ‘every’ in (22a) combines with a singular noun, just like its English counterpart.²⁵ *Duk(à)* ‘all’ combines with plural nouns and can both precede and follow the noun it modifies. In the post-head position, the form *dukà* is generally required. In addition, *duk* also has an adverbial use, as in (23):

- (23) Duk naa gàji
 all 1SG.PF be.tired
 ‘I’m tired out completely’

²⁴ Recall that the grave accent represents a floating (low) tone, that is, a tone that attaches to the syllable the determiner merges with.

²⁵ The distributive universal quantifier, apart from having a masculine and feminine singular form (*koowàné* m./ *koowàcè* f.), has also a plural form: *koowàdànnè* pl.. According to Zimmermann (2008), the universal quantifier in the plural form appears to quantify over groups of entities:

- (i) Koowàdànnè mutàanee dà dabboobii sun mutù
 every.PL people with animals 3PL.PF die
 ‘All people and all animals have died’

Finally, nouns can be modified by numerals (24a) and other expressions of quantity (24b):

- (24) a. yaaròò/ yâraa biyu
boy/ boys two
‘two boys’
b. yaaròò/ yâraa dà yawàa
boy/ boys with many
‘many boys’

Other types of modifiers are less important with respect to the topic of this thesis and will not be discussed here.

2.2.6. Reduplication

Before moving on to pluractionals in the next subsection, this subsection gives an overview of different uses of reduplicative morphology in Hausa. Reduplicative morphology is employed very frequently in Hausa. Apart from the formation of pluractional verbs, reduplication can also be found with nouns, adjectives, adverbs, and numerals, with various semantic effects.

Newman (2000) distinguishes between active and frozen reduplication. Active reduplication is a “synchronically recognizable derivational or inflectional process”, which is more or less productive. The term ‘frozen (vestigial) reduplication’, by contrast, refers to forms that are phonologically reduplicated but which from a synchronic point of view are essentially unanalyzable. I will focus on cases of active reduplication, but note that lexicalized reduplicated cases are numerous. They can be found with nouns (*kankanaa* ‘water melon’), adjectives (*tsòoloolòò* ‘tall and skinny’) and verbs (*sansànaa* ‘smell’) alike.

In the case of nouns, reduplication plays a role in forming plurals. In many of the types of plural formation, the plural affix contains a copy of a consonant of the base, usually the final one:

- | | | | | | |
|------|----|--------|---|-----------|----------------------|
| (25) | a. | waakàa | > | waakookii | -oCi) ^H |
| | | ‘song’ | | ‘songs’ | |
| | b. | zoobèe | > | zôbbaa | -CCa) ^{HLH} |
| | | ‘ring’ | | ‘rings’ | |

The examples in (25) are cases of copying a single consonant. There are cases of full reduplication as well. In particular, certain loan words form their plurals that way:

- | | | | | |
|------|----------|---|---------------|--------------------|
| (26) | fīrjii | > | fīrjii-fīrjii | FULL REDUPLICATION |
| | ‘fridge’ | | ‘fridges’ | |

Apart from these, there are also the above-mentioned ‘frequentative’ forms (cf. (18) above):

- (27) *tàfiyàa* > *tàfiye- tàfiye* -e)^{LH} x 2
 ‘journey’ ‘journeys, travels’

All in all, reduplication in its pure form (i.e. apart from suffixes containing a copied consonant) is not typical for plural formation in the nominal domain. On the other hand, full reduplication of nouns is commonly used to express other meanings, namely, distribution:

- (28) a. *oofis-oofis*
 ‘office by office’
 b. *lookàcii-lookàcii*
 ‘from time to time’

Similarly, full reduplication of numerals leads to a distributive meaning as well:

- (29) *Naa baa sù naiřàa biyu biyu* (or: *bibbiyu*)
 1SG.PF give them naira two two
 ‘I gave them two naira each’

Turning to reduplication in adjectives, there are several cases to be considered. First, just like nouns, adjectives form plural forms. This is because adjectives agree in number (and gender) with the noun they modify. Adjectives make use of essentially the same plural formation types as nouns of the same shape. This means that plural forms of adjectives also include copies of the base consonants, as can be seen in the example below:²⁶

- (30) *farii m.* > *faràaree pl.* cf. *wurii* > *wuràaree* -aCe)^{LH}
 ‘white’ ‘white’ ‘place’ ‘places’

Similarly to some of the plural formations, the formation of participial adjectives also makes use of affixes containing copied consonants:

- (31) *řubùutaa* > *řubùutaccee m.* -aCCe)^{LHH}
 ‘write’ *řubùutacciyaa f.*
 řubùutàttuu pl.
 ‘written’
 e.g. *kaatii řubùutaccee dà ruwan ziinaarèe*
 card written with water.of gold
 ‘a card written in gold’

²⁶ Non-derived adjectives form a very small class in Hausa. To express adjectival notions, other constructions are often used. The so-called *màì/ maràs* (‘having/ lacking’) constructions with abstract nouns are particularly common. Cf. *riijiyaa màì zurfii* ‘a deep well’, lit. well having depth, *yàraa maràsaa hankàlii* ‘senseless children’, lit. children lacking sense.

Apart from these cases, where copied elements are part of affixes that have grammatical functions, there are also cases where the lexical meaning is modified. In particular, there is a class of adjectives derived from nouns, generally referring to qualities, which have an intensified meaning:²⁷

- (32) *karfii* > *kàkkarfaa m/f.*, *karfàafaa pl.*
 ‘strength’ ‘very strong’

Another class of reduplicated adjectives consists of denominal adjectives whose meaning can be paraphrased as ‘N-like’:²⁸

- (33) *gàarii* > *gàari-gàari*
 ‘flour’ ‘powdery’

The type of cases illustrated in (33) is similar to the one in (34) below where full reduplication of an adjective results in the meaning that can be paraphrased as ‘A-ish’:

- (34) *doogoo m.* > *doogo-doogo m.*
 dooguwa f. *dooguwa-dooguwa f.*
 doogwàayee pl. *doogwàaye-doogwàaye pl.*
 ‘tall’ ‘tallish’

Adjectives that can undergo this type of reduplication typically refer to colors or physical attributes.

There are also adjectives involving reduplication that usually do not have non-reduplicated counterparts. These are e.g. diminutive (35a), augmentative (35b) or ‘negative-defective’ (expressive) (35c) adjectives:²⁹

- (35) a. *miitsiitsii m.*, *miitsiitsiyaa f.*, *mitsii-mitsii pl.* DIM
 ‘miniscule’
 b. *ribdeedëe m.*, *ribdeediyaa f.*, *ribdâa-ribdâa pl.* AUGM
 ‘huge’
 c. *dòosoosòo m.*, *dòosoosùwaa f.*, *dòosòosai pl.* NEG
 ‘ugly, grubby’

²⁷ The intensification effect is not present for all speakers, however. Cf. Jaggar (2001:141).

²⁸ These derived adjectives do not have inflected feminine and plural forms but otherwise they are generally used like other reduplicated adjectives. Interestingly, however, according to Newman (2000:27), some speakers treat these forms as essentially nominal, which can be seen from the fact that they use the *màí* construction if these forms are to modify a noun (see footnote 26).

²⁹ Note also that there is an interesting class of words called ‘ideophones’. These are phonaesthetic words that are “descriptive of sound, colour, smell, manner, appearance, state, action or intensity... [that is, they are words that are] vivid vocal images or representations of visual, auditory and other sensory or mental experiences” (Cole 1955:370, as quoted by Newman 2000:242). Not all ideophones involve reduplication. However, many do.

Despite the fact that they lack corresponding simple forms (and as such do not represent ‘active’ reduplication), these forms are worth mentioning here because they carry meanings typical for reduplication. These cases form clearly recognizable classes with regular semantics, and as such they differ from cases that are just lexicalized.

Adverbs can reduplicate as well, resulting in an intensified meaning:

- (36) can > can-can
 ‘over there’ ‘way far away’

Interestingly, in the case of denominal adverbs, the same full reduplication leads to detensification:

- (37) baaya > baaya-baaya
 ‘behind’ ‘slightly behind’

Finally, I would like to mention a case of partial reduplication of verbs that does not give rise to pluractional meanings (pluractionals will be discussed in the next subsection). These cases involve verbs that Newman (2000) calls ‘sensory quality verbs’, related to adjectives and nouns of the type mentioned above in (32):

- (38) zaafàfaa cf. zàzzaafaa *m./f.*, zaafàfaa *pl.*; zaafii
 ‘heat up’ ‘very hot’ ‘heat’

Note that the list of reduplicated forms I have given above is not exhaustive. However, the main types have been presented.

2.2.7. Pluractional formation

The pluractional formation is a very productive derivational process, applying to verbs of all grades (Newman 2000).³⁰ In spite of that, pluractional forms are not used frequently and they are generally rather marked. The usage and meaning of pluractional forms will be discussed in detail in the rest of the chapter, starting in the next section. The present subsection, the last subsection of this general introduction to Hausa, focuses on the formal side of the pluractional formation.

Pluractional verbs in Hausa are derived from the corresponding non-pluractional verbs by partial reduplication. In fact, there are two ways of forming pluractional verbs but only one of them is truly productive: the prefixal reduplication, which itself comes in

³⁰ A very small number of speakers seem to exhibit some restrictions with respect to what grades pluractional verbs can be derived from. These restrictions do not seem to be morphological in nature, however. Rather, they appear to be semantico-pragmatic: it seems that the semantics of certain secondary grades is not compatible with the pluractional semantics for these speakers. I will not discuss these data because most speakers do derive pluractionals from all grades without problems. But cf. section 3.7.5. for a similar phenomenon: restrictions some speakers seem to have with respect to compatibility of pluractionals with certain TAMs.

two variants. The first variant is C_1VG - (C_1 – first consonant of the stem, V – vowel, G – geminate):

- (39) a. bugàa > bubbùgaa
 ‘beat’
 b. kiraa > kikkiraa
 ‘call’
 c. jèefaa > jàjjeefāa
 ‘throw’
 d. mutù > mummutù
 ‘die’
 e. tàmbayàa > tàttàmbayàa
 ‘ask’
 f. bi > bibbi
 ‘follow’

If the reduplicated vowel is underlyingly long, it undergoes shortening and adjustment rules that affect closed syllables ((39c); ee > a).

The other variant of the prefixal reduplication is C_1VC_2 -. It can be employed if the second consonant of the stem is a sonorant or any coronal:³¹

- (40) a. kiraa > kirkiraa
 ‘call’
 b. mutù > muṛmutù
 ‘die’
 c. tàmbayàa > tàntàmbayàa
 ‘ask’

Reduplicated C_2 nasals assimilate to the position of the following consonant (cf. (40c)), coronal obstruents undergo rhotacism and appear as rolled /ṛ/ (cf. (40b)). All verbs that form pluractionals by C_1VC_2 - reduplication also allow the C_1VG - formation, but not vice versa. Pluractional formation does not affect tone per se. Reduplication operates on the segmental level and tone is assigned to the resulting form based on the grade and syllabic shape.

In addition to the prefixal formation, there is an archaic formation, which makes use of infixing a reduplicative -CVC- in the penultimate position:

³¹ “Historically, the C_1VG - prefix undoubtedly derived from C_1VC_2 - plus complete assimilation. Synchronically, however, the C_1VG - variant has full and direct morphological status, i.e., one does not replicate the historical development and utilize an assimilation rule.” (Newman 2000:425)

- (41) a. tafāsaa > tafařfāsaa
 ‘boil’
 b. rikītaa > rikiřkītaa
 ‘confuse’

What is copied in this formation is the second syllable plus the initial consonant of the third syllable. This formation is restricted to specific lexical items and these verbs usually allow the first formation as well.³² The two formations are usually equivalent in meaning, except for a few cases where one of the forms has a lexicalized meaning (presumably the archaic form; e.g. *hàifaa* ‘give birth’ > (a) *hàhhaifaa* ‘give birth many times or to many children’, (b) *hàyyafaa* ‘engender, proliferate’). In this thesis, I do not differentiate between the two forms as the meaning, if regular, appears to be the same in both cases. The vast majority of pluractionals that appear in my data are of the productive type, however.

Apart from active pluractionals, there are also cases of lexicalized, or so called ‘frozen pluractionals’. Frozen pluractionals lack non-reduplicated counterparts and often the pluractional semantics is not obvious anymore:

- (42) a. famfāree
 ‘fall out (tooth)’
 b. lāllaasāa
 ‘soothe, coax’

Sometimes pluractionals are derived from forms that are already pluractional. This is only possible if the first formation is the infixal reduplication:

- (43) giřdāa > giřriřdāa > gigiřriřdāa
 ‘uproot’

According to Newman, these ‘hyperpluractionals’ are semantically strengthened but he does not specify in what sense.

One fact to be stressed is that there are not only pluractional verbs but also pluractional verbal nouns, statives and adjectival past participles. More precisely, these are verbal nouns, statives and adjectival past participles derived from pluractional verbs, rather than pluractional forms formed on the basis of these categories:

³² Newman suggests that these two formations used to be one in fact. The original formation was antepenultimate reduplication, which in the case of disyllabic verbs led to the same results as prefixal reduplication; e.g., *gāsāa* ‘roast’ > *gař-gāsāa*. In these cases, the antepenultimate formation can easily be reinterpreted as prefixal.

(44) *pluractional verbal nouns*

- a. 6u66ulloo > 6u66ullôwaa
 ‘appear’ ‘appearing’
 N.B. in numbers or all over the place

pluractional statives

- b. zazzàunaa > zàzzàune
 ‘sit down’ ‘seated’
 N.B. many people

*pluractional adjectival past participles*³³

- c. yagalgàlaa > yàgàlgàlallee
 ‘tear to pieces’ ‘torn into pieces’

As far as pluractional verbal nouns are concerned, it is important to say that not all pluractional verbs have corresponding verbal nouns. It seems to be much easier to derive a verbal noun from a pluractional verb if the verbal noun corresponding to the verb in question is weak, that is, formed in a regular and transparent way. Strong verbal nouns, on the other hand, often do not have pluractional counterparts, presumably because the formation is less transparent and often irregular.³⁴ Recall also that sometimes there is an alternative way to express the intended meaning, namely by means of using a ‘frequentative’ form as in (19). Nevertheless, the frequent lack of pluractional verbal nouns is responsible for the fact that pluractional forms are more often found in perfective sentences than imperfective ones (recall that imperfective TAM generally requires the use of verbal nouns, rather than verbs). In this thesis, pluractional verbal nouns and statives will not be treated separately. The analysis of pluractional verbs is assumed to extend to these categories as well, since the semantic contribution of the pluractional marker is preserved in the derivations.³⁵

The rest of this chapter will be devoted to a detailed discussion of the meaning of Hausa pluractionals.

³³ I have no pluractional adjectival past participles in my own data (the example given above is from Newman 2000). Perhaps incidentally, the examples given in Newman (2000) are derived from frozen pluractionals. The participle *yàgàlgàlallee* ‘torn into pieces’ is derived from *yagalgàlaa* ‘tear to pieces’, which does not seem to have a simple counterpart. The other example, *ninnìnkakkee* ‘multiplied’, is derived from *ninnìnkàa* ‘multiply’, whose simple counterpart has a different meaning: *ninkàa* ‘fold’. As can be seen from these two examples, however, the participle formation preserves the meaning of the pluractional.

³⁴ This seems to be related to the distinction Newman (2000) makes between stem-derived verbal nouns (SDVNs) and base-derived verbal nouns (BDVNs). SDVNs are derived from full verb stems (i.e. including the final vowel and tone). BDVNs are derived from verbal bases (i.e. without the final vowel and tone). As a consequence, the formation of SDVNs is rather straightforward and transparent, whereas the form of BDVNs is less predictable. All weak nouns are stem-derived but strong verbal nouns are of both types. This is in accordance with the generalization that in contrast to strong verbal nouns, weak verbal nouns can be derived from pluractionals rather easily.

³⁵ Cf. section 2.8.3. for more discussion, however.

2.3. Plurality and individuation

The basic generalization about pluractionals in Hausa, as well as in other languages, is that they refer to plural events. In what follows I will elaborate on this simple statement by going through the facts step by step. I will start by showing that pluractionals cannot be used to talk about singular or collective events (subsections 2.3.1. and 2.3.2.). In subsection 2.3.3., it will be demonstrated that Hausa pluractionals do not force a distributive interpretation in the sense of distribution to atoms. Next, I discuss cases where more than one argument of a pluractional is plural (subsection 2.3.4.) and I will show that even sentences with singular arguments can receive plural interpretations (subsection 2.3.5.). Subsection 2.3.6. presents some data showing that the individual subevents of a plural event should be separate from each other and possibly diverse. Finally, I present some potential counterexamples to the plurality and separateness requirement (subsection 2.3.7.).

Since there is a lot of variation, the data presented in this thesis are clearly always representative of a subset of speakers only. Where possible, I chose examples that most speakers would agree on or that illustrate properties of pluractionals that do not vary so much with speakers. Wherever I discuss examples that are less generally accepted or have less common interpretations this will be indicated. Example sentences that a majority of speakers agreed on will be presented as grammatical. Those accepted by only a minority of speakers are marked by a % sign. If an example was accepted by just one speaker it will be mentioned explicitly in the text. Note also that the translations assigned to the example sentences are usually simplified and do not capture the meanings of the Hausa sentences fully. With every particular example, just one specific aspect of the pluractional semantics is the focus of the discussion and other aspects might be ignored.

2.3.1. Pluractional vs. single action readings

Pluractional verbs in Hausa cannot be used to refer to singular events. This is illustrated in (45) where the pluractional form *fĩfĩtoo* (or its variant *fiffĩtoo*), derived from *fītoo* ‘come out’, is compatible with a plural subject like *mutàanên* ‘the people’ (45b) but not with a singular subject like *mùtùmin* ‘the man/person’ (45a).³⁶

- (45) a. *Mùtùmin yaa fĩfĩ-too
 man.the 3SG.M.PF RED-come.out
 b. Mutàanên sun fĩfĩ-too
 people.the 3PL.PF RED-come.out
 ‘The people have come out’

³⁶ As mentioned in section 2.2.5.1., in some cases singular count nouns can have plural reference. However, unless indicated otherwise, singular count nouns used in example sentences are real singulars.

When the verb occurs in its non-pluractional form, the subject can be both singular (46a) and plural (46b):

- (46) a. Mùtumìn yaa fitoo
man.the 3SG.M.PF come.out
'The person has come out'
- b. Mutàanên sun fitoo
people.the 3PL.PF come.out
'The people have come out'

In the case of (45a), one could in principle expect the possibility of an iterative interpretation. However, such an interpretation is not possible. The sentence cannot be used to refer to a situation in which the same person came out repeatedly. I will come back to the lack of iterative interpretations for cases such as (45a) in section 2.4.

Turning to transitive cases now, we can see in (47b) that the plurality requirement can be satisfied by the plurality in the object argument as well:

- (47) a. *Yuusùf yaa sàs-sàyi littaaḥii
Yusuf 3SG.M.PF RED-buy book
- b. Yuusùf yaa sàs-sàyi littàttàḥai
Yusuf 3SG.M.PF RED-buy books
'Yusuf bought many (different) books'

(47a) is not well-formed because both the subject and object are singular.³⁷ If the object is plural, as in (47b), however, the use of the pluractional is felicitous. Again, the non-pluractional form of the verb allows for both singular and plural arguments (48a-b):

- (48) a. Yuusùf yaa sàyi littaaḥii
Yusuf 3SG.M.PF buy book
'Yusuf bought a book'
- b. Yuusùf yaa sàyi littàttàḥai
Yusuf 3SG.M.PF buy books
'Yusuf bought some books'

Importantly, the plurality requirement does not have to be satisfied by a particular syntactic constituent. For many languages, it is reported that the pluractional requires the subject to be plural in the case of intransitive verbs, and the object in the case of transitive verbs. This means that these languages follow the ergative pattern (cf. Corbett

³⁷ Again, structures like these are not felicitous, even when the verb refers to an action that can be easily repeated, as in (49a). Iterative readings will be ignored until section 2.4., which is devoted to describing under what conditions repetition is a possible interpretation of Hausa pluractionals.

2000).³⁸ However, this is not true for Hausa, where both the subject and the object of transitive clauses may license the use of the pluractional:

- (49) a. *Màifō taa dāf-dāgà kujèerâf
 Mairo 3SG.F.PF RED-lift chair.the
 b. ‘Yammaatân sun dāf-dāgà kujèerâf
 girls.the 3PL.PF RED-lift chair.the
 ‘The girls lifted the chair’
 N.B. the most natural interpretation: the girls lift the chair one by one
 c. Màifō taa dāf-dāgà kujèerûn
 Mairo 3SG.F.PF RED-lift chairs.the
 ‘Mairo lifted the chairs’
 N.B. the most natural interpretation: the chairs are lifted one by one

Sentence (49a) is ungrammatical because both the subject and the object are singular. Sentences (49b) and (49c) are both well-formed, however. The object can be singular if the subject is plural and vice versa. In other words, the pluractional can be used both in a situation in which the same chair is lifted consecutively by different girls and in a situation in which one girl lifts several chairs, one by one. In either case, the event is a plural one.

Moreover, not only do Hausa pluractionals not follow the ergative pattern, it does not seem to matter at all what element in the sentence licenses the pluractional.³⁹ This can be illustrated by the following examples:

(50) *indirect object*

- a. Yaa zuz-zùbaa musù shaayi
 3SG.M.PF RED-pour to.them tea
 ‘He poured tea for them’

goal

- b. Yaa zuz-zùbà shaayi cikin koofunàa
 3SG.M.PF RED-pour tea in cups
 ‘He poured tea into (different) cups’

location

- c. Suunansà yaa fĩf-fĩtoo à wuràaree dàban-dàban
 name.his 3SG.M.PF RED-come.out at places different-different
 ‘His name came up in different places’

³⁸ It is possible that this pattern is typical for what I called, following Wood (2007), plural-participant verbs, rather than for real pluractionals. Nevertheless, there are clear cases of languages with restrictions as to what syntactic argument reflects the plurality of the verb (e.g. the internal argument in Kaqchikel; cf. Henderson 2010).

³⁹ Often, the ‘licensor’ does not even have to be overt; cf. section 2.8.2.

To summarize, in this subsection I demonstrated that the event described by a pluractional verb cannot be singular. Moreover, I showed that different elements in the sentence can be ‘responsible’ for the plurality of the event. In the next subsection I will show that collective readings, which are also singular in nature, are excluded with pluractionals as well.

2.3.2. Pluractional vs. true collective readings

Consider again sentence (49b), repeated in (51):

- (51) ‘Yammaatân sun dâc-dâgà kujèerâñ
 girls.the 3PL.PF RED-lift chair.the
 ‘The girls lifted the chair’

N.B. the most natural interpretation: the girls lift the chair one by one

Speakers typically translate sentences like (51) using expressions like ‘one by one’, which indicates that the sentence cannot be used to describe a situation in which a group of girls lift a chair together, that is, collectively. Similarly, if a plural object is involved in an event in a collective fashion, the pluractional cannot be used either. Thus, the sentence in (52a) can only be uttered in a situation in which the lights have been switched off one by one. It is not possible to use the pluractional if all the lights were switched off by using a single switch, i.e. in a single event.⁴⁰ In (52b) the pluractional of *baa* ‘give’ can only be used if there were several separate events of book-giving and not if a group of people received a collective gift of a pile of books.

- (52) a. Yaa kañ-kàshè fitilûn
 3SG.M.PF RED-kill lights.the
 ‘He switched off the lights’
 N.B. #with one switch/ OK: several switches, one by one
- b. Naa bab-baa sù littàttâfai
 1SG.PF RED-give them books
 ‘I gave them some books’
 N.B. #if it is a collective gift/ OK: several separate events of giving

Thus, pluractional verbs cannot be used to refer to true collective action, which supports theories that treat collective events as singular in nature (to be discussed properly in section 3.5. of Chapter 3).

As already pointed out in section 1.5.2. of Chapter 1, the use of the term ‘collective’ requires some caution. Cooccurrence with adverbs like *together* is often taken as a signal that a collective interpretation is involved. However, *together* and its counterparts in other languages do not necessarily imply joint action in the sense that the action is

⁴⁰ The next subsection presents a correction to the claim that the entities referred to by the verb’s arguments have to be affected strictly one by one.

performed by a group as a whole and not individually by each member of the group. *Together* can also be used just to indicate accompaniment, spatio-temporal overlap and other related notions (cf. (56) in Chapter 1). Thus, for example, if several people sit down or stand up together, each of them still has to sit down or stand up by themselves – they only do it simultaneously or at the same place. This means that plural action and adverbials comparable to *together* are in principle compatible, at least if the predicate is inherently distributive as in (53a), which can be contrasted with (53b):

- (53) a. [?]Sun zaz-zàunaa tàare
 3PL.PF RED-sit.down together
 ‘They sat down together’
 b. *Sun dāɗ-dāgà teebùr̀ tàare
 3PL.PF RED-lift table together
 ‘They lifted the table together’

In section 3.5.3. of Chapter 3, it will be shown that the facts regarding collective interpretations are still a bit more complicated. However, at this point, the following generalizations are sufficient: (a) pluractional verbs cannot be used to refer to truly collective events, and (b) the presence of a collectivizing adverb by itself does not imply that the sentence is to be interpreted as involving a truly collective action.

2.3.3. Pluractionality vs. distribution to atoms

Considering the fact that speakers tend to translate sentences like (51) above using expressions like *one by one*, one might conclude that pluractionals in Hausa are distributive in the sense of distribution to atomic individuals. However, sentence (51), repeated below as (54), can also be used in a scenario where not all the girls lift the chair by themselves, as long as there are multiple liftings. In other words, in a context where there are six girls, *a, b, c, d, e* and *f*, and the table is lifted by *a, b, c, d, c+e* and *e+f*, the sentence is still felicitous:^{41,42}

⁴¹ A parallel interpretation is also available for examples like (45b), repeated below in (i). Similarly to (54), for the sentence in (i) to be true, the people do not have to come out necessarily one by one. The sentence is felicitous also in a situation in which the people come out in smaller groups:

- (i) Mutàanèn sun fiɓ̃-fiɓ̃oo
 people.the 3PL.PF RED-come.out
 ‘The people have come out (one by one or in smaller groups)’

Notice, however, that *fiɓ̃oo* ‘come out’ is an inherently distributive predicate, which makes this case rather different from the one in (54): the predicate *fiɓ̃oo* holds of every atomic individual in any case. This type of case will be discussed in section 3.5.3. of Chapter 3.

⁴² Note that this is not a necessary property of pluractional markers in general. An example of a language where the pluractional marker does give rise to a distributive interpretation in the sense of distribution to atoms is Kaqchikel. If the following sentence is used, with the pluractional marker on the verb, it can only mean that every individual child was hugged. It cannot be used if any subset of the children got a collective hug (Henderson 2010):

- (54) ‘Yammaatân sun đad-đàgà kujèerâĩ
 girls.the 3PL.PF RED-lift chair.the
 ‘The girls lifted the chair’
 N.B. the most natural interpretation: the girls lift the chair one by one

The same is true for the internal argument: it is not necessary that each atom in the plurality denoted by the plural object argument be affected individually. Sentence (55a) can also be used in a situation in which the things are not bought literally one by one but perhaps a few at a time. Sentence (55b) can describe a situation in which the books are put on the table in little piles.

- (55) a. Yaa sàs-sàyi abubuwaà
 3SG.M.PF RED-buy things
 ‘He bought a lot of different things’
 b. Taa sas-sàkà littàttàfai à kân teebũĩ
 3SG.F.PF RED-put books at top.of table
 ‘She put some books on the table, in various places/piles’

To conclude, what matters for the use of the pluractional form is whether there are multiple events that can be described by the basic verb. It does not seem to matter whether the individual subevents have atomic or collective participants.

2.3.4. Plural arguments

So far, only cases where one of the participants is plural have been discussed. Naturally, pluractional verbs allow more than one participant to be plural. Two examples are given below:

- (56) a. Sun bub-bùudè taagoogii⁴³
 3PL.PF RED-open windows
 ‘They opened the windows’
 b. Yârân sun đad-đàgà teebũooĩĩ
 children.the 3PL.PF RED-lift tables
 ‘The children lifted some/ the tables’

When more than one participant is plural (e.g. both the subject and object), the number of possible scenarios increases. For example, sentence (56b) can be used in situations in

(i) X-e’-in-q’ete-la ri ak’wal-a’
 CP-A3p-E1s-hug-PDIST the child-PL
 ‘I hugged the children individually’

⁴³ In this particular example, one speaker preferred the use of the singular form *taagàa* ‘window’ as it is clear that the windows are plural from the form of the verb already. Cf. the discussion in section 2.2.5.2., esp. footnote 19.

which each of the children lifted one table, where each of the children lifted all tables (one by one), where all the children collectively lifted all the tables one by one, or where the children in smaller groups lifted the tables one by one, or a few at a time. The only excluded scenario is the one in which all the children collectively lift all the tables at once, for example, by putting them on top of each other and then lifting them together. In other words, the sentence cannot be used to refer to a single collective action but there are essentially no restrictions on how exactly the lifting is carried out as long as the event is plural.

2.3.5. Singular count and mass arguments

In this subsection I discuss sentences in which the ‘licensing’ participants of pluractional verbs are expressed either by singular count or mass nouns. These cases make it very clear that the phenomenon observed is not number agreement (cf. Durie 1986, Corbett 2000), and also that these verbs are not simply plural-argument verbs (in the sense of Wood 2007).⁴⁴ Examples like the following thus demonstrate that the plurality requirement is not (morpho)syntactic in nature, but rather purely semantic:⁴⁵

- (57) a. Yanàa mìm-miife à kân gadoo
 3SG.M.IMPF RED-stretch.ST at top.of bed
 ‘He is sprawled out all over the bed’
- b. Gidân yaa rur-rùushee
 house.the 3SG.M.PF RED-collapse
 ‘The house is completely demolished’
 N.B. all its parts
- c. %Kankanaa yaa rur-rùðee⁴⁶
 watermelon 3SG.M.PF RED-rot
 ‘The watermelon is all rotten’
 N.B. all parts of it, it cannot be eaten anymore
- d. Kwalabaa taa faf-fàshee
 bottle 3SG.F.PF RED-break
 ‘The bottle broke’
 N.B. into many pieces, not just two

⁴⁴ Cf. section 1.6.1. of Chapter 1.

⁴⁵ Example (57a) is from Newman (2000:423). Examples like (57b-c) generally receive two types of interpretations, depending on the speaker. At this point I give only one of them. The other interpretation will be introduced in section 2.8.1.

⁴⁶ For speakers who accept cases where it is parts of objects that are affected by the individual subevents, the size of the object seems to play a role. Thus, a speaker might not accept the example with *mangwàřò* ‘mango’ but if *kankanaa* ‘watermelon’ is the subject of the sentence, the acceptability improves substantially. Naturally, nouns referring to objects like houses (57b), which are much bigger and have clear parts, are even better suited for such readings.

In the case of verbs with singular count arguments (like those above), the pluractional form is acceptable if the intended meaning is that the individual subevents of the plural event affect various parts of the object, rather than the object as a whole. For example, sentence (57a) is interpreted as an event in which different body parts stretch in different directions. Similarly, the sentence in (57b) expresses that (all the) different parts of a house are demolished. Sentence (57c) conveys the information that (all the) different parts of a melon are rotten. In (57d), a situation is described in which a single bottle breaks into many pieces. In other words, it refers to a situation involving more than one breaking event.⁴⁷

Similar effects can be found with mass nouns in the position of the verbs' arguments:

- (58) a. Ruwaa yaa bu6-bulloo
 water 3SG.M.PF RED-appear
 'Water appeared'
 N.B. in various places
- b. %Shinkaafaa yaa dàd-dàfu
 rice 3SG.M.PF RED-cook
 'The rice is (all) cooked'
 N.B. the rice is in different pots
- c. %Yaa shas-shànyè madaṛaa
 3SG.M.PF RED-drink.up milk
 'He drank up all the milk'
 N.B. either all the bottles, or all subquantities of milk in a single bottle

In the situation described by sentence (58a), the water is understood to have appeared in different places, which means that separate quantities of water are involved. Similarly for (58b): if the sentence is acceptable at all it usually means that the rice is being cooked in different pots. As for the sentence in (58c), two different scenarios are possible: either the milk was divided into spatially separate quantities (e.g. several bottles; this is the preferred option), or it means that all the subquantities of milk in a single container were consumed (a less natural option).

Note that not all speakers accept sentences like the ones in (57) and (58) equally easily. The availability of this type of interpretation is influenced by various factors. For example, body parts are salient parts of humans and thus verbs referring to events that can involve the individual body parts more or less separately can be pluralized in such contexts quite easily. It seems that it is more difficult to obtain a 'distribution to parts'

⁴⁷ One could think that the pluractional is licensed by an implicit plural argument or adjunct in (57d) (cf. 2.8.2.), e.g. a resultative phrase like 'into many pieces'. However, it would often be hard to determine what the particular argument/adjunct should be. One could imagine that the non-overt expression is something like 'many times' or 'in many places' just as easily as 'into many pieces', since all these could in principle describe the same situation. I will argue in section 3.5.2. of Chapter 3 that cases like these are indeed underspecified with respect to what licenses the plurality.

interpretation with homogeneous (mass) nouns. In such cases, pluractionals are more likely to be used if the (mass) individual can be split into spatially separated quantities. However, as illustrated in (58c), an interpretation in which different parts of a single quantity of stuff are affected, is also available for some speakers.⁴⁸

In this section, it was shown that pluractional verbs can sometimes combine with morphologically singular arguments. In the case of mass nouns, this often means that the event involves spatially separate entities of matter, that is, essentially plural individuals. The other option, and the only one available for singular count nouns, is that the plural subevents are distributed over parts of objects. To conclude, pluractionals can also be used felicitously when their participants are singular if the situations can be conceptualized as involving a plurality of events.

2.3.6. High individuation: separateness and diversity

So far, pluractionals have been described as if they were used to talk about events that are simply plural. This does seem to be the case with a certain type of predicates. In particular, certain inherently distributive predicates seem to have the same meaning in the pluractional and non-pluractional form in cases in which the plurality is already signaled by the plurality of an argument, as in (59):

- (59) a. Sun taashi
3PL.PF stand.up
'They stood up'
b. Sun tat-taashi
3PL.PF RED-stand.up
'They stood up'

In cases like this, the pluractional form does not seem to contribute any additional meaning as compared to the non-pluractional form. According to the first intuition of many speakers, sentences (59a) and (59b) mean exactly the same. Given that the non-pluractional forms of verbs can be used to refer to plural events, the effect of pluralization can become essentially invisible in cases like these. Nevertheless, in many cases, it is clear that the effect of using a pluractional verb is more than just evoking a plural event. Rather, the interpretation is that there is a number of (more or less) clearly individuated events of the same type. In the case of (59b), we can get a glimpse of that if the speaker translates the sentence as 'they all stood up', where *all* does not indicate exhaustiveness as much as it puts emphasis on the fact that each person stands up

⁴⁸ In fact, one speaker was able to assign a 'distribution to parts' interpretation to the sentence in (58b) as well. The resulting interpretation was an odd one, however, due to a requirement that will be discussed in more detail later. This requirement forces an interpretation according to which the individual subevents are more or less independent of each other. As a result, the use of the pluractional form in sentence (58b) implies for that speaker that the different parts of rice were cooked to various degrees.

individually, i.e. that each person is involved in their own event of standing up. Clearer cases of emphasis on the individuation of the subevents, however, are those where the subevents are visibly separate from each other and/or differentiated from each other along some dimension. Such cases are discussed below.

The requirement that the individual subevents should be separated from each other was already observed in the previous section. Consider the following examples:

- (60) a. Ruwaa yanàa zuz-zubôwaa
 water 3SG.M.IMPF RED-pour.VN
 ‘Water was pouring down’
 N.B. from various places
- b. Naa cic-ci tuwoo
 1SG.PF RED-eat tuwo
 ‘I ate several servings of tuwo’
 N.B. possibly from other people’s plates

Sentence (60a) can be used only in a situation in which the water is coming from several different sources (e.g. dripping/ pouring from various spots on the ceiling). This means that the pluractional cannot be used if the water came down in a single stream from a single spot – only the non-pluractional form is felicitous in such a context. Similarly, sentence (60b) cannot be used if *tuwoo* refers to a single serving but only when several different quantities of *tuwoo* are involved, e.g. portions served to different people on different plates.⁴⁹

The examples given above to illustrate the separateness requirement involve mass arguments. This is because that is where the effect is most clearly visible. Nevertheless, it should be clear that the separateness requirement is present also with count arguments. With count nouns, however, the separateness requirement is usually fulfilled trivially: different people or books, for example, are necessarily separate entities.⁵⁰

The condition that the individual subevents should be separate is often accompanied and strengthened by a requirement that they should be diverse. This diversification is not strictly speaking a requirement, rather just a preference. It can be observed that, often, the most natural translations of sentences with pluractionals contain expressions like *various*, *different kinds of* etc. In many cases, then, it is clear that the pluractional form is not used to refer to simply plural events but rather to ‘multiple and varied’ events. Consider the following examples:

⁴⁹ Staple food made from guinea-corn, rice, or millet flour, which is cooked in boiling water and stirred until thick (Newman 2007).

⁵⁰ The cases where the separateness requirement is not fulfilled trivially with count nouns are cases with collective arguments. In those cases, there has to be something ‘lumping’ the individual members of the collections together and separating them from others, e.g. a common purpose or shared location. More discussion of collective interpretations can be found in section 3.5.3. of Chapter 3.

- (61) a. Yaa sàs-sàyi littàttàfai
 3SG.M.PF RED-buy books
 'He bought a lot of different books'
- b. Yaa dad-dàfà àbinci
 3SG.M.PF RED-cook food
 'He cooked different kinds of food'
- c. %Sun gog-gòodee
 3PL.PF RED-thank
 'They thanked individually'
 N.B. for different things/ reasons

For most speakers, sentence (61a) means that many different (kinds of) books were bought, perhaps also at various places. Sentence (61b) describes an event of cooking different kinds of food. As for sentence (61c), the comment of a speaker with a very strong diversity requirement is that the sentence can be uttered in a situation in which different people, living in different places got different presents and they are all sending their thanks back, from different places and for different reasons.

One more dimension along which the (sub)events of a plural event can be differentiated is illustrated below:

- (62) %Yàransù sun yiy-yi kàmaa dà bàabansù
 children.their 3PL.PF RED-do resemblance with father.their
 'Their children resemble their father to various degrees'

In this example, the subevents are differentiated by the fact that the degree to which the property can be attributed to each of the subjects is different. In other words, there are many subevents, each of them being an event of a child resembling his or her father, and the subevents differ from each other in the degree of resemblance.

It should be kept in mind that, as already mentioned, speakers' intuitions vary quite considerably in how strong this preference is. For some, sentence (61a) can only be used if the agent buys different books in different places but for most speakers, the diversity requirement is less strong and it is satisfied even if the books are bought in a single shop, as long as they are different. All in all, it can be concluded that the subevents of a plural event should be more or less clearly individuated if the pluractional form is used.

2.3.7. Pluractional vs. continuous readings

The main generalization so far is that pluractional verbs in Hausa refer to plural events, whose subevents are more or less clearly individuated. However, it is also occasionally possible to find cases that seemingly contradict this generalization. In particular, these are cases where there are no gaps between the individual subevents, i.e. cases that seem to involve (singular) continuous events. Admittedly, it is very hard to get clear data here.

Moreover, even if true continuous cases can be found, they are extremely rare. The two examples that I give below are the only cases I have encountered that are more or less clearly continuous and, in fact, most speakers do not accept them on the continuous interpretation. Consider first the example in (63):

- (63) Ruwaa yanàa zuz-zubôwaa
 water 3SG.M.IMPF RED-pour.VN
 ‘Water was pouring down’

N.B. most speakers: from different sources; a small number of speakers:
 possibly from one source, continuously

For most speakers, the sentence in (63) means that there was water coming from various places (cf. (60a)) or that that the stream was being interrupted. However, sentence (63) can also be interpreted by some speakers as involving a continuous, uninterrupted, stream of water.⁵¹ Still, it is not completely clear that even for those speakers sentence (63) refers to a truly continuous process. I believe that there is another way to analyze cases like these. This can be better illustrated with the following example, which some speakers also accept on what seems to be a continuous reading:

- (64) Naa tut-tùurà mootàa
 1SG.PF RED-push car
 ‘I pushed the car’

N.B. most speakers: there must be pauses in the pushing; a small number of
 speakers: possibly continuously, without stops

Similarly to (63), for most speakers, this sentence can only be used if there are pauses in the pushing or if there is some other plurality present. Nevertheless, for some speakers it can be used both when the pushing is interrupted and when it is continuous and some speakers report that the sentence expresses that the pushing is continuous and requires a lot of effort.

Despite the fact that some speakers do seem to accept sentence (64) on a continuous reading, closer examination reveals that the interpretation might not be truly continuous. When asked in more detail about the exact conditions under which the sentence can refer to a continuous pushing, some of the speakers respond in a way that suggests that the seemingly continuous action rather involves repeated inputs of energy. A natural situation for the use of the sentence would be, for instance, when the car is very heavy and thus hard to push, as a consequence of which the attempts need to be repeated. This might also explain why the ‘continuous’ reading is possible for some speakers if it requires a lot of effort. As for the continuous reading of sentence (63), it is less clear that this type of explanation can be applied to it. Nevertheless, one could say in this case as well that the water is not flowing strictly continuously. It is possible that the situation is

⁵¹ The same holds for its perfective counterpart. This means that the ‘continuous’ effect is not the result of using the imperfective TAM.

conceptualized as involving repeated gushes of water. The fact that the situation involves a plurality of gushes might be obscured by lack of moments when there is no water coming, which is however plausible if the gushes follow one another in quick succession. That is, the event of water pouring down can be repeated without any (perceptible) gaps between the repetitions. If that is the case, the idea is still defensible that this is a plural event. As such, example (63) would not be a real counterexample to the basic generalization that pluractional verbs can only be used to refer to plural events. However, it would still be a counterexample to the generalization that the individual subevents should be clearly individuated (note that this also applies to the explanation offered for (64)). The second option is that (63) is a genuine continuous case. In that case it would be a real counterexample to the main generalization about pluractionals. I suggest, however, that even then the problem would not be very serious as this would be essentially the only real counterexample I have come across. In Chapter 3, I will argue that the two potential continuous examples given here should be treated as subcases of two slightly different phenomena. The example in (63) might be best analyzed as a subcase of the participant-based type of interpretation, whereas example (64) will be analyzed as a subcase of the repetitive type of pluractionals, which will be discussed in the following section.

2.4. Iteration

In descriptions of pluractional verbs across languages one often encounters the generalization that pluractionals are used to refer to multiple events distributed over different participants, locations or times (cf. Lasnik 1995). So far, examples of the first case (most of the examples given so far) and some potential examples of the second case (e.g. (50c)) have been presented. However, no well-formed examples of the third case have been presented yet. In this section, I will argue that even though simple iteration of an event is in most cases not a possible interpretation of Hausa pluractionals, a distinction has to be made between two types of cases. I will call the first type ‘repetitive events’ and the second type ‘repeated events’. It is perfectly acceptable to refer to repetitive events by pluractional verbs, while repeated events have to be described using other constructions. I will discuss these two types separately, in subsections 2.4.1. and 2.4.2., respectively. In subsection 2.4.3., I will discuss a related issue of tentative and conative readings.

2.4.1. Repetitive events

I use the term ‘repetitive events’ to refer to cases that involve typically quick repetition of short events. Such series of short events can be described by using a pluractional in Hausa. Below are some examples:

- (65) a. Taa tat-tàbà hancìntà
 3SG.F.PF RED-touch nose.her
 ‘She tapped her nose/ touched her nose repeatedly’
- b. Yaa shùs-shùuri teebùr̃
 3SG.M.PF RED-kick table
 ‘He kicked the table repeatedly’
- c. Tanàa ta nun-nùunà hannuntà dòomin sù gantà?⁵²
 3SG.F.IMPF TA RED-show hand.her so.that 3PL.SUBJ see.her
 ‘She was waving her hand so that they saw her’
- d. Taa sos-sòosà gaashintà
 3SG.F.PF RED-scratch hair.her
 ‘She scratched her head repeatedly’

These pluractional verbs are derived from verbs that refer to short events like hitting, scratching, kicking or slapping etc. In English, verbs like *jump* or *kick* can be used to refer to either a single jump or kick (the semelfactive use) or to a series of jumps or kicks (the repeated action/ activity use). This is illustrated in (66):

- (66) a. He jumped onto the chair (one jump)
 b. He jumped on the spot for several minutes (repeated jumps)
 c. She kicked him hard to make him shut up (one kick)
 d. She kicked the leg of the table nervously (repeated kicks)

In Hausa, non-pluractional verbs of this type can also refer both to single and repeated events, even though it seems that the pluractional form is strongly preferred if the intended meaning is repetition:⁵³

- (67) Yaa taafāa
 3SG.M.PF clap
 ‘He clapped’
 N.B. once or more times

Rothstein (2008) assumes that English verbs like *kick* and *jump* refer to ‘single occurrence’ events and are homonymous with activity predicates denoting events which involve iterations of the single event. I assume that Hausa verbs like *shùuraa* ‘kick’ or

⁵² The sentence contains the particle *ta*, which by itself signals repetition.

⁵³ Some of the frozen pluractionals of the language have a repetitive meaning as well:

- (i) a. Naa kwankwàsà teebùr̃
 1SG.PF knock table
 ‘I knocked on the table (repeatedly)’
- b. Taa mulmùlà alkamàa, zaa tà yi wàinaa
 3SG.F.PF knead wheat FUT 3SG.F do pancakes
 ‘She’s kneaded the dough, she is going to make pancakes’

taafàa ‘clap’ are number-neutral, just like all other non-pluractional verbs. For lack of a better term, I will call this class of verbs ‘semelfactive verbs’, despite the fact that the semelfactive interpretation is not their only interpretation.

In relation to the previous subsection, it is important to point out that cases with the repetitive interpretation might resemble the potential continuous cases. The reason is that there are often no perceptible gaps between the individual repetitions. For instance, the most natural scenario associated with example (65d) is one involving an uninterrupted series of scratches, rather than a single scratch, followed by a pause, another scratch, and so on. What distinguishes the repetitive cases without perceptible gaps from cases like (64) is mainly that it is rather well defined what counts as one kick, hit or scratch. With pushing, this is much less obvious. In Chapter 3, I will offer an explanation for why reduplicated semelfactives constitute an exception to the general requirement for (visible) ‘gaps’ and how that relates them to cases such as (64). At this point, it is important to realize that the class of verbs just presented is a class with special properties. In the following subsection, it will be shown that repetition is not a possible interpretation with other types of pluractional verbs.

2.4.2. Repeated events

Perhaps surprisingly, iteration of any other type than the one just described cannot be expressed using a pluractional in Hausa. Thus, it is not possible to utter (68) to describe a situation in which the same person poured tea for herself, drank it up, poured more tea etc.

- (68) Naa zuz-zùbà shaayi (*cikin koofin/ OK: cikin koofunàa)
 1SG.PF RED-pour tea (*in cup.the/ OK: in cups)
 ‘I poured tea (*in the cup/ OK: in the cups)’

Sentence (68) is not felicitous if the event of pouring tea into a cup is simply repeated. However, for some speakers, (68) is acceptable with *cikin koofin* (in cup.the.SG) in a situation in which the tea is in fact meant for different people but where the speaker has only one cup so she has to reuse it. If that is the case the individual subevents are not just repetitions of the same event: they are differentiated by means of the tea being poured for different people.⁵⁴

Below are some more examples that show that simple iteration is generally not an option. All the examples involve differentiation between the subevents:

- (69) a. Naa nà-nèemee tà
 1SG.PF RED-look.for her
 ‘I looked for her in various places’
 N.B. not just repeatedly in the same place

⁵⁴ This example also shows how a well-chosen context can influence the acceptability of a sentence.

- b. Naa bib-bi shì (wuràaree)⁵⁵
 1SG.PF RED-follow him (places)
 ‘I followed him to various places’
 N.B. not repeatedly to the same place
- c. Yaa bub-bùudê jákaa
 3SG.M.PF RED-open bag
 ‘He opened different compartments of the bag’
 N.B. not repeated opening
- d. Yaa bib-biyaa kudii
 3SG.M.PF RED-pay money
 ‘He paid for different people’
 N.B. several different paying events

In (69), the pluractional verbs are used with singular subjects and objects. However, the interpretation is never that of simple repetition. If a person is looked for many times, it has to be in different places (69a). If a single person is being followed and a pluractional is used to describe the situation it means that he was followed to different places (69b). If a bag is opened and the verb *bùudêe* ‘open’ is used in its pluractional form, as in (69c), it is not just repeated opening but rather different compartments of the bag are being searched. Finally, in (69d) a situation is described in which there are multiple events of paying by the same person but the payments are for different people, for example. In cases in which an interpretation other than simple repetition is not easily available, the sentence is not acceptable:⁵⁶

- (70) a. *Naa tsat-tsallàkè kujèeraa
 1SG.PF RED-jump.over chair
 intended: ‘I jumped over the chair repeatedly’
- b. *Taa bub-bùudê taagãĩ
 3SG.F.PF RED-open window.the
 intended: ‘She opened the window repeatedly’

It is hard to imagine a multiple event of jumping over a single chair as involving anything else than simple repetition, or at least not without a lot of creativity. Similarly for (70b): a single window cannot be opened in many different ways and thus the only way to interpret the sentence would have to involve simple repetition.

⁵⁵ Some speakers require the presence of *wuràaree* ‘places’ for the sentence to be acceptable.

⁵⁶ Notice that the pluractional in (70a) is acceptable if the object is plural:

- (i) Naa tsat-tsallàkè kujèeruu
 1SG.PF RED-jump.over chairs
 ‘I jumped over (different) chairs’

As for (70b), some speakers accept the sentence on the interpretation ‘she opened the different parts of the window’, which is then a case of distribution to parts, described in subsection 2.3.5.

This being said, it should also be acknowledged that the picture is a bit more complicated than suggested above. As already mentioned, there is a lot of variation in judgments among speakers. Perhaps not surprisingly then, there are a few speakers who occasionally, or quite systematically, accept iterative interpretations with pluractionals. This happens especially after they have been exposed to a number of sentences with pluractionals that are hard to interpret as not involving repetition. However, simple repetition is never the first interpretation a pluractional will receive even for these speakers. I will come back to this issue in Chapter 3. Generally, it can be concluded that simple iteration is not a possible interpretation of pluractional verbs in Hausa.

Iterative interpretations need to be distinguished from habitual interpretations. Habituality is expressed by using the habitual TAM marker (or the imperfective TAM marker in some dialects). In Hausa, habituality cannot be expressed by the use of the pluractional form. This is not surprising as simple iteration of an event is not a possible interpretation of the pluractional form either. However, habitual TAM (or imperfective TAM in the habitual use) can generally combine with pluractionals. The resulting interpretation is that on each occasion, there is a plural event of V-ing.

- (71) Takàn tāt-tàmbàyee nì
 3SG.F.HAB RED-ask me
 ‘She always asks me a lot of (different) questions’

The individual asking events cannot be distributed over different occasions. In other words, the sentence above cannot be used to express that on each occasion the person was asked a single question.

2.4.3. Conative and tentative readings

There are two special types of cases that represent another way of interpreting pluractionals with singular arguments, which would otherwise be infelicitous since iteration is not a possible interpretation. These are the so-called conative and tentative readings (cf. section 1.4.4.). In the case of conative interpretations, the action does not produce the desired result (72a-b). Tentative interpretations are interpretations according to which the action was performed superficially or not with serious effort (72c):⁵⁷

- (72) a. %Naa dāɗ-dāgà teebùr̃
 1SG.PF RED-lift table
 ‘I tried to lift a table’
 N.B. here and there, a bit on each side

⁵⁷ This type of interpretation is not easily available for all speakers. Sentences like (72c) are systematically assigned a different type of interpretation by some speakers (cf. the discussion of exhaustive interpretations in section 2.8.1.). Note also that sentence (72b) can in principle get a regular plural reading as well. For instance, the sentence could mean that the things were pushed into many cars.

- b. Naa tut-tùurà kaayân
 1SG.PF RED-push things.the
 ‘I tried to push in the things’
 N.B. e.g. in a car that is already too full
- c. %Yaa shàs-shàari òaakii
 3SG.M.PF RED-sweep room
 ‘He swept the room superficially’

In (72a), the simple iterative interpretation, involving a repeated lifting of the table, is not possible. However, at least for some speakers it is possible to interpret the sentence as describing a situation in which the attempt to lift the table was repeated, rather than the full event. In addition, for some speakers, the attempts are not just repeated. Instead, the person trying to lift the table tries different corners and angles. In (72b), the use of the pluractional suggests that someone is trying to push something either into a container that is too small or full already or through an opening that is too small. Again, the attempts are repeated. In (72c), the use of the pluractional suggests that the person did not do the sweeping properly. Perhaps he swept a bit here and a bit there but the room was not really clean in the end.

Conative (72a-b) and tentative (72c) readings are rather common cross-linguistically. It is not surprising, then, that they can be found with Hausa pluractionals as well. In this chapter, I discuss conative and tentative readings together, as they are at least superficially very similar to each other. In Chapter 3, however, I offer two different explanations for the two types of meaning effects.

2.5. Large quantity and vagueness

The discussion of the Hausa pluractional data revolves around one central claim, namely, the claim that pluractional verbs refer to plural events. In this subsection I will make this claim a bit more specific again, describing another layer of the meaning of Hausa pluractionals. In particular, I will demonstrate below that plural events referred to by pluractionals are not just plural (or plural and individuated). Rather, the number of events should be relatively large and, moreover, it should be vague. This is true no matter whether the plurality of events is manifested as plurality of participants, locations, repetitions or anything else. In the following, the large number and vagueness requirement will be illustrated separately for temporal and non-temporal cases, starting with the non-temporal ones.

As just mentioned, for a pluractional verb to be used felicitously, the number of events referred to by it should be left unspecified. It can be seen from the fact that specifying the exact number of participants or locations leads to reduced acceptability. The number of subevents should rather not be specified. It is simply understood to be quite large.

This is not a strict requirement for all speakers but it is the preferred option even for those who (sometimes) accept cases with explicit reference to numbers. In (73), the general pattern is presented:

- (73) a. Mutàanee sun fiĩ-fitoo
 people 3PL.PF RED-come.out
 ‘Many people came out’
 b. Mutàanee ?dà yawàa/ ?dārii/ ??biyaĩ/ ?*biyu sun fiĩ-fitoo
 people ?with many/ ?hundred/ ??five/ ?*two 3PL.PF RED-come.out
 ‘?Many/ ?hundred/ ??five/ ?*two people came out’
 c. Mutàanee dà yawàa/ dārii / biyaĩ / biyu sun fitoo
 people with many/ hundred/ five/ two 3PL.PF come.out
 ‘Many/ hundred/ five/ two people came out’
 d. ?*John dà Peter sun fiĩ-fitoo
 John with Peter 3PL.PF RED-come.out

In (73a), the noun *mutàanee* ‘people’ is not modified by a numeral or a quantity expression. Nevertheless, the use of the pluractional implies that the number of people was rather large. In (73b), it is demonstrated that modifying the noun by a vague quantity expression leads only to slight degradedness, whereas the use of numerals yields a worse result. Moreover, the smaller the number is, the less acceptable the sentence gets. Example (73c) demonstrates that the non-pluractional form of the verb imposes no such restrictions. Finally, the ungrammaticality of (73d) shows that also noun phrases like *John dà Peter* ‘John and Peter’ do not combine well with pluractionals since the number of the participants should be larger than two for the pluractional form to be acceptable.

The same pattern can be found in the case of specifying the number of locations (if that is where the plurality is located):⁵⁸

- (74) a. Mutàanee sun fiĩ-fitoo dàgà gidàajèn/ ?gidàajèn àshirĩn
 people 3PL.PF RED-come.out from houses.the/ houses.the twenty
 ‘People came out of the houses/ ?twenty houses’
 b. Katangaa taa tsat-tsàagee (??à wurii biyaĩ)
 wall 3SG.F.PF RED-crack (??at place five)
 ‘The wall cracked in many places (??in five places)’

Example (74a) shows that the preferred option is to not specify the number of houses the people came out of if the pluractional is used. Similarly, specifying the number of places in which the wall cracked is not acceptable for most speakers if the multiplicity of cracking events is expressed by the pluractional form, as in (74b).

⁵⁸ In Chapter 3, I will argue that there is no fundamental difference between participants and locations as ‘licensors’ of pluractionality.

The question marks and stars show the relative acceptability of the modifiers across speakers, not absolute judgments for all speakers. As in many other aspects of the meaning of pluractionals, also here speakers' judgments vary to a certain degree. Nevertheless, the basic generalization is that the use of the pluractional form implies that the number of the subevents was rather large. Furthermore, it is dispreferred to specify the cardinality of the subevents by another expression, especially if the quantity expression is not sufficiently vague.

The facts are slightly more complicated in the case of temporal interpretations. Testing the possibility of precise specification of the number of repetitions requires more caution, for reasons to be specified below. Once the complicating factors are taken care of, however, the picture is clear: the number of subevents should be vaguely large in these cases as well.

One reason why the situation is less transparent with the repetitive cases is that *x-times* adverbials can appear in different syntactic positions. In cases in which an *x-times* adverbial is felicitous with a pluractional, it usually precedes it and also semantically scopes over it. In (75), then, the interpretation is that there were ten occasions on which the plural event occurred. In other words, there were ten occasions involving many hits, not ten individual hits:

- (75) Sàu goomà taa bub-bùgà teebùĩ
 times ten 3SG.F.PF RED-hit table
 'Ten times, she hit the table repeatedly'

To test whether *x-times* adverbials can also specify the number of the actual subevents (the individual hits), the adverbial has to follow the pluractional, as in (76):

- (76) %Taa bub-bùgà teebùĩ sàu goomà
 3SG.F.PF RED-hit table times ten
 'She hit the table (repeatedly) ten times'

Some speakers report the same interpretation for (76) as the one exemplified in (75). This means that for them the adverbial does not have to be preposed to scope semantically over the pluractional, which results in the sentence being acceptable, on a par with (75). For most speakers, however, (76) is degraded because in this position the adverbial necessarily specifies the number of the individual hits and that is not accepted if the pluractional is used. Consider also the following examples where the individual slaps are being counted:

- (77) a. Taa màm-màaree shì
 3SG.F.PF RED-slap him
 ‘She slapped him repeatedly/ many times’
- b. Taa màm-màaree shì ?sàu dà yawàa/ ??sàu biyaĩ
 3SG.F.PF RED-slap him times with ?many/ ??times five
 ‘She slapped him (repeatedly) ?many/ ??five times’
- c. Taa màaree shì sàu dà yawàa/ sàu biyaĩ
 3SG.F.PF slap him times with many/ times five
 ‘She slapped him many/ five times’

The pattern is the same as in the case of non-repetitive readings: the number of slaps should not be specified if the pluractional is used, at least not very precisely. Thus, it can be concluded that the vagueness requirement applies in the temporal cases as well. Just like in the case of the participant-based readings, the use of the pluractional form itself implies that the number of the subevents is relatively large.

Finally, notice that if a pluractional is used with a repetitive interpretation, the number of participants can be specified since the contribution of the pluractional does not have to do with the number of participants in that case but with the number of repetitions. The well-formedness of (78a) can be contrasted with the degraded status of the participant-based case in (78b).

- (78) a. Mutàanee biyu/ John dà Peter sun tat-tàbà kujèerāĩ
 people two/ John with Peter 3PL.PF RED-touch chair.the
 ‘Two people/ John and Peter (each) touched the chair repeatedly’
- b. ?*Mutàanee biyu/ John dà Peter sun fĩr-fĩtoo
 ?*people two/ John with Peter 3PL.PF RED-come.out
 ‘?*Two people/ John and Peter came out’

Notice that the opposite case is not so easy to construct. If the singular subject in (77b) is replaced by a plural one it does not rescue the sentence because of the low position of the adverbial. As indicated above, *x-times* adverbials generally cannot take scope over the pluractional in that position.

- (79) Sun màm-màaree shì ?sàu dà yawàa/ ??sàu biyaĩ
 3PL.PF RED-slap him times ?with many/ ??times five
 ‘They slapped him (repeatedly) ?many/ ??five times’

To prevent the adverbial from counting the number of the individual slaps it should be preposed, as in (80):

- (80) Sàu biyaĩ sun màm-màaree shì
 times five 3PL.PF RED-slap him
 ‘Five times, they slapped him’
 N.B. several/ many people on each occasion but possibly each person once

Sentence (80) expresses that there were five occasions on which a plural event of slapping took place.

To summarize, the use of a pluractional generally implies that the number of the subevents in the plural event is relatively large. Specifying the number precisely is dispreferred.

2.6. Degree readings

In the present section, I discuss interpretations that involve either intensification or detensification, that is, degree-like meaning effects. Subsection 2.6.1. deals with high degree cases, subsection 2.6.2. with cases that can be seen as involving low degree meanings.

2.6.1. High degree

Cases of pluractionals with high degree interpretations do not constitute a large class but they are rather important for the overall analysis of pluractionality in Hausa. Therefore, they will be discussed in some detail. An example of a pluractional with a high degree interpretation is given below:

- (81) Yâraa sun rur-rùudfee
 children 3PL.PF RED-be.confused
 ‘The children were very confused’
 N.B. beyond control, alarmed

Note that cases like the one above are different from cases where the intensity effect comes only as a side effect of plurality (cf. section 1.4.2.). Consider the following examples:

- (82) a. Kwalabaa taa faf-fâshee
 bottle 3SG.F.PF RED-break
 ‘The bottle shattered/ broke into many pieces’
 b. Kwalabaa taa fashèe
 bottle 3SG.F.PF break
 ‘The bottle broke (into two pieces)’

Sentence (82a) might sound like a description of an ‘intensified’ event because the expressions *shatter/ break into many pieces* in the translation make the event sound more serious in comparison to simple *break* in (82b). However, I suggest that any potential degree effects in cases like this should be understood as following from the large number of the breaking (sub)events.

The type of cases that will be discussed here are, unlike the verb in (82a), pluractionals derived from gradable verbs, i.e. verbs like *ruudêe/ gâji/ dàamu* ‘be confused/ tired/ worried’. The interesting generalization about these verbs is that the gradable property associated with them is intensified, while the use of the pluractional form requires the participants to be plural at the same time. This can be seen in the following examples:

- (83) a. *Yâraa sun ruudêe*
 children 3PL.PF be.confused
 ‘The children were confused’
 b. *Yâraa sun rur-rùudêe*
 children 3PL.PF RED-be.confused
 ‘The children were very confused’
 N.B. beyond control, alarmed
 c. *%Yaa rur-rùudêe*⁵⁹
 3SG.M.PF RED-be.confused
 intended: ‘He is very confused’

Sentence (83b) is interpreted as involving a higher degree of confusion than sentence (83a), where the verb is in its non-pluractional form. The sentence in (83c) shows, in addition, that the pluractional form of *ruudêe* ‘be confused’ cannot be combined with a singular subject. The same pattern is found with other gradable verbs, e.g. *gâji* ‘be tired’:

- (84) a. *Mun gâji*
 1PL.PF be.tired
 ‘We are tired’
 b. *%Mun gâg-gâji*
 1PL.PF RED-be.tired
 ‘We are all very tired’
 c. *??Naa gâg-gâji*
 1SG.PF RED-be.tired
 intended: ‘I am very tired’

Example (84b) shows that the pluractional form of *gâji* ‘be tired’ expresses a higher degree of tiredness in comparison to the non-pluractional form in (84a). The unacceptability of the sentence in (84c) demonstrates that the pluractional form is incompatible with a singular subject.

In section 2.2.3., I briefly discussed the so-called grade system, a system of morphological classes of verbs. With respect to gradability, grade 7 is an interesting class since these verbs display the same pattern as the verbs discussed above. Grade 7

⁵⁹ The % sign indicates that for some speakers this sentence is well-formed. However, it seems that at least for some of those speakers for whom it is acceptable, the interpretation is rather that of internal plurality. For instance, it can mean that the person was confused for multiple reasons, kept getting confused etc.

verbs are all intransitive. In the perfective TAM these verbs have passive-like semantics and usually refer to action thoroughly or well done (cf. Newman 2000).⁶⁰ This means that in the perfective TAM these verbs already involve high degree in the non-pluractional form. However, in the pluractional form, the degree of the property is even higher:

- (85) a. Naa/Mun dàamu
 1SG/PL.PF be.worried
 ‘I am/ we are (very) worried’
 b. %Mun dàd-dàamu
 1PL.PF RED-be.worried
 ‘We are (really) very worried’
 c. ??Naa dàd-dàamu
 1SG.PF RED-be.worried
 intended: ‘I am very worried’

To conclude, when the meaning of a pluractional derived from a gradable verb is compared to its non-pluractional counterpart, it is clear that the gradable property is intensified. At the same time, the plurality requirement is still present since sentences with singular participants are degraded. This means that intensification alone is not a possible interpretation of Hausa pluractionals, as sometimes suggested in the literature (e.g. Frajzyngier 1965). In other words, in the cases of gradable verbs, the semantic contribution of the use of the pluractional form is both plurality and high degree.⁶¹

2.6.2. Low degree

In this subsection, a different type of cases that involve a degree-like effect is presented. In these cases, the effect is detensification rather than intensification: the degree of whatever property is gradable in each particular case is lower than in the case of the non-pluractional form. Below are some examples (note that not all speakers find them acceptable or they do not interpret them as involving detensification):

⁶⁰ In the imperfective TAM grade 7 verbs (or, more precisely, verbal nouns) indicate potentiality of action:

- (i) Wannàn mootāf tanāa gyāaruwaa
 this car.the 3SG.F.IMPF repair.VN
 ‘This car is repairable’

⁶¹ As in many other aspects of the use of pluractional verbs, there is quite some variation in judgments among native speakers also in the gradable cases. The variation concerns both the exact set of verbs that allow for pluractional formation, as well as the interpretation of the resulting, reduplicated, forms. Some speakers seem to get high degree interpretations quite easily, for others intensification is very rare as a meaning contribution of the pluractional form. Despite all the variation, however, the data presented above manifest a rather regular pattern in the sense that gradable verbs generally require intensification in the pluractional form while the plurality requirement is still preserved.

- (86) a. % Yârân sun yiy-yi kàmaa dà juunaa
 children.the 3PL.PF RED-do resemblance with each.other
 ‘The children resemble each other a bit’
- b. %Mun yiy-yi aikii
 1PL.PF RED-do work
 ‘Occasionally we found some time for work’
 N.B. the work is not serious enough
- c. %Sun kak-kařàntà littàttàfân
 3PL.PF RED-read books.the
 ‘They read the books superficially’
 N.B. a bit here, a bit there

The sentence in (86a) implies that the degree of the resemblance among the children is rather low. Sentence (86b) can be uttered by people who did not work very hard. Finally, the use of the pluractional form in (86c) suggests that the reading was not thorough. For example, if the sentence describes the preparation of a group of students for an exam, the use of the pluractional indicates that they did not study seriously enough.

Notice that with the exception of the complex predicate *yi kàmaa* ‘resemble’ these verbs cannot be considered gradable. This makes these pluractionals rather different from the high degree cases discussed in the previous subsection. Notice also, that examples (86b-c) can be taken to represent the tentative reading, as exemplified in (72c) (section 2.4.3). In fact, in Chapter 3, I will treat cases like (86b-c) and (72c) as representing the same phenomenon. Also, it will be shown that the high degree and low degree effects have very different sources.

2.7. Interaction between large number, high degree and high individuation

In the previous sections, it was shown that pluractional verbs in Hausa do not simply refer to non-singular events but that the subevents have to be many and the number should remain vague. Moreover, the individual subevents are typically highly individuated and in some cases high or low degree interpretations arise in addition to plurality. Putting the gradable cases aside for a moment, it can be said that pluractionals typically refer to many and varied events. The following examples suggest that at least for some speakers either meaning contribution can license the pluractional form on its own. For such speakers, it is enough for the events to be sufficiently many (and not very varied), or only sufficiently varied (and not very many). Note that the comments provided for the examples given below represent intuitions of one or two speakers in each case. However, effects of this type can be found with a number of speakers. Consider first the example in (87):

- (87) Sun jij-jiraa shi
 3PL.PF RED-wait.for him
 ‘They waited for him’
 N.B. %as few as two people is enough if they waited for different reasons

The example in (87) elicited a comment according to which the pluractional can be used even if there were only two people waiting provided that they waited (e.g. to meet with someone) for different reasons. If the reasons were not different, then the people waiting should be many. The following example gave rise to a similar comment:⁶²

- (88) %Anàa gig-ginà màkàřàntun sakandàřèe gùdaa biyař
 IMP.IMPF RED-build schools.of secondary unit five
 ‘Five secondary schools are being built’
 N.B. %possible if the schools are being built in different towns

The number of schools can be specified (and low) if the individual events of building were differentiated by having the schools built in different towns.

Something very similar can be observed in cases of pluractionals with high degree interpretations. It seems that in high degree cases, some speakers allow for interpretations involving participants that are simply plural, rather than numerous, which is otherwise usually required with pluractionals. Thus, one speaker suggested that in (89) it is possible for the subject pronoun to refer to two people only, provided that the degree of being thankful is very high:

- (89) %Mun gog-gòodee
 1PL.PF RED-thank
 ‘We thank you so much!’
 N.B. %it is possible that the subject refers to two people only

In fact, the general idea that the event is somehow very serious or important often seems to save sentences where the number of subevents is specified and/or low. The sentence in (88) above also received a comment that it sounds like something a politician would say, as if to stress how well they are taking care of the well-being of their people. This means that if the pluractional in (88) is interpreted as augmenting the importance of the plural event, it is possible to specify the number of the subevents. The same effect is illustrated in (90), which sounds inappropriate exactly for this reason:

- (90) %?Kàajiinaa biyu sun muř-mutù
 chickens.my two 3PL.PF RED-die
 ‘My two chickens died’
 N.B. %it sounds as if the event is given too much importance

⁶² The example in (88) is based on an example from Pawlak (1975:146).

The reason why sentence (90) sounds odd to the speaker who provided the comment is that the use of the pluractional makes the event sound overly serious.

To summarize, from the data presented in this subsection it seems clearer than from the discussion of the individual aspects of the pluractional meaning that the use of the pluractional form often suggests that the plural event is somehow special or remarkable. What makes the event remarkable could be a higher degree of a property, it could be the fact that the subevents are very many or that they are highly diversified. In addition, it could be just a very general emphasis. Typically, several of these special effects cooccur. Nevertheless, the examples just discussed point to the conclusion that this is not necessary. It is enough if one of the special meaning effects ‘licenses’ the use of the pluractional form in Hausa. However subtle these effects can sometimes be, they reveal something important about the nature of Hausa pluractionals and as such they play an important role in the motivation of the proposal presented in Chapter 3.

The basic properties of Hausa pluractionals have now been described. The purpose of the following section is to present some additional properties of pluractionality in Hausa.

2.8. Further issues

This section discusses some further issues that are relevant for the analysis. Subsection 2.8.1. discusses the issue of exhaustive and non-exhaustive interpretations. The next subsection (2.8.2.) deals with cases of pluractionals whose arguments are not expressed overtly. In subsection 2.8.3. statives and verbal nouns derived from pluractional verbs are discussed. Finally, subsection 2.8.4. summarizes the facts about inter-speaker variation.

2.8.1. Exhaustivity

Hausa sentences with pluractionals are often translated by native speakers with the use of expressions like *all* or *each* (cf. (91a)). Also, when providing their own examples of sentences with pluractionals, speakers often use the Hausa equivalent of *all*: *duk(à)*, which apparently makes the examples sound very natural (91b).⁶³

⁶³ Notice that while the non-distributive universal quantifier *duk* ‘all’ is frequently used with pluractionals, the distributive universal quantifier is usually not compatible with the pluractional form:

(i) ?³Koowaa yaa zaz-zàunaa
 everyone 3SG.M.PF RED-sit.down
 intended: ‘Everyone sat down’

Interestingly, while some speakers do not find sentences with *koowaa* ‘everyone’ (completely) ungrammatical, sentences with *koowàné* *N* ‘every N’ are clearly worse in comparison:

- (91) a. Sunàa zàz-zàune
 3PL.IMPF RED-sit.ST
 ‘They were all seated’
 b. Duk sun tsait-tsàyaa
 all 3PL.PF RED-stop
 ‘They all stopped’

This might be taken to mean that pluractionality in Hausa involves exhaustivity. However, if this were the case pluractionals would be expected to be incompatible with exceptive phrases. The following examples show that this is not the case. The sentences in (92) are not contradictory despite the presence of an exceptive phrase:

- (92) a. Sunàa zàz-zàune àmmaa bà dukà ba
 3PL.IMPF RED-sit.ST but NEG all NEG
 ‘They are seated but not all of them’
 b. Fuřsunoonii sun guř-gudù àmmaa bà dukà ba
 prisoners 3PL.PF RED-run.away but NEG all NEG
 ‘The/ some prisoners escaped but not all of them’

I conclude from this that pluractionals do not give rise to truly exhaustive interpretations. However, the tendency of speakers to use *all* or *each* in the translations and *duk(à)* in the original sentences with pluractionals clearly exists. It probably partly reflects the fact that pluractionals are used for emphasis, to make the event sound more ‘serious’. The following example illustrates this and shows that in such cases *duk(à)* does not mean literally ‘all’ or ‘completely’:

- (93) Duk kaa zuz-zubař dà ruwaa!
 all/completely 2SG.M.PF RED-pour with water
 ‘You spilled all the water!’
 N.B. possible even if only some of the water is spilled

According to the speaker who volunteered the example, the sentence can be used when the person being scolded in fact did not spill all the water, maybe not even a bigger part of it. *Duk* is used basically to make the clumsiness of the person spilling the water sound really terrible and of serious consequences.

-
- (ii) ?*Koowàné dāalibii yaa zaz-zàunaa
 every student 3SG.M.PF RED-sit.down
 intended: ‘Every student sat down’

This correlates with the fact that in English, *everybody* combines more easily with e.g. *together* than *every N*:

- (iii) Everybody/ *every man danced together

As *together* needs a plural subject, this example shows that *everybody* is more plural-like than *every N*.

It is important to realize that apart from the seemingly exhaustive interpretations, it is also possible to find the opposite case. Recall that Hausa pluractionals can in some cases be assigned the so-called tentative interpretation, where the implication is that the action is not performed thoroughly:

- (94) %Yaa shàs-shàari dfaakii
 3SG.M.PF RED-sweep room
 ‘He swept the room superficially’

If the room is not swept properly, it probably means that not all parts of the room were swept. In other words, the superficiality effect can be understood as resulting from non-exhaustivity. In addition to the tentative cases, there are also other cases of pluractionals with non-exhaustive interpretations:

- (95) Gidân yaa rur-rùushee
 house.the 3SG.M.PF RED-collapse
 i. ‘The house collapsed completely’
 ii. ‘The house collapsed in some parts’

Sentences like (95) are generally interpreted in two different ways. For some speakers the contribution of the pluractional is an exhaustive interpretation (i) while others interpret such cases non-exhaustively (ii). For some speakers, then, (95) expresses that the house was completely destroyed, while for other speakers the use of the pluractional indicates that only some parts of the house collapsed and thus the house might still be usable.⁶⁴ In Chapter 3 (section 3.8.1.), I will offer an explanation for this paradox.

2.8.2. Unexpressed arguments

As already mentioned in section 2.2.2., the verb’s arguments can often be left unexpressed in Hausa. This is also true for sentences with pluractionals. Such unexpressed arguments can then also serve as licensors of pluractionality. Consider the following example:

- (96) a. Naa tut-tùnaa
 1SG.PF RED-remember
 b. Sun tut-tùnaa
 3PL.PF RED-remember

Sentence (96a) is easily interpreted as ‘I remembered various things’, ‘various things’ being something the hearer has to fill in on their own. Sentence (96b) has a plural subject. However, this does not mean that the subject has to be interpreted as the licensor of the pluractional form. The pluractional can also be licensed by the unexpressed object.

⁶⁴ Similarly, there are speakers who interpret sentence (94) as ‘He swept all parts of the room/ he swept the room thoroughly’.

Thus, sentence (96b) can be interpreted as ‘They (all) remembered (the same thing)’, or ‘They remembered various things’. In principle, then, unexpressed arguments are not different from expressed (plural) arguments in the ability to license a pluractional. In spite of that, expressing or not expressing an argument overtly can make a certain interpretation more prominent than another. This is illustrated in (97):

- (97) a. Yaa zuz-zùbà shaayi
 3SG.M.PF RED-pour tea
 i. ‘He poured tea for them (different people)’
 ii. ‘He spilled tea’
- b. Yaa zuz-zùbaa musù shaayi
 3SG.M.PF RED-pour to.them tea
 ‘He poured tea for them (different people)’

Many speakers assign the same interpretation to sentence (97a) as to sentence (97b): the tea was poured for different people. Nevertheless, the fact that the beneficiary of the event is not expressed overtly in (97a) makes the interpretation according to which the tea was spilled (here and there) much more prominent for some speakers. In addition, there are also speakers who actually seem to require overt expression of the licenser of the pluractional form. Such speakers find sentences like (96a) unacceptable and require the object to be expressed overtly in order for the pluractional to be felicitous:

- (98) Naa tut-tùnaa dà suu
 1SG.PF RED-remember with them
 ‘I remembered them (different things)’

In my view, this is not a reflection of a real grammatical restriction. Rather, some speakers seem to be better at providing possible interpretations in underspecified contexts than others. It is easier to locate the source of plurality if it is expressed in the sentence. Importantly, however, the majority of speakers seem to have little trouble reconstructing the missing material.

2.8.3. Pluractional statives and verbal nouns

Pluractionality is a verbal phenomenon. Nevertheless, it is not restricted to verbs in Hausa. Pluractionality can also be found with certain deverbal categories, namely statives and verbal nouns (cf. section 2.2.7.).⁶⁵ Both pluractional statives and verbal nouns have been used in the examples in this chapter, since the pluractional semantics is preserved in the derivations. The present subsection discusses in what sense these forms are specific.

⁶⁵ I have nothing to say about adjectival participles derived from pluractionals.

Statives do not seem to exhibit any kind of morphological constraints with respect to the availability of pluractional forms. Consider the following pair of a verbal pluractional and its corresponding stative:

- (99) a. An cic-cikà kwalàabân
 IMP.PF RED-fill bottles.the
 ‘They filled the bottles’
 b. Kwalàabân sunàa cic-cike
 bottles.the 3PL.IMPf RED-fill.ST
 ‘The bottles are filled/ full’

What distinguishes pluractional statives from their corresponding verbs is that they seem to require the plurality to be situated in the subject. Thus, whereas (100a) is acceptable with the singular subject (the plurality is located in the unexpressed object argument), (100b) is not: the pluractional stative requires the subject to be plural (100c).

- (100) a. Naa shis-shiryaa
 1SG.PF RED-prepare
 ‘I got prepared’
 N.B. preparing a lot of things
 b. *Inàa shis-shirye
 1SG.IMPf RED-prepare.ST
 intended: ‘I am prepared/ ready’
 c. Sunàa shis-shirye
 3PL.IMPf RED-prepare.ST
 ‘They are (all) prepared/ ready’

This pattern is perhaps not unexpected, considering that the stative describes the state of the subject resulting from the event of preparing oneself and not the event itself.

As for verbal nouns, their meaning seems entirely parallel to that of their corresponding verbs. However, there are gaps in the paradigm: not all types of verbal nouns have corresponding pluractional forms. This means that many pluractionals cannot be used in the imperfective TAM. Consider the following contrast between the well-formed *daddàfāwaa* (the pluractional counterpart of *dafāwaa* ‘cooking’, a weak verbal noun; (101a)) and the degraded *nanneemaa* (the expected pluractional counterpart of *neemaa* ‘looking for’, a strong verbal noun; (102a)):

- (101) a. Tanàa dad-dāfāwaa
 3SG.F.IMPf RED-cook.VN
 ‘She is cooking different kinds of things’
 b. Taa dad-dāfaa
 3SG.F.PF RED-cook
 ‘She cooked different kinds of things’

- (102) a. ??Tanàa nan-neemansù
 3SG.F.IMPF [RED-look.for].VN.of.them
 ‘She is looking for them (in various places)’
 b. Taa nà-nèemee sù
 3SG.F.PF RED-look.for them
 ‘She looked for them (in various places)’

The constraint at play seems to be of morphological nature. Apparently, if a given verb does not derive its corresponding verbal noun in a completely transparent and regular fashion, it is generally impossible to derive a verbal noun from its corresponding pluractional verb.⁶⁶

To conclude, pluractional statives and verbal nouns do have their specifics. Nevertheless, the pluractional semantics is inherited from the base verb. As a consequence, I will not propose a separate analysis of pluractional statives and verbal nouns.

2.8.4. Variation

At various points during the presentation of the data, variation in speakers’ judgments has been discussed. There is no variation with respect to the basic plurality requirement, that is, no speakers use pluractionals to refer to singular events.⁶⁷ However, most other aspects of the use of pluractional verbs exhibit less uniformity. Some of the most important ones are summarized in the following paragraphs.

First, while all speakers allow for the pluractional form to be licensed by plural participants, not all speakers accept cases with singular count or mass arguments without problems (cf. section 2.3.5.). In other words, not all speakers find it easy to distribute the event plurality to parts of participants. Those speakers who cannot associate the plural subevents with different parts of a single participant very easily generally reject examples with singular participants unless an interpretation involving a different type of plurality is available.

Second, the high individuation requirement (cf. section 2.3.6.) is not equally strong for everyone. For some speakers, this seems to be a genuine requirement and thus the pluractional form is rejected if the individual subevents are not sufficiently differentiated. For others, however, high individuation is generally preferred but not strictly speaking required. For such speakers, pluractionals often refer to events that are simply plural.

⁶⁶ The impossibility of deriving verbal nouns from pluractional verbs whose non-pluractional counterparts are associated with irregular verbal nouns thus follows from the restrictions on the formation of verbal nouns, rather than from restrictions on the pluractional formation. Cf. also the discussion in section 2.2.4.

⁶⁷ Note that the very limited number of continuous-like interpretations some speakers seem to accept are analyzed as plural events where the gaps between the individual subevents are less clearly visible. These cases will be dealt with in sections 3.5.4.1. and 3.6.1. of Chapter 3.

Another point of variation is the absoluteness of the ban on iterative interpretations (cf. section 2.4.2.). While most speakers reject all interpretations involving simple iteration with other than semelfactive verbs, some speakers do occasionally or even quite regularly accept them. However, iteration is never the first interpretation offered by any speaker. It is rather typical that if speakers accept iterative interpretations this is after they have been exposed to a sufficient amount of data that are hard to interpret otherwise. This suggests that some speakers can develop a certain degree of ‘tolerance’ to iterative interpretations despite the fact that they usually reject them at first.

As a fourth aspect in which there is quite a lot of variation, the availability of high degree interpretations can be mentioned (cf. section 2.6.1.). For most speakers, intensification interpretations are not very frequent but they do occur. However, there are speakers for which intensification is a meaning effect that is relatively commonly found with pluractional verbs. On the other hand, there are also speakers who hardly ever interpret pluractionals as involving high degree.

The points of variation discussed above are perhaps the most easily noticeable ones. Nevertheless, there are many other aspects in which speakers vary. For instance, some speakers can specify the number of subevents more easily than others. An interesting point of variation is also the preference for either exhaustive or non-exhaustive interpretations, discussed in section 2.8.1. In addition, for many but not all speakers, pluractionals have certain special connotations associated with them. For example, they may be perceived as carrying some kind of negative evaluation or suggesting that there is an element of disorder and/or unpredictability in the event or that the event is striking in some other way.

In Chapter 3, I will offer an analysis that will, among other things, provide an explanation for why there is so much variation in the Hausa pluractional data and also why some aspects of the use of pluractionals give rise to more variation than others. Even though there will be cases that I have no principled explanation for, most of the variation can be explained and is in fact predicted by the analysis. In other words, the variation in the judgments is not as random as it might seem at first sight.

2.9. Conclusion

The goal of this chapter was to introduce the data that will be analyzed in the next chapter, the main chapter of the dissertation. After providing an overview of the Hausa grammatical system, the individual aspects of the use of pluractional verbs were discussed one by one and they were illustrated by a number of examples. The basic generalization is that pluractional verbs can only refer to plural events. There are some additional conditions on the felicitous use of pluractionals, however. In particular, the individual subevents are generally required to be many, rather than simply plural, and preferably differentiated from each other. In some cases, the use of the pluractional form

also indicates that the event is somehow intensified. These additional conditions or meaning effects sometimes interact with each other in interesting ways. One of the most striking facts about Hausa pluractionals is that they cannot be used to express simple iteration, with the exception of semelfactive verbs. Apart from this restriction, however, there are very few restrictions as to how the event plurality is instantiated. All these properties will be given an explanation in the next chapter, where I propose an analysis of the semantics of pluractionality in Hausa.

Chapter 3: Analysis

3.1. Introduction

In this chapter I propose an analysis of the semantics of pluractional verbs in Hausa. I will argue for an approach that is in some respects quite different from other approaches found in the literature on pluractionality. This difference will be justified by the specific properties of Hausa pluractionals. Among the properties of Hausa pluractionals that motivate this move, the most prominent are the lack of simple iterative readings and the extent of inter-speaker variation. I will not argue that this analysis is applicable to all pluractionals in all languages. Nevertheless, the analysis proposed here is interesting for the general discussion of pluractionality for several reasons. One of them is that it brings pluractionality rather close to nominal plurality. The differences between pluractionality and nominal plurality are shown to follow largely from the nature of events as semantic objects, i.e. the ways in which events are individuated. This has the desirable consequence that certain aspects of the use of the pluractional form do not need to be reflected in the semantics of the pluractional itself. Another reason why the present proposal is interesting also for linguists who are not specifically interested in Hausa pluractionals is that the concept of special plurality, which forms an important part of my account, provides a tool for explaining certain differences between pluractionals in different languages and between different types of plurals in general. Another more general contribution of this thesis is the particular view on variation in judgments that is adopted here.

The basic idea defended in this chapter is that the interpretations of pluractional verbs in Hausa are a result of the interaction between different components (or levels) of meaning. In other words, not all that is to be said about the meaning of the pluractional marker will appear in a single formula. Instead, I will distinguish between (a) the core meaning of pluractional verbs; (b) independent principles of event individuation that are restricted by a language-specific condition; and (c) the (slightly variable) conditions on the use of pluractional verbs that follow from their special nature.

The chapter is organized as follows. Section 3.2. discusses some general notions that will be important for the analysis. In section 3.3. I give an outline of the proposal. Sections 3.4. through 3.7. are devoted to working out the details of the proposal. Section 3.4. discusses the core meaning of pluractionality in Hausa, namely the event plurality component. Sections 3.5. and 3.6. each deal with a specific class of verbs. Section 3.5. analyses verbs that require what I will be calling ‘anchors’ for event individuation. Section 3.6. focuses on naturally atomic predicates. In section 3.7., I will investigate the consequences of the fact that Hausa pluractionals are ‘special’ plurals. Section 3.8. deals with the variation in judgments found among speakers. After the entire proposal is

presented in detail, my approach to selected issues will be compared to other approaches (section 3.9). Section 3.10. concludes the chapter and the dissertation as a whole.

3.2. Some preliminaries

Before I proceed to the analysis itself, a few notions closely related to counting and plurality need to be discussed. Let us start by looking at some differences between objects and events. I assume that events are primitives in the ontology, just like individuals. I will not review the many arguments in favor of this idea (Davidson 1967 and many works after that) but I would like to point out that the mere existence of pluractionality should be taken as direct support for such an approach (cf. also Collins 2001). Pluractional markers mark plurality of events rather than plurality of times or individuals. Without events in the ontology, it is not possible to capture this insight. The existence of pluractionality, in addition to nominal plurality, thus supports the idea that events and objects are entities that are parallel to a certain extent. However, it is also important to pay attention to the ways in which events are different from objects. In particular, events are harder to pin down than objects. They are abstract, multidimensional entities that can be observed and described only indirectly, by reference to the elements that constitute them, most prominently, their participants, locations and times.¹

Baker (2003), following Geach (1962) and Gupta (1980), assumes that nouns are the only category that have criteria of identity. According to Baker (2003), a criterion of identity is an essential precondition for counting. Since common nouns can provide criteria of identity they can appear with plural morphology. Baker assumes that verbs, just like adjectives, “cannot be inherent bearers of singular, dual, or plural morphology” because they do not have criteria of identity. He is aware of the fact that the number marking sometimes found on verbs in Mohawk is not agreement but he assumes an (incorporated) nominal element to be present in such cases, which provides the criterion for counting. “The generalization that nonnominal words cannot take intrinsic plural morphology is thus supported even in Mohawk once one looks beneath the surface” (Baker 2003:109). Even though the claim that verbs cannot be inherent bearers of plural morphology is in conflict with the prevalence of pluractional morphology in the languages of the world, the insight that verbs generally need other elements to provide the criteria for counting is correct. To be able to identify an event, it is necessary to know who or what the participants of the event are and/or where and when it takes place. In most cases, these constituting elements or building blocks of events are necessary for determining how many events there are. This does not hold for all verbs, as will be

¹ I am simplifying the situation in the nominal domain. The comparison holds for objects referred to by concrete nouns. However, it is clear that a large number of nouns refer to abstract entities, which, obviously, represent more complex cases as well.

shown later: certain verbs do have inherent criteria for counting. At this point it can be concluded, however, that events generally need to rely on other elements in order to be individuated or counted. This is reflected in the existence of the different ‘readings’ pluractionals receive: namely, participant-based, spatial and temporal (iterative).

In connection with the question of what entities can be counted, three closely related notions are relevant: countability, atomicity and boundedness. In the following I specify how these three notions relate to each other.

Starting with countability, the term is traditionally used in the nominal domain in connection with the distinction between count and mass nouns. This is typically exemplified by the contrast between count nouns like *dog* and mass nouns like *water*. Count nouns like *dog* are taken to refer to atomic entities. In languages like English, they bear plural morphology, combine directly with numerals etc. Mass nouns like *water*, on the other hand, do not refer to atoms.² They cannot bear plural morphology, or combine directly with numerals. In addition to these straightforward cases, there are mass nouns like *furniture*, which are grammatically mass but whose denotation contains atomic entities and thus should be considered semantically count (cf. Doetjes 1997, Barner & Snedeker 2005, Bale & Barner in press, among others). Since Bach (1986) and Krifka (1986), the verbal counterpart of the count/ mass distinction has been commonly identified with the bounded/ unbounded (telic/ atelic) distinction, as will be discussed below. However, from the perspective of how the singular vs. plural contrast is encoded, it might be more appropriate to say that all that verbs are like (English-type) mass nouns. The reason is that (non-pluractional) verbal denotations seem to be typically number-neutral, just like those of mass nouns.³

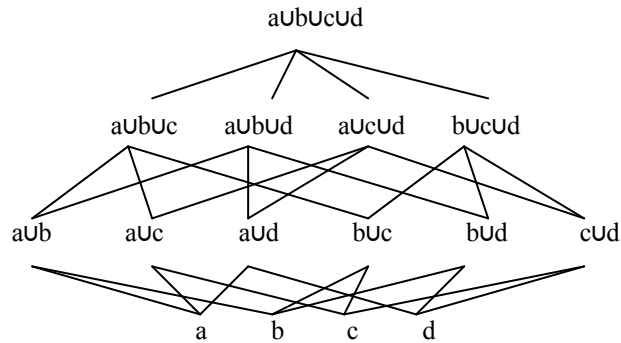
A number-neutral denotation is a denotation that contains both singularities and pluralities, which can be represented by a join semi-lattice as in Figure 3.1. below:⁴

² But see Chierchia (1998) who suggests that the denotation of mass nouns is also atomic, even though what exactly the atoms are might stay vague. I stay neutral on this issue: ‘non-atomic’ might also be read as ‘vaguely atomic’.

³ The count/ mass distinction in the verbal domain is then like the count/ mass distinction within mass nouns. Verbs like *sleep* resemble ‘mass mass’ (semantically non-count) nouns like *water* and verbs like *jump* are like ‘count mass’ (semantically count) nouns like *furniture*. This distinction will be discussed below, in connection with atomicity. On ‘mass mass’ vs. ‘count mass’ nouns see Doetjes (1997).

⁴ According to Ojeda (1998), the use of mereologies for the interpretation of grammatical number was pioneered by Massey (1976) and Wald (1977). It has become common after Link (1983).

Figure 3.1.: Number-neutral denotation



a , b , c , and d are atomic entities and aub , auc , aud , buc , bud , cud , $aubuc$ etc. are sums made of those atoms. Notice that the denotation in Figure 3.1. is identical to the ‘weak’ plural denotation of Link (1983) and Landman (1996), which includes atoms.⁵ It is also the type of denotation Chierchia (1998) assigns to mass nouns, both of the *water* and *furniture* type.⁶

In many languages of the world, nouns can be unspecified for number (see e.g. Schmitt & Munn 1999, Corbett 2000, Rullmann & You 2006, Doetjes to appear). The languages that have been claimed to have number-neutral nouns include Malay, Mandarin, Korean, Hungarian, Turkish, Armenian, Brazilian Portuguese and many others. However, while nouns are number-neutral in many languages of the world, it is presumably even more common for verbs. In fact, verbs seem to be typically number-neutral. The studies that state explicitly that the non-pluractional counterparts of pluractional verbs are number-neutral include Müller & Sanchez-Mendes (2007), Faller (2008) and Součková & Buba (2008). For non-pluractional languages it has also been claimed that verbal predicates have a number-neutral rather than a singular interpretation (cf. Doetjes 2007). Kratzer (2007), following Krifka (1992) and Landman (1996), assumes that all verbs (in fact, all predicative stems) are born as plurals (the ‘cumulativity from the start’ hypothesis),

⁵ The term ‘weak’ is used by Sauerland, Anderssen & Yatsushiro (2005), who give an overview of arguments in favor of the inclusion of atoms in the plural denotation and provide some additional evidence from language processing and acquisition. The view according to which atoms are excluded from the plural denotation (the ‘strong’ view), is taken e.g. by Hoeksema (1983), Chierchia (1998). I assume that both types of plurals exist.

⁶ In Chierchia’s (1998) theory, it is the fact that these denotations are already ‘plural’ that makes it impossible for mass nouns to derive plural forms. Notice that this explanation should also prevent number-neutral predicates from having unambiguously plural counterparts, which is a prediction that is not borne out. Languages that have both number-neutral forms of nouns and corresponding plurals include Indonesian, Brazilian Portuguese, Hungarian among others (cf. Chung 2000, Schmitt & Munn 1999, Göksel & Kerslake 2005). Clearly, pluractional forms of verbs whose non-pluractional counterparts are number-neutral rather than singular are not expected to exist either.

which for her means that they have the denotation in Figure 3.1., i.e. one containing both atoms and their sums.⁷

The semantic count/ mass distinction can be defined in terms of atomicity. While mass predicates refer to non-atomic entities (or ‘vaguely atomic’ entities), count predicates are defined as having atomic reference. I further distinguish between two types of atoms, namely what I call ‘natural atoms’ and ‘constructed atoms’. Naturally atomic predicates are those predicates for which it is clear from the lexical meaning of the verb what counts as one unit (cf. Rothstein 2008).⁸ If a predicate is not naturally atomic, atomicity can be constructed in ways that will be described below. An example of a naturally atomic nominal predicate is the count noun *dog*. Count mass nouns, like *furniture*, have clearly defined units as well. With mass mass nouns, like *water*, the atoms have to be constructed with the help of e.g. measure terms (*a liter of wine*) or they are created by mass-to-count shifts (e.g. *wines* ‘different kinds of wine’). In the verbal domain, certain predicates are also naturally atomic, even though this seem to be less common than in the case of nouns, presumably because events are essentially constructed abstract objects. An example of a naturally atomic verbal predicate is *jump*. If we know what *jump* means, we know what counts as one jump. If the predicate in question is not naturally atomic, which is the more common case, atoms can be constructed if the boundaries of the event are provided, as in *sleep for two hours* or *run to the store*. Alternatively, the predicate may undergo a mass-to-count shift, as in *John was in Paris three times this week* (cf. Doetjes 1997 for mass-to-count shifts in the nominal and verbal domain). Note that naturally atomic predicates like *jump* or *kick* can be compared to semantically count mass nouns like *furniture* or *change*, which are also naturally atomic, while verbs for which the atoms need to be constructed, like *sleep* or *run*, correspond to semantically mass mass nouns like *water* or *rice*.

The presence of atoms in the denotation, either lexically specified or constructed, can be identified with the property of semantic countability. In the case of nouns, the correlation of semantic countability with the ability to bear plural marking is not complete, however. The semantically count lexical predicates *boy(s)* and *furniture* both have atoms in their denotations. The first one is also grammatically count, but the latter is not and as a result it cannot bear plural morphology. This shows that even natural atomicity does not guarantee the possibility of plural marking. In the cases of mass-to-count shifts, the number marking does appear directly on the noun, as in the plural form *wines*. However, if the atoms are constructed with the help of measure expressions, the noun can never be marked for plurality directly, cf. **two bottle(s) of wines*. The situation is different in the case of verbs. In pluractional languages, the plural marking can often occur on basically any type of verb. This means that both verbs that are naturally atomic

⁷ This is not to say that unambiguously singular forms do not exist. An example of a language that has singulative forms of verbs is Konso (Ongaye Oda 2010).

⁸ “A predicate P is naturally atomic if what counts as one instance of P is given as part of the meaning of P and is thus not context dependent.” (Rothstein 2008:47)

(i.e. lexically count: (1a)), and those for which the atoms need to be constructed ((1b) and (1c)), can be marked for plurality:

- (1) a. Naa tat-tàafaa
 1SG.PF RED-clap
 ‘I clapped’
- b. Sun rur-rùudée
 3PL.PF RED-be.confused
 ‘They are (all) very confused’
- c. Yaa bib-bi shi wuràaree dàban-dàban
 3SG.M.PF RED-follow him places different-different
 ‘He followed him to different places’

How exactly the event atoms are constructed in cases like (1b) and (1c) will be discussed later in the chapter. At this point it is sufficient to note that the verb in (1b) is a stative predicate and the verb in (1c) an activity predicate, which are both lexically non-atomic. The verb *bi* ‘follow’ requires e.g. a goal argument for the whole predicate to become atomic. This is comparable to what measure terms do for mass nouns. However, despite the fact that in cases like (1b) and (1c) the event atoms need to be constructed, it is the verb itself that is marked for plurality.⁹

The last issue that has to do with countability and that needs to be discussed here is the issue of boundedness. Since Bach (1986) and Krifka (1986), the idea that the count/mass distinction in the nominal domain has as its counterpart in the verbal domain the distinction between bounded/ telic and unbounded/ atelic predicates has become widely accepted. Under this view, bounded/ telic equals count and unbounded/ atelic equals mass. Assuming that only semantically count predicates have atomic reference and that only atoms can be counted, it should follow that only bounded/ telic events are pluralizable. Nevertheless, this is clearly not the case. I showed in section 1.3.3. that pluractionality is independent of viewpoint aspect and telicity, and that unbounded verbal predicates are pluralizable as well (see also (1b) above).

I propose that the notion of atomicity needs to be relativized in the case of complex, multi-dimensional entities like events. In other words, events can be atomic in one dimension and non-atomic in another one. If events are to be pluralized, they have to be atomic in the dimension in which the pluralization takes place, e.g. in the temporal or participant dimension, but not necessarily in both. This means that temporally unbounded events can be easily pluralized because their participants can provide the

⁹ Note also that while atoms can be constructed both with nouns and verbs, it seems to be much more characteristic for verbs. This is presumably because events are essentially constructed entities. The fact that in the nominal domain the atoms are more often specified lexically can also be seen in that mass-to-count shifts in the nominal domain are more lexically restricted and less predictable than mass-to-count shifts in the verbal domain (Doetjes 1997:52-55).

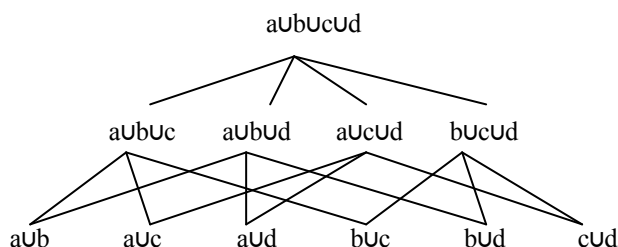
necessary atomic structure. Temporally bounded predicates are thus not the only type of ‘countable’ verbal predicates.¹⁰ In the rest of the thesis, when I talk of event atoms it is in this relativized sense of ‘atomicity’.

This concludes the discussion of the relations between the count/ mass distinction, atomicity and boundedness. In relation to pluractionality, it is important that any verb is in principle pluralizable because verbal predicates that are not lexically count can very easily be made count.¹¹ It will be shown, however, that pluractionals that are derived from verbs that are lexically atomic behave quite differently from those that are not and whose atoms thus need to be constructed.

In the introduction to Chapter 1, I characterized pluractionality as expressing event plurality but also as typically having certain additional properties. To understand these properties better, the notion of special plurality will be important.

Special plurals are plurals that coexist with another form that can be used in a plural meaning: either number-neutral forms or regular plurals of the English type. The denotation of special plurals is not the ‘weak’ plural denotation of Link (1983). Rather, it is a ‘strong’ denotation that does not include atoms. These plurals are also called ‘proper plurals’ (Link 1983, Ojeda 1998):

Figure 3.2.: Proper plurals



Special plurals are not exclusively defined by being proper plurals coexisting with another ‘plural’ form, however. The other characterizing property, which is presumably more or less a consequence of the first one, is the fact that they tend to express various special plural meanings. The term ‘special plural meanings’ refers to meanings that go beyond simple plurality paraphrasable as ‘more than one’. Consider the following examples from the nominal domain, repeated from section 1.2. of Chapter 1. The forms

¹⁰ The claim that not only entities that are delimited in all dimensions can be counted does not apply only to events. An example of objects that are clearly unbounded in one dimension but that are still distinguishable from each other and by that can be counted are infinitely long lines.

¹¹ The exact way of turning a verbal denotation into a count one will be discussed in section 3.5.

in (2) are distributive plurals, expressing meanings like ‘various kinds’ or ‘here and there’ in addition to plurality:

- | | | | | |
|-----|----|-------------------------------|-------------------------|------------------------|
| (2) | a. | otsikhe'ta'shòn:'a | otsikhè:ta' | [Mohawk] ¹² |
| | | ‘ <u>various</u> candies’ | ‘sugar, candy, candies’ | |
| | b. | tukô·yo' | tukô·yo' | [Quileute] |
| | | ‘snow <u>here and there</u> ’ | ‘snow’ | |

Another type of special plurals are ‘plurals of abundance’, where the additional meaning is that of large quantity:

- | | | | |
|-----|-------------------------|------------------------------|------------------------|
| (3) | ašja:r | šajar | [Arabic] ¹³ |
| | ‘ <u>lots of</u> trees’ | ‘tree’ (generic/ collective) | |

There is also a type that could be labeled ‘augmented plural’:

- | | | | |
|-----|---------------------------------|------------------|------------------------|
| (4) | buyu:ta:t | bayt/buyu:t | [Arabic] ¹⁴ |
| | ‘ <u>big, important</u> houses’ | ‘house’/‘houses’ | |

Distributives and plurals of abundance are the most common types. Augmentation seems to be a much less common option. Nevertheless, all three seem to be found with special plurals both in the nominal and the verbal domain (in a comparable proportion; cf. section 1.2.).

As I have already suggested, the two aspects of special plurality just presented are not independent of each other. Special plurals are special because of their coexistence with number-neutral forms. It is thus the fact that the same meaning (plurality) can be expressed by a simpler, unmarked, form that is responsible for the marked status of an additional plural form.¹⁵

To conclude this section, I have discussed several notions that are important for the analysis to follow. They all had to do with counting and plurality. I presented some parallels and differences between the nominal and verbal domain. In the rest of the chapter, the focus will be on verbal plurality only. Nevertheless, the knowledge of how the two domains relate in different aspects should form the background of the discussion.

3.3. Outline of the proposal

This section presents the proposal. It provides an overview of the different components of meaning of pluractionality in Hausa and their interaction, and it sketches how the

¹² Example (a) is from Andrade (1933:187; as quoted by Mithun 1999:88), (b) from Mithun (1999:88).

¹³ Cusic (1981:18).

¹⁴ Cusic (1981:17).

¹⁵ See Horn (1984). Cf also de Hoop & Krämer 2005 for the correlation marked form – marked meaning.

different interpretations are arrived at for different types of verbs. A fuller discussion of the individual aspects of the proposal, as well as the motivation for each step, will be given in the following sections.

As shown in Chapter 2, pluractional verbs in Hausa refer to plural events. In general, however, it is not enough if the events are simply plural. Typically, the individual subevents or, better, event units of a plural event should be many and clearly individuated.¹⁶ Often, there is no need to have an overt expression referring to the plural participants or locations in the sentence. Rather, it is enough if the plurality is understood. It is also possible to relate the individual event units of a plural event to parts of a single participant, for example.

Contrary to what one would expect on the basis of data from other pluractional languages, most verbs cannot receive iterative interpretations in the pluractional form. For example, a repeated event of falling down from the stairs has to be described using a different construction. There is, however, a specific class of verbs with which repetition is possible, namely, semelfactive verbs. I have been calling these cases ‘repetitive’. These pluractional forms typically refer to events consisting of quick repetitions of short actions, like kicking, slapping, hitting etc. Apart from these more basic interpretations, a few cases are attested in most speakers’ data where plurality combines with intensification. Conative (‘try to V’) or tentative (‘superficial action’) readings can also be found.

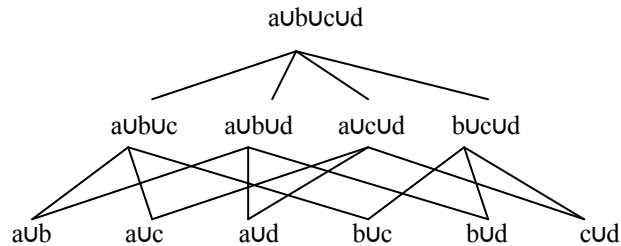
Pluractional verbs in Hausa, however regularly they are formed, are marked and not used frequently. For some speakers, pluractionals have special connotations associated with them, e.g. they are perceived as expressive, informal or contributing some kind of negative evaluation. The use of the pluractional form may suggest that there is an element of disorder in the event or that the way in which the event takes place is unpredictable or striking.

At the most basic level, the analysis proposed in this thesis can be characterized as consisting of several distinct and semi-independent components. Based on the number of components that enter into the ‘making’ of a pluractional interpretation, one could speak of a three-component system. That is, it is possible to distinguish between (a) the core meaning of pluractional verbs; (b) independent principles of event individuation that are not specific to Hausa or pluractionality as such but whose application is restricted by a language- and construction-specific condition; and (c) additional (and somewhat variable) conditions on use.

¹⁶ From now on I will be using the term ‘event unit’ instead of ‘subevent’. The reasons for this move are the following. First, the term ‘subevent’ is generally used to refer also to parts of singular events. Second, the term ‘event unit’ expresses better the idea that these are units/ atoms that can be individuated and counted.

Turning to a discussion of these individual components now, the core meaning component is very simple: pluractionals denote sums of events (a , b , c and d are atomic events):

Figure 3.3.: The core meaning of Hausa pluractionals



Note that the denotation given above contains no atoms. This is motivated by the fact that pluractional verbs cannot be used to talk about singular events, as demonstrated below:

- (5) a. Mutàanên sun fĩ̀-fitoo
 people.the 3PL.PF RED-come.out
 ‘The people have come out’
 b. *Mùtumìn yaa fĩ̀-fitoo
 man.the 3SG.M.PF RED-come.out
 intended: ‘The person came out’

The pluractional morpheme can thus be seen as having the effect of removing the atoms from a number-neutral denotation (cf. section 3.2. above).

The second component of the meaning of the Hausa pluractional is formed by a single condition. This condition constrains a process that is otherwise governed by principles independent of pluractionality as such: the process of event individuation. Events are abstract objects that cannot be observed directly – they can only be observed via their constituting elements. In most cases this also means that something else is needed for the events to be individuated. In particular, this applies to predicates that are not naturally atomic. Thus, for the purpose of accounting for the different readings of the pluractional form, Hausa verbs should be divided into two classes: naturally atomic verbs and all other verbs.¹⁷ Naturally atomic predicates do not need anything to individuate the events they refer to, since the units are specified lexically. Thus, with verbs such as *shùuraa* ‘kick’, the minimal event unit is a single kick and the pluractional form then refers to a

¹⁷ For a definition of natural atomicity see section 3.2.

multiplicity of these pre-defined units (many kicks). If the pluractional combines with singular arguments only, it is generally only possible to interpret the kicks as one following another:

- (6) Yaa shùs-shùuri teebug̃
 3SG.M.PF RED-kick table
 ‘He kicked the table repeatedly’

By contrast, verbs that are not naturally atomic need the event individuation to be achieved in a different way. I will call the elements that are responsible for identifying the individual event units ‘anchors’, as they anchor the events and make them countable. In principle, all kinds of entities can serve as event anchors, e.g. the event’s participants or locations. Thus, for instance, an event that involves independently acting plural agents is interpreted as a plural event. The process of anchoring is governed by principles independent of pluractionality per se – they must be part of a general theory of what events are.¹⁸

Nevertheless, there is a restriction specific to Hausa pluractionals that enters at the level of event anchoring. The restriction is a conventionalized condition that I call ‘the non-equivalence condition’ (cf. Ojeda 1998). This condition states that anchoring should not create event units that are merely non-identical, i.e. simply plural. Rather, the individual event units should be non-equivalent, that is differentiated. The non-equivalence condition therefore excludes iterative interpretations as possible interpretations of Hausa pluractionals, since events that are simply iterated are not interpreted as truly different from each other. Anchors other than times basically always have the potential to differentiate the individual event units, by virtue of having properties of their own. For example, each event participant is a unique individual and as such participant anchors make the events they are involved in non-equivalent. By contrast, times do not have any inherent properties and as such they cannot guarantee this type of differentiation.¹⁹ As a consequence, something else always has to be present that makes one event different from another, as illustrated by the following examples:

- (7) a. Naa bib-bi sù
 1SG.PF RED-follow them
 ‘I followed them’
 N.B. different people (separately)

¹⁸ Cf. Carlson (1998) for a discussion of the role of thematic roles in event individuation.

¹⁹ The claim that times cannot make the individual events sufficiently different does not mean that times cannot distinguish one event from another. However, events that only differ in the moment at which they take place should be considered equivalent. Obviously, such events are not identical, since they are distinguishable from each other. In other words, the knocks that make up the event of (repeated) knocking on a door are non-identical but equivalent to each other, while the repeated action of lifting a (different) table at different moments involves both non-identical and non-equivalent events, since these events are interpreted as differing in more than times alone.

- b. Naa bib-bi shì wuràaree dàban-dàban
 1SG.PF RED-follow him places different-different
 'I followed him to different places'
- c. ?*Naa bib-bi shì (sàu dà yawàa)
 1SG.PF RED-follow him (times with many)
 intended: 'I followed him many times'
- N.B. possible if the hearer interprets the sentences in the same way as (7b)

In (7a), the individual event units are differentiated by the different people being followed. The situation in (7b) involves different places. By contrast, sentence (7c) is normally not acceptable since there is nothing that could make the individual event units non-equivalent.

This type of approach explains the otherwise puzzling contrast between the well-formedness of repetitive cases such as (6) and the unacceptability of iterative cases such as (7c). The repetitive cases involve naturally atomic predicates as a result of which the events they refer to are inherently individuated and do not need to rely on anchoring. Since the non-equivalence condition is a condition on anchoring, it does not apply to naturally atomic predicates.

Before moving on to the third component, one final remark is in order. Since the manner in which the event units are individuated is not determined by the pluractional marker itself, the resulting interpretation is to a large extent shaped by the individual preferences of the speakers. Moreover, some speakers are better than others at inventing scenarios that make the use of the pluractional form felicitous. The fact that the pluractional marker does not specify what elements should be used as anchors is thus one of the sources of inter-speaker variation.

The third component concerns the additional conditions on use. These follow from Hausa pluractionals being special plurals, in the sense discussed in the previous section. The special plurality meaning is shared by all speakers, but there is variation among speakers with respect to the ways in which special plurality is manifested and with respect to how strong the effects are. Generally, the 'special' nature of Hausa pluractionals can be observed in the following properties. First, Hausa pluractionals normally do not refer to events that are simply plural, where plural means 'more than one'. If a pluractional is used, the number of the individual event units should be relatively large. As a result, sentence (8) cannot be used if only very few people came out; rather, the people who came out should be relatively many:

- (8) Mutàanee sun fĩr-fĩto
 people 3PL.PF RED-come.out
 'Many people have come out'

Second, the occasional high degree readings are also tied to the special character of Hausa pluractionals:

- (9) Yâraa sun rur-rùudée
 Children 3PL.PF RED-be.confused
 'The children were very confused'
 N.B. beyond control, alarmed

Third, a high degree of individuation is often required. This means that the minimal requirement imposed by the non-equivalence condition introduced above is often strengthened. This can have the form of an implication that the participants involved in the plural event were of different kinds or that the individual events were scattered all over the place:

- (10) Yaa sàs-sàyi abuubuwàa
 3SG.M.PF RED-buy things
 'He bought (many) things'
 N.B. e.g. different kinds of things, or the buying events were scattered all over the market/ town etc.

It is rather typical for the individual event units to be differentiated along more than one dimension. This means that in the case of sentence (10), both meaning effects can be present simultaneously.

Note that there is a difference between the non-equivalence condition and the 'high individuation' requirement. In the case of (10), the non-equivalence condition requires a plurality of things but it does not explain the stronger 'distributive' effect.²⁰ The non-equivalence condition is a conventionalized condition that does not allow for the same degree of variation as the special plurality effects.²¹

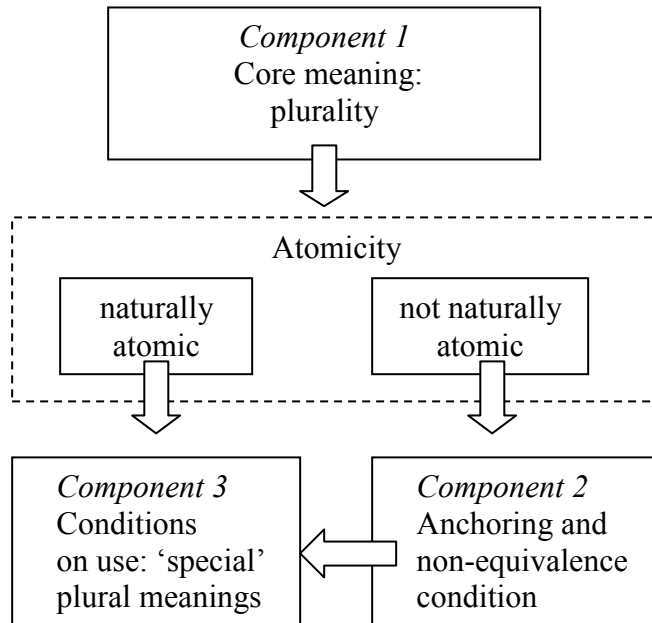
There is a variety of other, more subtle, special plurality effects that will be discussed in section 3.7. Also, the variation in speakers' judgments partly follows from pluractionals being special plurals.²²

Let me summarize the proposal now in a form of a schema. Note that only the first and the third meaning component have the same importance for all verbs.

²⁰ Cf. the distributive plurals in (2).

²¹ It is possible that the (original) source of the non-equivalence condition is the special plural character of the pluractional form. Nevertheless, within the system of Hausa pluractionality it has an independent status, as will be argued in more detail below.

²² As already mentioned at several points, speakers differ in what the exact set of accepted forms is, what the appropriate contexts are and what the forms mean. The extent of inter-speaker variation is in fact an important reason for suggesting that the interpretations pluractionals get are a result of interaction of several components that do not have the same status. The different sources of inter-speaker variation are discussed in section 3.8.

Figure 3.4.: The three-component system

The schema above illustrates how pluractional verbs are assigned their interpretations. Component 1, which contributes event plurality, applies equally to all verbs. The applicability of Component 2, containing the non-equivalence condition, depends on whether a given verb is naturally atomic or not, as it only plays a role in the latter case. Component 3, representing 'special' meanings of pluractionals, applies again to both types of verbs.

One aspect of the three-component system that should still be mentioned is the fact that the different components do not represent meanings that are equally fixed or stable across speakers. The plurality component is very well-defined and stable. By contrast, the special plural meanings component represents much more elusive aspects of the meaning of the pluractional. It is not fully defined how exactly the special character is manifested and the degree to which pluractionals are special can also vary with speakers. The component represented by the non-equivalence condition is much more stable than the special meanings component. However, the non-equivalence condition is not as inviolable as the plurality requirement representing the core component. Thus, each component is different not only in what it is responsible for, but also in the degree of

fixedness and the obligatoriness of its application, with the core plurality component being the most stable and well-defined one and the special effects component the least fixed one. I will argue that this also accounts for some of the typical properties of Hausa pluractionals.

In the next section, I will start developing the details of the analysis with a presentation of the core meaning component. After that, I will separately discuss cases that require anchors for event individuation and those where the event individuation relies on the natural atomicity of the verbal predicates (in sections 3.5. and 3.6., respectively). Following that, the different consequences of special plurality (section 3.7.) and the inter-speaker variation (section 3.8.) will be dealt with. Finally, I will briefly compare my proposal to other proposals in section 3.9.

3.4. The core meaning of pluractionality

In the previous section, I outlined the entire proposal with its three components of meaning: (a) the core meaning of the pluractional; (b) the non-equivalence condition constraining anchoring, which is a process otherwise governed by independent principles of event individuation; and (c) additional conditions on use. I suggested that the core meaning of the pluractional (Component 1 in Figure 3.4.) can be represented as follows:

Figure 3.5.: The core meaning of Hausa pluractionals

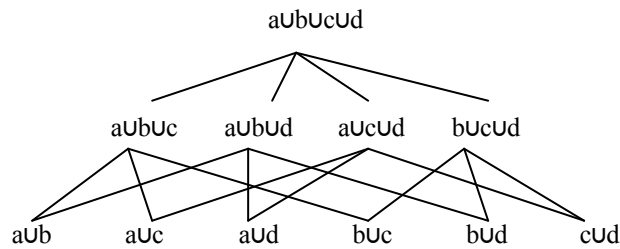


Figure 3.5. represents the fact that pluractional verbs denote sums of events. Pluractional verbs cannot refer to singular events (11), hence the exclusion of singularities.

- (11) *Mùtumin yaa fĩr-fĩtoo
 man.the 3SG.M.PF RED-come.out
 intended: 'The person came out'

Pluractional verbs also cannot normally refer to sums of events whose cardinality is very low, as in (12):

- (12) *Mutàanee biyu sun fĩr-fĩtoo
 people two 3PL.PF RED-come.out
 intended: ‘Two people came out’

Therefore, it might seem desirable to exclude at least the sums made of two atoms as well. Nevertheless, in my approach pluralities of low cardinality are part of the core meaning of pluractionality. They are only excluded by the additional conditions on use, following from the special plural character of pluractionals (to be discussed in section 3.7.; cf. Component 3 in Figure 3.4.). As far as the core meaning of pluractionals is concerned, these verbs simply denote sums of events.²³

Notice that the denotation given in Figure 3.5. is just a plural denotation, equally applicable to nouns and verbs. The only difference is that the atoms are individuals in the case of nouns and events in the case of verbs. The representation in Figure 3.5. does not exhaust the meaning of pluractionality in Hausa. Nevertheless, for the comparison of nominal and verbal number it is interesting to observe that the core component of the meaning of Hausa pluractionals is not different from the denotation that can be assigned to nominal (proper) plurals.

Characterizing pluractionals as referring to plural events is not sufficient for a full understanding of pluractionality in Hausa. The denotation given above by itself does not indicate how it can be determined whether something is a sum of events. What is needed to decide whether a particular event is a singular or a plural one? The answer depends on the type of verb (cf. the schema in Figure 3.4. which shows that Component 2 does not apply to all verbs). If the verb is naturally atomic, it is clear what the minimal event unit is, since this information is encoded in the lexical meaning of the verb. Knowing what the event unit is then makes it possible to determine whether there is one or more such units. Taking the semelfactive verb *bugàa* ‘hit’ as an example, a natural unit of hitting is a single hit and a plural event consists of several hits. With verbs that are not naturally atomic, the meaning of the predicate itself does not predefine event units. For example, determining what the event unit is in the case of a verb such as *sàyya* ‘buy’ requires knowledge of what is being bought and who is buying it. If Ummu buys two houses in two separate transactions, each house defines one event of buying. Verbs like *dafàa* ‘cook’, *karàntaa* ‘read’, or *bi* ‘follow’ are similar.²⁴ In other words, most verbs require the presence of elements that individuate the actual event units, elements that pull the event units out of the event mass, so to speak. I will call these individuator ‘anchors’ and the process of individuation ‘anchoring’.

I will discuss anchoring in the following section. Pluractionals that are derived from naturally atomic predicates will be dealt with in section 3.6.

²³ In principle, one could think that singular events are excluded by any condition that excludes sums of low cardinality. Nevertheless, while speakers sometimes do accept pluractionals when referring to plural events of low cardinality, pluractionals can never refer to singular events.

²⁴ For event individuation through thematic roles cf. Carlson (1998).

3.5. Event individuation through anchoring

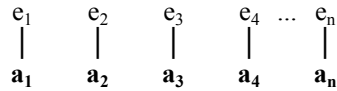
In order to determine whether an event is plural, it is necessary to be able to identify the individual event units. Most verbs are not naturally atomic, which means that it is not lexically specified for them what constitutes a single event unit. As a result, something else is needed to define the event units and these are what I call ‘anchors’. Typically, three types of pluractional readings are distinguished in the literature: participant-based, temporal and spatial readings (cf. Lasersohn 1995). One could conclude from this that there are three types of anchors: participants, times, and locations. However, in the present section, I will argue that, at least in Hausa, there is no need to distinguish between locations and participants as different types of anchors. In addition, I will argue that times are not licit anchors in Hausa. As mentioned above, this is due to the non-equivalence condition, which will be properly introduced below.

This section is divided into five subsections. I will start by introducing the notion of anchoring and the non-equivalence condition (section 3.5.1.). The following section (3.5.2.) is devoted to a discussion of locations, participants and times as potential event anchors. After that, I will discuss collective interpretations, an issue tightly linked to the question of where to draw the line between singular and plural interpretations (section 3.5.3.). Section 3.5.4. deals with cases where the anchors are parts of objects (or subquantities of masses). The last subsection (3.5.5.) discusses some related proposals in the literature. Section 3.5.6. concludes the discussion of event individuation through anchoring.

3.5.1. Anchoring and the non-equivalence condition

As mentioned above, most verbs are such that their lexical meaning alone does not specify what counts as an event unit. In such cases, event individuation has to rely on the existence of entities that create the necessary units. As I already indicated, I will call the individuating entities ‘anchors’ and the process of individuation ‘anchoring’ (cf. Component 2 in Figure 3.4.). Figure 3.6. below represents anchoring graphically.

Figure 3.6.: Anchoring



The individual event units e_1, e_2, e_3 etc. forming a plural event are individuated by their links to different event anchors a_1, a_2, a_3 etc. The following examples illustrate different types of anchors (agents in (13a), patients in (13b), goals in (13c)):

- (13) a. ‘Yammaatân sun dāf-dāgà kujèerâĩ
 girls.the 3PL.PF RED-lift chair.the
 ‘The girls have lifted the chair’
 N.B. the event involves multiple liftings
- b. Naa tāt-tāmbāyee sù
 1SG.PF RED-ask them
 ‘I asked them’
 N.B. one by one, or group by group
- c. Yaa bib-bi shì wuràaree dāban-dāban
 3SG.M.PF RED-follow him places different-different
 ‘He followed him to various places’

In (13a), the anchoring of the individual event units of lifting is achieved by linking each event unit to a different girl (or a different group of girls). In (13b), each event unit is anchored by a different person (or a group of people) being asked. Sentence (13c) is an example of a case where the event units are anchored by means of being linked to different locations/ goals.

Notice that, given a dimension, an atomic/ singular event is defined by being linked to an atomic/ singular anchor in that dimension.²⁵ For an event to be plural there has to be a plurality of anchors at least in one dimension, so that an anchoring structure of the type illustrated in Figure 3.6. can be created.

Recall that anchoring is governed by independent principles of event individuation. This means that the information of what is and what is not a possible anchor is not specified in the meaning of the pluractional marker itself. Eliminating this kind of information from the meaning of the pluractional itself has the desirable consequence of making the semantics of Hausa pluractionals more clearly parallel to that of nominal plurals. Principles of event individuation, including anchoring, should be part of a general theory of what events are. The study of pluractionality can bring novel insights to this discussion.

Even though the process of anchoring is essentially independent of pluractionality in general, in the case of Hausa pluractionals it is constrained by a language specific condition. I call this condition ‘the non-equivalence condition’.²⁶ It can be formulated as follows:

(14) **The non-equivalence condition**

The individual event units in a plural event should be non-equivalent

²⁵ Groups are a type of atom; cf. the discussion in section 3.5.2.

²⁶ The non-equivalence condition is inspired by Ojeda’s (1998) treatment of distributives in Papago (see section 1.8.3.). I will compare my use of the notion of non-equivalence to his in section 3.9.

For two events to be non-equivalent, they may not be identical copies of each other. Rather, the events have to be differentiated from each other in some way. Sentence (15), for example, describes a plural event, in which every event unit involves a different bottle. The fact that the bottles are different differentiates the event units as well:

- (15) Naa cic-cikà kwalàabee
 1SG.PF RED-fill bottles
 'I filled (many/ different) bottles'

In the examples in (13) above, the non-equivalence is achieved by the event units being anchored by different (groups of) girls in (13a), different (groups of) people asked in (13b), and different places in (13c). In section 3.7., it will be shown that the effect of the non-equivalence condition is often strengthened to the extent that the event units are highly individuated rather than only minimally different. I will argue that this strengthening, which is not required by all speakers, is a result of the conditions on use of special plurals (Component 3 in Figure 3.4.) and as such is independent of the non-equivalence condition (Component 2 in Figure 3.4.).

To conclude, anchoring is a process that is responsible for providing event units or atoms in cases of predicates that are not naturally atomic. The process is constrained by the non-equivalence condition, which ensures a minimal differentiation of the event units. In the following subsection, I will discuss what exactly it means for the possible interpretations of Hausa pluractionals, and what types of anchors can be found with Hausa pluractionals.

3.5.2. Possible anchors

As mentioned in the introduction, three basic readings are often distinguished in the literature: participant-based, spatial and temporal. In the context of the present discussion, a natural assumption would be that these three readings correspond to three types of anchors: participants, locations and times. In the present section, I will argue that this division is not very useful for Hausa. One reason is that times are not possible anchors of pluractional event units in Hausa. The other reason is that it is not necessary and thus not desirable to distinguish any further subtypes of anchors.

Let us start with times as potential anchors. In Chapter 2, I demonstrated that simple iterative readings are not possible interpretations of Hausa pluractionals. Consider the relevant examples again:

- (16) a. Naa zuz-zùbà shaayi
 1SG.PF RED-pour tea
 'I poured tea'
 N.B. for different people, not repeatedly

- b. Naa bib-bi shi
 1SG.PF RED-follow him
 ‘I followed him to various places’
 N.B. not repeatedly to the same place
- c. Yaa bub-bùudê jákaa
 3SG.M.PF RED-open bag
 ‘He opened different compartments of the bag’
 N.B. cannot be used to refer to repeated opening
- d. *Taa kik-kiraa suunaanaa²⁷
 3SG.F.PF RED-call name.my
 intended: ‘She called my name repeatedly’

Sentence (16a) has to be interpreted as describing an event of pouring tea for different people. It cannot be used in a situation in which I pour tea in a cup, drink it, pour some more etc. Similarly for (16b-c): simply repeated following or opening of a bag are not situations that would support the use of the pluractional form. Sentence (16d), unlike the other three sentences, does not even have the option of receiving a non-iterative interpretation. As a result, the sentence is simply unacceptable.

This situation is quite surprising, in view of the fact that iterative interpretations are very common interpretations of pluractional verbs cross-linguistically. However, on the present account, this restriction follows from the non-equivalence condition constraining the anchoring: simple iteration is not an option in Hausa because it does not yield event units that can be interpreted as non-equivalent. Times (points, or intervals), are rather mere coordinates of events, and as such they have no inherent properties that would alter the event in any perceptible way. If sentences like (16a-c) are to be interpreted at all, the hearer has to supply anchors of a different type: participants in (16a), places in (16b), different parts of a single participant in (16c). If this cannot be achieved, as in (16d), the sentence is simply unacceptable. Notice that the event described in (16d) is an event that can be repeated immediately. Thus, one cannot explain the unacceptability of the iterative readings by saying that the verbs refer to events that are not immediately repeatable.

This being said, recall that there are speakers who do allow for iterative readings (some marginally, others quite systematically) despite the fact that these should be excluded by the non-equivalence condition. My explanation for this fact is that the non-equivalence condition is not inviolable for these speakers. Recall that this condition is separate from the core meaning of the pluractional – the plurality meaning – and that it is a

²⁷ The example is well-formed (for some speakers) if one of the arguments is plural:

- (i) Taa kik-kiraa suunàayensù
 3SG.F.PF RED-call names.their
 ‘She called their names one by one’

conventionalized but probably not a fully grammaticalized condition. Importantly, most speakers consistently reject iterative interpretations with pluractionals. I will come back to the issue in section 3.9.

Turning to locations as potential anchors, two facts are striking. On the one hand, it is often very difficult to decide whether the event units are non-equivalent because they involve different participants, or different locations, as these might be just two different ways to look at the same thing. On the other hand, spatial readings only seem to arise with ‘location-prominent’ verbs.

To elaborate on the first point, since physical objects are always situated in space, the locations they appear in are hard to separate from them.²⁸ If an event involves participants that occupy clearly separate locations, for example, how can it be decided whether it is the participants or the locations that individuate the event units? Consider (17):

- (17) Ruwaa yaa bu6-bulloo
 water 3SG.M.PF RED-appear
 ‘Water appeared in different places’

It is hard to determine whether (17) represents a spatial reading – the event units take place in different locations – or a participant-based reading – the spatial separation only serves the purpose of making it clear that a plural participant is involved (separate quantities of water).²⁹

Wood (2007) argues that locations are not independent of either times or participants. An argument in favor of this idea is that it is virtually impossible to construct examples with event units that would differ only with respect to their locations and not also with respect to their participants or running times. This explains why in many cases it is hard to decide what type of reading is involved. I will treat cases like (17) as participant-based. Nevertheless, the point is that the decision whether these are spatial or participant-based interpretations is probably more or less arbitrary and of no real importance.³⁰

²⁸ In Cusic (1981), the participant-based cases do not constitute a separate value of the distributive parameter. According to Lasersohn (1995:250), this is probably because these are already covered under the setting for distribution in space-or-time. “It is somewhat hard to judge whether or not this represents a spurious conflation of readings. An ideal test case would be a verb representing some kind of action or property which intuitively seems “outside space and time.” If such a verb could take a pluractional marker, producing a reading which ascribes the property in question separately to multiple individuals, this would show that participant-based distributivity is not a special case of spatial distributivity.” Lasersohn concludes, however, that it is better not to prejudge the issue and treat spatial and participant-based readings separately.

²⁹ Mass arguments are treated in section 3.5.4.

³⁰ Wood (2007:137-8) takes a similar position. She also argues that in many cases “it makes no sense to try to identify a single dimension in which the event is plural”, and “while it may be convenient to refer to temporal, participant or spatial interpretations of event plurality, it is frequently the case that these are not clearly separable or distinguishable”.

The second point is tightly connected to the first one. Basically, regardless of what the best way is to analyze unclear cases like (17), the entities that can serve as anchors have to be rather tightly linked to the lexical meaning of the verb. Thus, if example (17) represents a spatial reading, the locations are not just external circumstances of the plural event. With verbs like *bulloo* ‘appear’, the location should be considered an argument of the verb. If the event units are to be individuated by their locations, the fact that the events take place in different locations should affect these events in a relatively important way. In other words, only ‘location prominent’ verbs can make use of spatial anchors (cf. Wood 2007).³¹ For instance, the locations might be the source or the goal of a motion event, as in the case of the situation described in (18a), or they might be intrinsically connected to the event in some other way, as in (18b):

- (18) a. Naa bib-bi shi wuràaree dàban-dàban
 1SG.PF RED-follow him places different-different
 ‘I followed him to various places’
 b. Mun nàn-nèemee tà
 1PL.PF RED-look.for her
 ‘We looked for her everywhere’

I do not know of any clearly spatial cases of Hausa pluractionals where the locations would be mere specifications of where the events happened to take place without them being in any sense relevant for the nature of the event. This is probably not a coincidence. Presumably, such events would be understood as simply iterated, and hence the use of the pluractional form would be excluded.

As for participants, their ability to function as anchors is uncontroversial. They are undoubtedly the most common anchors. At the same time, they also represent the most complex cases. Even though locations (with location-prominent verbs) are not different from participants with respect to the ability to function as anchors, participant-based cases by far exceed spatial cases with respect to the complexity of their possible interpretations.³² There are two main reasons for this. The first one is the existence of collective interpretations. The second reason is the fact that verbs often have more than one argument. As a result, there are more potential sources for a plural interpretation: a pluractional verb can be licensed by a plurality in the subject, in the direct object, as well as in the indirect object argument. I will first discuss collective readings and the way they are analyzed in this thesis. Then I move on to the consequences of the fact that

³¹ Wood (2007) argues that spatial readings are the least common interpretations – they are only primary with location-prominent verbs (verbs of motion etc) or in cases where a participant is defined by a spatial location (holes). While this seems to be true for Hausa, it does not seem to be quite true cross-linguistically. In Papago, for instance, using the distributive form of a verb implies that the events take place in different locations also in the case of verbs with meanings like ‘to work’ or ‘to say something for the first time’.

³² From now on I will be using the terms ‘participant-based’ and ‘spatial’ just as descriptive labels.

verbs typically have more than one argument, namely, the increase in the range of the possible scenarios that can make a sentence with a pluractional true.

Let us start by reviewing the facts:

- (19) a. Sun dāɗ-dāgà teebùr̃
 3PL.PF RED-lift table
 ‘They (all) lifted the table’
 N.B. #if they lifted the table together, collectively
 OK: if they lifted the table one by one or in smaller groups
- b. Yaa kaĩ-kàshè fitilûn
 3SG.M.PF RED-kill lights.the
 ‘He switched off the lights’
 N.B. #with a single switch (all at once)
 OK: several switches, one by one or a few at a time

In (19a), the subject of the pluractional verb is syntactically plural but the pluractional cannot be used if the subject is interpreted collectively. Similarly, in (19b), if the object is interpreted collectively the pluractional is not felicitous. This shows that in the participant-based cases, it is not enough to know that there are several individuals participating in the event, it is also important to know in what way they were involved in the event, i.e. what kind of interpretation the syntactically plural argument receives.

To account for the fact that collectively interpreted arguments do not license the use of pluractionals, I will be making use of the idea that collectively interpreted NPs are interpreted as groups (as in Landman 1996, 2000). Following Landman, I will assume that there are two types of singular denotations: individual atoms and group atoms.³³ This, in combination with the assumption that singular anchors correspond to singular events, explains why the subject in (19a) and the object in (19b) cannot be interpreted collectively. It is because collectively interpreted arguments correspond to singular anchors and thus the events they are associated with are necessarily singular as well (unless there is a plurality in a different dimension). Pluractional verbs can only refer to plural events, hence the incompatibility. The idea that collective interpretations are singular is thus crucial. The importance of interpreting groups as atoms will also become apparent below, where more complex interpretations are discussed.³⁴

The other main reason why participant-based cases of pluractionals are so complex is that verbs often have more than one argument, which increases the number of possible scenarios that make the use of a pluractional felicitous. Consider the following example:

³³ Groups are formed from sums, plural denotations, by a group formation operation (↑).

³⁴ Later I will show that it is not always completely clear what makes an event a collective one. In section 3.5.3., I will discuss what factors play a role in determining whether a plural NP argument receives a collective interpretation or not.

- (20) Yârân sun dāf-dāgà teebũooĩi
 children.the 3PL.PF RED-lift tables
 ‘The children lifted some/ the tables’

There are many possible scenarios that make this sentence true. For example, each of the children lifts each of the tables individually; each of the children lifts some of the tables individually; or each of the children lifts all the tables stacked on top of each other. Alternatively, the children collectively lift each of the tables one by one; the children collectively lift a few tables at a time; etc. In addition, it is also possible that the children form smaller groups that lift the tables individually or stacked on top of each other. Basically, the children can act either individually, collectively, or in smaller groups and the tables can be lifted one by one, all together, or a few at a time, as long as there are plural liftings.³⁵ The only scenario that is excluded is the one where all the children collectively lift all the tables at once. The reason is that in order to be able to use the pluractional form of *dāgà* ‘lift’, there have to be multiple liftings. A lifting of a group entity by a group entity qualifies as a single lifting, however. With respect to anchoring, this means that each individual event unit is linked to either an individual child, or a (sub)group. For the felicitous use of the pluractional form, it does not matter whether the anchor of each event unit is an individual or a group atom: it only matters is that the anchors are plural.

Having discussed the most common cases of anchoring, let us have a look at two less typical cases. The first type of case can be represented by the following examples. Each of these examples represents the judgment of a single speaker:

- (21) a. %Yâransù sun yiy-yi kàmaa dà bàabansù
 children.their 3PL.PF RED-do resemblance with father.their
 ‘Their children resemble their father to various degrees’
 b. %Mun gāg-gāji
 1PL.PF RED-be.tired
 ‘We are (all) tired for different reasons’

In the examples above, one might think that what individuates the event units is the degree to which the property holds in (21a) and the different reasons in (21b). Nevertheless, as I will argue in more detail in the next section, these cases should be analyzed as cases of anchoring through participants. The different degrees or reasons thus do not function as anchors in (21a-b), rather they only help to individuate the participants more clearly.

The second type can be represented by the examples below:

³⁵ Section 3.5.5. contains a discussion of how this type of interpretation can be labeled.

- (22) a. %Naa yày-yařdà dà shii
 1SG.PF RED-trust with him
 'I trust him totally/ in everything'
- b. %Yaa rur-rùudee
 3SG.M.PF RED-be.confused
 'He was so confused/ repeatedly confused'
 N.B. about many things

The nature of the anchors in the examples above is quite hard to determine. The reason is that the meaning of such sentences can be paraphrased in different ways, which would suggest different labels for the anchors. The nature of the anchors is hard to grasp because the verbs are abstract predicates. As a result, the anchors are necessarily rather abstract as well. In (22a), the anchors could probably be characterized as 'the things he does/ says'. In (22b), the anchors are perhaps best described as 'the different things the person was confused about' (e.g. where to go, what to say, how to decide about something). I will not try to provide labels for these anchors.³⁶ Note, however, that in both cases the anchors are tightly connected to the lexical meaning of the verb and could be possibly analyzed as 'semantic arguments' of the verbs (cf. Jackendoff 1990, Grimshaw 1990, Zubizarreta 1987). In fact, I consider these cases to provide additional support for the idea that Hausa pluractionals do not rely on anchors of distinct categories. Instead, I suggest that possible anchors can be defined as those entities that correspond to semantic arguments of the verb in a rather broad sense. In principle, no labels are needed but there is also no harm in using terms like 'participant-based' or 'spatial' reading descriptively.³⁷

To conclude the discussion on the possible entities that can anchor event units of plural events referred to by Hausa pluractionals, I propose that essentially anything with any relevance for the given event can serve as an anchor, as long as the non-equivalence condition is met. As discussed before, this excludes times as possible anchors because anchoring by means of times would not create event units that are non-equivalent. This type of approach also eliminates the need for further classification of possible anchors. In other words, the 'anchored' interpretations do not need to be divided into distinct 'readings'. Such a classification would not provide any interesting insight into pluractionality in Hausa. In fact, it would only obscure the fact that the process of

³⁶ If a label was to be invented it would probably be something like 'content' ('trust someone in something', 'be confused about something').

³⁷ Note also the following characterization of what licenses distributive readings of reduplicated verbs in Indonesian; the last possibility mentioned suggests that not only possible syntactic arguments of the verb can be what instantiates the (distributive) plurality (Rosen 1977:2; emphasis mine): "In these cases when reduplication is applied to a verb, it has the function of either making the immediate arguments of the verb either multiple or diffuse. The possible arguments (or related NP's) a verb can have are the agent or actor, the direct object, a statement of time or aspect, objects which are incorporated into the basic meaning of the word (which would be implied by the lexical decomposition of the word.)"

anchoring is, with the exception of the non-equivalence condition, unrestricted by the pluractional marker itself.

3.5.3. Collective interpretations

In the previous section, I dealt with the question of what elements can serve as event anchors. When discussing participant anchors, I showed that collectively interpreted participants behave like singular participants. This means that they function as singular anchors and thus collective events are singular. As a result, the use of the pluractional form is infelicitous. However, as will be shown, answering the question what makes a collection of individuals a group and an event a collective one is not trivial. In many cases, the situation is clear. For instance, joint action of the type ‘lift the piano together’ is undoubtedly collective and therefore the pluractional form cannot be used to describe such events. Nevertheless, there are also other cases where speakers often hesitate or give varying judgments.

In this section I will first show that even inherently distributive predicates can refer to collective events. This is reflected in the fact that in such cases the pluractional cannot be used. Second, I will argue that certain special effects might arise with pluractionals, which serve the purpose of excluding collective interpretations.

Let us start by looking at the compatibility of the adverb *tàare* ‘together’ with pluractionals. I showed in Chapter 1 (section 1.5.2.) that the use of adverbs like *together* does not necessarily imply joint action. In some cases, *together* just indicates social accompaniment, spatial or temporal proximity etc. (Lasersohn 1995, chapter 11):

- | | | |
|------|--|-----------------------|
| (23) | a. John and Mary lifted the piano together | COLLECTIVE ACTION |
| | b. John and Mary sat together | SPATIAL PROXIMITY |
| | c. John and Mary stood up together | TEMPORAL SIMULTANEITY |
| | d. John and Mary went to the movies together | SOCIAL ACCOMPANIMENT |
| | e. John and Mary work together | COORDINATED ACTION |

According to Lasersohn (1995), only (23a) refers to true collective action. Verbs such as *stand up* or *go to the movies* are inherently distributive predicates. This means that they necessarily apply to all atoms in the plurality, and as a result, the events in (23c) or (23d) could be expected to count as plural.

Applying this to Hausa, the expectation would be that pluractional forms of verbs that can have both collective and distributive readings (like *ɗagàa* ‘lift’) should be incompatible with adverbs like *tàare* ‘together’. This is so because *tàare* would force a collective, i.e. singular, interpretation. As for inherently distributive predicates, one would expect the presence of *tàare* in the sentence to be less important, as events

described by such predicates should count as plural in either case. This expectation is fulfilled only partly, as can be seen from the following examples:³⁸

- (24) a. *Sun dāf-dāgà teebùrīn tàare
 3PL.PF RED-lift table.the together
 ‘They lifted the table together’
 b. %Sun zaz-zàunaa tàare
 3PL.PF RED-sit together
 ‘They (many people) sat down together’
 c. %?Sun tāt-tāfi kàasuwaa tàare
 3PL.PF RED-go market together
 ‘They went to the market together’

The examples in (24) show that the opposition collective (singular) vs. non-collective (plural) readings is not as simple and clear-cut as one might think. The data in (24a-b) are as expected: in (24a), *tàare* forces the collective – singular – interpretation of the event. As a result, the pluractional is unacceptable. In (24b), the predicate *zàunaa* ‘sit down’ is inherently distributive. Consequently, the event is necessarily plural and the pluractional usually acceptable. The adverbial *tàare* only expresses spatial and/or temporal proximity. Compared to (24b), (24c) is much less readily acceptable, however. This is surprising under the assumption that events referred to by inherently distributive predicates are always plural. The predicate *tāfi kàasuwaa* ‘go to the market’ is inherently distributive just like *zàunaa* ‘sit down’. If it holds of a group of people that they go to the market, it holds of every individual member of the group that they go to the market. In fact, cases like (24c) are not simply degraded. It is more accurate to say that speakers hesitate and sometimes change judgments over time. Note also that the pattern above can be observed not only when *tàare* is used in the sentence: it is enough for the situations to be described as involving actions in which the participants act together in some sense. Consider also the following sentence:

- (25) Mutàanee sun fīr-fītoo
 people 3PL.PF RED-come.out
 ‘Some/ the people have come out’
 N.B. not all of them together

Similarly to what was observed above, speakers usually do not accept the sentence if the people came out at once, in a single group, even though *fītoo* ‘come out’ is an inherently

³⁸ The reason why not all speakers accept the sentence in (24b), as indicated by the % symbol, is that some speakers would only use the pluractional if the people sit scattered all around the place or if they are very many, which are both situations that are not easily compatible with the use of *tàare* ‘together’. The combination of symbols ‘%?’ preceding the sentence in (24c) indicates that those speakers who accept sentences (24b) and (24c) find sentence (24c) less good than sentence (24b).

distributive verb.³⁹ Thus, the fact that an inherently distributive predicate is used does not prevent the speakers from interpreting an event as collective, that is singular. Whether a predicate holds of every individual in a group or the group as a whole is not the only factor that determines whether an event is plural or singular (collective). The following paragraphs give some indication as to what factors play a role in determining whether an event is interpreted as collective or not.

To understand better why *zaunàa* ‘sit’ resists the collective interpretation more easily than *tàfi kàasuwaa* ‘go to the market’, it is important to look at what types of events they refer to and how much the nature of the event changes if the participants involved in the event form a group in some sense. The data suggest that it matters more for events like going to the market whether the participants are a group, or independent individuals, than it does for events like sitting down. Presumably, the reason is that if a group of people go to the market together, they have a common goal and the event requires more interaction among the participants. In such an event, the individual participants are connected by a shared intention and thus they act less like independent entities than participants of an event that involves just a more or less mechanical change of position. In a change-of-position event involving a group of people, the individual members of a group basically just act simultaneously rather than truly collectively. Thus, it seems that what matters for the possibility of the use of the pluractional form is whether the members of a group can be said to be involved in the event strictly individually (sitting down together) or not (going to the market together).⁴⁰

In a certain type of cases, some interesting effects can be observed that seem to arise as a consequence of the need to ensure that the participants of the different event units are indeed involved in them as independent entities. Consider the following examples (already discussed briefly in section 3.5.1.):

- (26) a. %Sun gàg-gàji
 3PL.PF RED-be.tired
 ‘They were all tired’
 N.B. %for different reasons

³⁹ In principle, one could think that this effect can be a consequence of the high individuation requirement, which will be discussed in more detail in section 3.7.2. As such, the fact that the people cannot come out together would follow from the requirement that the individual event units be highly differentiated. While this is not an implausible explanation, the effect observed in (25) seems to be too strong to follow from the high individuation requirement, which can often be dropped or is not present for all speakers.

⁴⁰ Verbs like *fitoo* ‘come out’ in the example in (25) also presumably do not refer to simple events of (directed) motion. If people come out of the house together, they probably have the same reason for doing so (something is happening outside) or are otherwise connected in the action (some of them just follow the others). Other verbs that pattern with *zaunàa* ‘sit’, on the other hand, are *tsayàa* ‘stop’, *taashì* ‘stand up/ get up’, *kwàntaa* ‘lie down’. Notice that these are all verbs referring to actions that have to be carried out strictly individually.

- b. %Yâransù sun yiy-yi kàmaa dà bàabansù
 children.their 3PL.PF RED-do resemblance with father.their
 ‘Their children resemble their father’
 N.B. %to various degrees’

The predicates used in the two sentences above are inherently distributive. Nevertheless, the use of the pluractional requires that the participants be involved in the events not as a group, but rather as individual units. For (26a), this is achieved if the participants are not tired as a group, for instance as the result of something they did together, but rather independently of each other, as the result of their individual actions. Similarly in (26b): the pluractional is felicitous if the children do not just all look like their father (that could be a statement about them as a group), but rather if it is clear that each of them resembles their father individually and in their own way, for example, by each resembling the father to a different degree. Even though the judgments above are not shared by all speakers (as indicated by the % symbol), they represent a general tendency with respect to the use of pluractionals as a way to exclude collective interpretations.

Coming back to the discussion in Chapter 1 (section 1.5.2.) where different views on the nature of collective interpretations were presented, the following can be said. On the one hand, there is the position of Lasersohn (1995) and Landman (2000) according to which only (23a) represents true collective action. On the other hand, for Kratzer (2003), probably all the predicates in (23) should be interpreted as collective. Kratzer’s definition of collectivity relies on the notion of substantive groups, which is in turn defined by “spatial proximity of the agents and temporal closeness and coordination of their actions” (Kratzer 2003:34). Actions by substantive groups are, then, collective actions. In the paragraphs above, it was observed that an adequate description of the use of the pluractional form in Hausa requires still a different notion of collectivity. This notion of collectivity is broader than that of Lasersohn/ Landman, but narrower than that of Kratzer because it includes more than cases of true collective action but excludes cases in which the events are merely spatially/ temporally close or coordinated. In other words, for an event to be interpreted as collective, i.e. as singular, it is often enough if the participants are not involved in the event strictly individually but have a common goal, for instance, or the state they are in has a common source. However, spatial closeness of the agents or the temporal closeness of the actions is not sufficient for an event to be interpreted as collective one. I do not propose that one approach to collective interpretations is correct and the others are wrong. Instead, I suggest that different grammatical and lexical phenomena are sensitive to different types of ‘collectivity’. The English adverb *together*, for example, might be sensitive to collective interpretations roughly in the sense defined by Kratzer (2003). Inherently distributive predicates, on the other hand, reflect the distinction between true collective action and all the other readings (Lasersohn 1995/ Landman 2000), as they can never receive a true joint action interpretation. Finally, Hausa pluractionals seem to put the dividing line between

collective and plural readings somewhere else still: what seems to matter is the extent to which the event participants act as independent entities.

3.5.4. Distribution to parts and subquantities

The previous section dealt with an issue connected to cases where the anchors are event participants. This section will continue discussing cases with participant anchors. In particular, the focus of this section will be on cases where the individual event units of plural events are anchored by parts of participants. I will argue that these are just a subtype of participant-based cases, and that all cases involving anchoring can be treated uniformly. The discussion will partly revolve around the event-external vs. event-internal distinction. Recall that, roughly, event-external pluractionals refer to multiple events, while event-internal pluractionals refer to singular events that consist of many phases or subevents of the same type (a more precise characterization will be given below). The reason why this distinction will be important is that certain cases of pluractionals that involve distribution to parts have been analyzed as event-internal in the literature (Tovena & Kihm 2008). Some space will thus be devoted to showing that, according to the criteria adopted in this thesis, cases of distribution to parts are not event-internal in Hausa. However, there are pluractionals in Hausa that receive interpretations that could be considered event-internal. I will discuss one type of event-internal interpretation in this section, and I will argue that these cases are just a subtype of the ‘distribution to parts’ type.⁴¹ Despite the fact that the interpretations are event-internal, I will suggest that there is no need to assume a different semantics for these pluractionals. The event-internal effect will be argued to follow from non-exhaustive distribution to parts, which in turn follows from the need of having plural anchors.

3.5.4.1. Parts as anchors

Let us start by looking at some examples:^{42,43}

⁴¹ Another type of event-internal interpretations will be discussed in section 3.6.2.

⁴² Most speakers have little trouble interpreting sentences like those in (27). Some speakers accept more cases of this type than others, however. The acceptability is influenced by factors discussed below. In addition, examples of the type illustrated in (27) are generally interpreted in two different ways: either exhaustively (all parts are affected), or non-exhaustively (only some parts are affected). This will be discussed in more detail in the next subsection and in section 3.8.1.

⁴³ Note that sentences with singular arguments of the type below do not seem to be able to receive an interpretation according to which the arguments co-vary with the event units:

- (i) *Naa sàs-sàyi littaaɸii
 1SG.PF RED-buy book
 intended: ‘In each book-buying situation I bought a different book’.

This is in accordance with the observations made for other languages that indefinite objects seem to take wide scope with respect to the pluractional (cf. Van Geenhoven 2004, Henderson 2010).

- (27) a. Gidân yaa rur-rùushee
house.the 3SG.M.PF RED-collapse
'The house has collapsed in different places'
N.B. either all parts of the house have collapsed or only some
- b. Riigâĩ taa faĩ-fâashee
gown.the 3SG.F.PF RED-break
'The gown has holes in different/ many places'
- c. An ðad-ðaurée shi
IMP.PF RED-tie.up him
'They tied him in various places'
N.B. for some speakers it implies that the rope was wound all around him

Sentence (27a) describes a situation in which different parts of the house have collapsed. In (27b), the pluractional indicates that the holes are distributed over parts of the gown. Sentence (27c) is used to indicate that the tied person is tied in various places and thus it would not be used if only the person's hands were tied, for instance.

Apart from cases with singular count arguments, as in (27), there are also cases of pluractionals with mass arguments (referring to quantities), which can receive very similar interpretations:

- (28) a. Ruwaa yaa 6u6-bulloo
water 3SG.M.PF RED-appear
'Water appeared in various places'
N.B. the event involves separate quantities of water
- b. %Yaa shas-shànyè madañaa
3SG.M.PF RED-drink.up milk
'He drank up all the milk'
N.B. all the bottles; for some speakers also all subquantities of milk in a single bottle⁴⁴

The use of the pluractional form in (28a) implies that there were separate quantities of water appearing in different places. Sentence (28b) can be used by some speakers to indicate that there was a plural event of drinking and each event unit involved a separate (sub)quantity of milk.

Note that I am treating cases with singular count and mass nouns together. This might seem strange, as mass nouns are usually compared to plural count nouns (e.g. Link 1983, Chierchia 1998), rather than to singular count nouns. I would like to argue, however, that in some respects mass nouns behave like singular nouns, in others like plural nouns and

⁴⁴ The interpretation according to which all the subquantities of milk in a single bottle are drunk in the plural event is rather unusual because the plurality of the event is not obvious. This type of interpretation will be discussed below.

in still others they form a category of their own. The resemblance to singular count nouns can be seen from the fact that speakers seem to have similar intuitions about at least some cases with mass nouns and about cases with singular count nouns. This is because division into parts is often required in both types of cases: for mass nouns it is in cases in which the mass noun refers to a contiguous quantity of stuff (cf. (28b)). Thus, even though some cases involving mass nouns, such as (28a), might be closer to cases with plural NP participants, in general it makes more sense to consider cases with mass nouns together with cases with singular count nouns. Nevertheless, I will argue that all types of cases – with singular count, plural count and mass nouns – represent the same phenomenon.⁴⁵

I propose that cases like those in (27) and (28) are in fact not different from cases where pluractionals combine with plural arguments. They represent the same type of event plurality. What is different in these cases is that the anchors for the individual event units are parts of participants. This is in general a less obvious option and as a result examples of this type are generally not the first examples of pluractionals volunteered by the speakers. Still, examples of this type are far from rare. More importantly, the interpretations are very systematic and predictable. To provide more support for the idea that parts of individuals and quantities can function as anchors of pluractional event units, I will now discuss some other cases in which part structures of single objects can be accessed.

Moltmann (1997) discusses expressions that are sensitive to part structures of various entities (objects, events). There are expressions operating on part structures of plural entities, as in (29a), but also of individuals (denoted by singular count nouns), as in

⁴⁵ The distributive prefix *po-* in Czech, discussed briefly in sections 1.5.1. and 1.7. of Chapter 1, can also access parts of objects and thus its use is not restricted to verbs with plural objects:

- | | | | | |
|--------|--|-----------|----------------------------|---------------|
| (i) a. | Po-zamykal | (všechny) | dveře | PLURAL NOUN |
| | DISTR-locked | (all) | doors | |
| | 'He locked (all) the doors' | | | |
| b. | Po-zamykal | (celý) | dům | SG COUNT NOUN |
| | DISTR-locked | (whole) | house | |
| | 'He locked (anything lockable in) the (whole) house' | | | |
| c. | Po-schovávala | ty | mince (na různých místech) | PLURAL NOUN |
| | DISTR-hid | DEM | coins (in various places) | |
| | 'She hid the coins (in various places)' | | | |
| d. | Po-schovávala | to | zlato (na různých místech) | MASS NOUN |
| | DISTR-hid | DEM | gold (in various places) | |
| | 'She hid the gold (in various places)' | | | |

In (ia), there are plural doors for the plural event to distribute over. In (ib), on the other hand, the object is the singular count noun *dům* 'house': it is understood that all doors of the house that can be locked were locked. Similarly, in (ic) the event is distributed over plural (collections of) coins. In (id) the existence of separate quantities of gold is implied.

(29b), and quantities (denoted by mass nouns), as in (29c). In Italian, the same expression, *tutto*, can combine with definite plural, singular, and mass NPs:

- (29) a. Tutti i bambini sono arrivati PLURAL [Italian]⁴⁶
 all the children are arrived
 ‘All the children have arrived’
 b. Tutta la superficie è coperta di fiori SINGULAR COUNT
 all the surface is covered of flowers
 ‘The whole surface is covered with flowers’
 c. Tutta l’acqua contiene sale MASS
 all the water contains salt
 ‘All the water contains salt’

In other languages, not all types of NPs can combine with the same ‘part quantifier’ (in Moltmann’s terminology). Thus, in English, *all* combines with plural and mass nouns and *whole* with singular count nouns:

- (30) a. All the women are rich PLURAL
 b. All the furniture is the same color MASS: *furniture-type*
 c. All the milk has gone bad MASS: *water-type*
 d. The whole country supported him SINGULAR COUNT

In (30a) and (30b), the parts that the predicate holds of are very clearly defined: the individual women and the individual pieces of furniture, respectively. The sentences in (30c) and (30d), however, are more interesting for the present discussion, as it is left unspecified what exactly the parts are in these cases. In (30c), the overall quantity of milk could be subdivided in any fashion, and the predicate holds of any (relevant) part/subquantity of it. Similarly, in (30d), the predicate holds of every (relevant) part of the country (its population), however vaguely the parts might be defined (every city, every region etc.). Moltmann argues that in different contexts different part structures may become available or salient. Clearly, these various part structures can be accessed by linguistic expressions.⁴⁷ If even part structures of entities referred to by singular count nouns can be accessed by certain linguistic expressions, it is not surprising that they can be used for the ‘anchoring’ of individual event units of plural events referred to by pluractional verbs.

I have suggested that anchoring by parts of participants is in principle the same as anchoring by plural participants. The necessary precondition is, of course, the availability of a suitable part structure. Sometimes more than one part structure is available and in such cases the choice of the relevant parts is essentially a pragmatic phenomenon. In some cases more readings are possible, but some are always more likely

⁴⁶ Based on Moltmann (1997:128).

⁴⁷ For more examples see Moltmann (1997).

than others. This is not just true for cases with singular NPs, as can be seen from the following example (Moltmann 1997:57-58):

- (31) The boxes are expensive
- a. each individual box is expensive
 - b. the boxes as a group/ collection are expensive
 - c. every relevant subgroup is expensive

The readings in (31a) and (31b) are the most salient ones. Reading (31a) involves distribution to the individual boxes as atoms. Reading (31b) represents the collective interpretation. According to Moltmann, distribution to subgroups, as in (31c), is probably not excluded either but it requires an appropriate context.⁴⁸

As shown in (31), it is generally much easier to distribute to atoms than to subgroups, since atoms, unlike subgroups, are pre-defined or ‘natural’ units. Not surprisingly, then, when going below the level of an individual, it can become even harder to make the parts clear (and usable). This can be seen from the fact that many speakers, when confronted with a combination of a pluractional and a singular argument, might at first reject the sentence as unacceptable. After a moment of reflection, however, they are often able to reconsider the example and accept it on a reading where the individual event units are linked to different parts of the participant. Therefore, even though cases like (32a) are generally easier to interpret than cases like (32b), the latter are not hard to find.

- (32) a. Gidàajên sun rur-rùushee
 houses.the 3PL.PF RED-collapse
 ‘The houses collapsed’
- b. Gidân yaa rur-rùushee
 house.the 3SG.M.PF RED-collapse
 ‘The house collapsed in many places’

In addition, the properties of a given object substantially influence the acceptability of the use of the pluractional form. Nouns referring to objects that have salient parts are easier to ‘partition’ this way than those that do not. Nouns referring to objects like buildings (32a), humans (33a) and other objects with a salient internal structure (33b) thus generally combine well with pluractionals:⁴⁹

- (33) a. Yanàa mìm-miike a kân gadoo
 3SG.M.IMPF RED-stretch.ST at top.of bed
 ‘He is sprawled out all over the bed’

⁴⁸ Moltmann also notes that while the subgroup interpretation is not excluded, even though it is relatively hard to get, distribution to subparts of the boxes is not available at all.

⁴⁹ Example (33a) is from Newman (2000:423); the glosses are mine.

- b. Naa bub-bùudè jàkaa
 1SG.PF RED-open bag
 ‘I opened the different compartments of the bag’

If the internal structure of the object is rather homogeneous, the size of the object seems to be relevant: bigger objects seem to be easier to divide into parts. Consider the contrast between (34a) and (34b):

- (34) a. Kankanaa yaa rur-rùbee
 watermelon 3SG.M.PF RED-rot
 ‘The watermelon is all rotten’
 b. ?Mangwàrò yaa rur-rùbee
 mango 3SG.M.PF RED-rot
 ‘The mango is all rotten’

Note that data like these suggest that we should not think of the pluractional morpheme as being directly responsible for splitting its singular argument into parts. If that were the case we would expect the ‘partitioning’ to happen whenever possible. In other words, it would be possible to divide mangoes into parts just as easily as watermelons, similarly to what can be seen in (35), where the parts are accessed by other means (lexically):

- (35) a. (different/ all) parts of the watermelon
 b. (different/ all) parts of the mango

Moreover, some speakers accept cases involving distribution to parts more easily than others. All in all, the fact that the differences in acceptability are gradual rather than sharp, suggests that the availability of a suitable part structure is not something the pluractional itself is responsible for. Instead, it relies on the part structure being potentially present.

Unlike singular count nouns, mass nouns should be able to receive a plural interpretation without any additional operations since they can in principle refer both to one and several portions of matter. Nevertheless, for the use of a pluractional form to be felicitous it is important whether the mass noun is easily construed as referring to discrete entities. For participants to be suitable anchors they need to be plural and clearly distinguishable from each other. In the case of plural count nouns, it is clear what constitutes an anchor unit: the (natural) unit that can be described by the given nominal predicate. In the case of mass nouns like *water*, however, there are no predefined parts or units. These have to be created either linguistically (e.g. *a bucket of water*) or with the help of context (cf. Chierchia’s 1998 distinction between well-defined and vague minimal parts). In that sense (*water*-type) mass nouns are similar to singular count nouns. In both cases the different parts of the given entity, i.e. the units that could anchor the individual subevents, are not clearly predefined.

As said, then, for compatibility with pluractionals, it matters more whether discrete units can be easily created or not, rather than whether the noun has a cumulative reference. This is what makes mass nouns in argument positions of pluractional verbs very similar to singular count nouns. It is not surprising that it is easier to use a pluractional if the mass noun can be interpreted as referring to separate quantities of matter (e.g. several bottles of milk), rather than not so clearly separated subquantities of a single portion of matter (e.g. subquantities of milk in a single bottle). This is even clearer if there are conventional units available (e.g. a bottle). In other words, some ways of ‘packaging’ stuff are more readily available than others. Consider example (28b), repeated here as (36):

- (36) %Yaa shas-shànyè madaŋaa
 3SG.M.PF RED-drink.up milk
 ‘He drank up all the milk’
 a. all the bottles
 b. %all subquantities of milk in a single bottle

The reading involving separate quantities of milk, e.g. in the form of separate bottles of milk, as in (36a), seems to be easier to obtain than the reading involving subquantities of milk in a single bottle, as in (36b). Nevertheless, the subquantity reading is available for a small number of speakers as well. This seems to be the general pattern found in the data.

The contrast between separate quantities and subquantities of a single unbroken quantity is parallel to the contrast between plural individuals and parts of a single individual. The latter is the marked option in each opposition. This is especially true for cases where the anchors are subquantities that are not separated from each other, as in (36b). Events that are clearly separated by means of their participants being clearly separated are more likely to be described by pluractionals than events whose participants are less clearly separated.

In this context, consider one of the two examples that were presented in section 2.3.7. as possible counterexamples to the plurality requirement:

- (37) Ruwaa yanàa zuz-zubôwaa
 water 3SG.M.IMPF RED-pour.VN
 ‘Water is/ was pouring down’
 N.B. %from one source, continuously

Most speakers require there to be separate quantities of water. This requirement is fulfilled if the water comes from different sources or, less often, if the water flows from a single source but with interruptions. Nevertheless, there are a few speakers who also allow for a reading involving a single source and no interruptions. This seems to be a continuous reading, which is otherwise not possible with pluractionals. I would like to argue, however, that this interpretation is not genuinely continuous. I suggest that the

anchors of the individual event units of the water-pouring are the different subquantities of water. However, these subquantities are not separated from each other, similarly to the interpretation in (36b). This gives the impression of continuous flowing. Notice that this reading is dispreferred and most speakers reject it completely. Subquantities that are not separated from each other remain very marginal anchors.⁵⁰

Coming back to the comparison of (semantically) count and mass participants, the main difference between the two types of participants is that in the case of mass participants, both the ‘separate quantities’ reading and the ‘subquantities of a single quantity’ reading are triggered by context and do not rely on the presence of predefined units. In (36), the (a) reading does make use of the availability of a conventional unit (bottle). However, such units are generally not required as can be seen in (38), repeated from (28a), where the separate quantities of water can take any form (drops, puddles, streams etc.; the difference between (36) and (38) stems from the fact that milk does not occur freely in real life):

- (38) Ruwaa yaa 6u6-6ulloo
 water 3SG.M.PF RED-appear
 ‘Water appeared in various places’
 N.B. the event involves separate quantities of water

As a result of this lack of natural units, the contrast between the ‘plural’ and ‘part’ readings is smaller in the case of mass nouns than in the case of count nouns. In the case of count nouns, the anchors can be either natural units (the ‘plural’ case), or entities below the level of natural units (the ‘part’ case). Therefore, as far as distribution to parts is concerned, mass nouns are very much like singular count nouns. Nevertheless, once all types of participant units are considered, it becomes clearer that mass nouns form a category of their own, defined by the absence of natural units. The table below summarizes the possibilities for anchoring for both singular and plural count nouns and (*water-type*) mass nouns:

Table 3.1.: Types of participant-based readings

type of NP	‘plural’ readings	‘part’ readings
count	plural individuals (plural NPs)	parts (singular NPs)
mass	separate quantities	subquantities

To summarize, in the cases of distribution to parts or subquantities, what licenses the use of the pluractional form is the presence of an NP that can be interpreted as a plurality of some kind. Therefore, it is the presence of multiple participant anchors that makes the use of the pluractional form felicitous in these cases as well, just like in the more typical

⁵⁰ The other apparently continuous case presented in section 2.3.7. is of a slightly different type and will be discussed in 3.6.1.

participant-based cases. The only difference with respect to the regular plural NP argument cases is that the individual ‘participants’ in the distribution-to-parts cases are not as clearly predefined as they are in the case of distribution to natural wholes. As a consequence, it requires some effort on the part of the speaker/ listener to supply a salient part structure of the entities in question, and more so if the given entities do not have a very clear internal structure. Once there is a salient part structure, ideally with clearly individuated parts, nothing prevents the individual event units to be anchored by these parts.

3.5.4.2. Event-internal status of ‘distribution-to-parts’ cases and tentative interpretations

As mentioned already, cases of pluractionals where the plural event is distributed over parts of a single participant could be potentially considered event-internal.⁵¹ In relation to this, I will make two claims here. First, I will argue that cases like the ones discussed above are not event-internal in Hausa. The second claim will be that there are, nevertheless, pluractional interpretations in Hausa that are probably best analyzed as event-internal. These are of two types: the so-called tentative and conative cases. The tentative cases will be discussed in this subsection since, on my analysis, they constitute a special type of ‘distribution-to-parts’ cases. The conative cases will be discussed in section 3.6.2.

The distinction between event-external and event-internal pluractionals, introduced in Chapter 1, can be characterized as the distinction between pluractionals that refer to many events on the one hand and those that refer to many phases of a single event on the other hand (Cusic 1981). However, researchers do not completely agree on a more exact characterization of this seemingly simple distinction. A number of different criteria can be found, some of which are not linguistic. Non-linguistic criteria can be found in Wood (2007), where what matters is basically whether the plurality is perceived as a single whole or not. This is influenced by e.g. temporal and spatial proximity, similarity, etc. For the purpose of this thesis, I adopt the following criteria for identifying event-internal pluractionality. These are basically a compilation of (linguistic) criteria found in Lasersohn (1995), Wood (2007) and Tovená & Kihm (2008):

- (39) *necessary properties of event-internal pluractionals:*
- (a) ARGUMENT IDENTITY
the individual event units are related to a single participant
 - (b) INACCESSIBILITY OF THE EVENT UNITS
the event units cannot be linguistically accessed

⁵¹ The distinction between event-external and event-internal pluractionality was introduced in section 1.6.2. of Chapter 1.

optional property of event-internal pluractionals:

(c) ALTERED NATURE OF THE EVENT UNITS

the basic predicate cannot be used to describe the individual event units

Criterion (a) can be found in Wood (2007) and in Tovená & Kihm (2008). In the example below it is illustrated for Italian:

- (40) Luisa ha tagliuzzato le mele [Italian]⁵²
 Luisa has chopped the apples
 'Louise chopped the apples'
 N.B. each apple has to be cut many times, not just once: there is a plurality of events per apple

Tovená and Kihm (2008) also take as a defining characteristic of event-internal plurality the inaccessibility of the event units: criterion (b):

- (41) Alla riunione, ha mordicchiato due volte la matita [Italian]⁵³
 at meeting has nibbled two times the pencil
 'During the meeting, s/he nibbled the pencil twice'
 N.B. two internally plural events, not a plural event consisting of two bites

Criterion (c) is taken from Lasersohn (1995), who presents this as the only aspect in which event-external and event-internal pluractionals differ. Thus, according to Lasersohn, event-internal pluractionals are different from event-external ones in that the predicate that applies to every individual event unit is different from the verb stem itself and has to be lexically specified for each case. Lasersohn uses the English verb *nibble* as an example: the individual subevents/ phases of nibbling are small bites. The following example is perhaps better, as it presumably represents a productively formed pluractional:

- (42) *barar* > *barrar* [Saho]⁵⁴
 'fly' 'flutter'
 N.B. *barar* 'fly' does not characterize subevents of *barrar*; the relevant predicate is rather something like 'flap the wings in the effort to fly'

Lasersohn's approach to the event-external vs. event-internal distinction has been criticized for not capturing the essence of the distinction (Wood 2007, Tovená & Kihm 2008, Greenberg 2010). I agree with the criticism: fulfilling criterion (c) is indeed not a

⁵² Tovená & Kihm (2008:22); the glosses are my own.

⁵³ Tovená & Kihm (2008:23); the glosses are my own.

⁵⁴ Tauli (1958:141), as quoted by Cusic (1981:83).

necessary condition for event-internal plurality.⁵⁵ Nevertheless, it is a useful criterion that also plays a role in some of the most typical types of event-internal pluractionals.

The criteria for event-internal pluractionality will now allow me to show that the ‘distribution to parts’ cases of the type discussed above are not event-internal. Starting with criterion (a), the argument identity criterion, the sentences in (43) demonstrate that the pluractional is not restricted to contexts with singular participants:

- (43) a. Gidân yaa rur-rùushee
 house.the 3SG.M.PF RED-collapse
 ‘The house collapsed in many places’
 b. Gidàajên sun rur-rùushee
 houses.the 3PL.PF RED-collapse
 ‘The houses collapsed’
 N.B. each of them, perhaps one by one

The pluractional form of *ruushèe* ‘collapse’ can be used both when the event units are distributed over parts of a single participant (house) and when they are distributed over different participants (houses). Sentence (43b) can be used if each of the houses simply collapses (not necessarily in many places). The pluractional requires that there be many collapsing events, but there is no restriction as to whether they involve many houses or many parts of the same house.

Criterion (b) also provides evidence for the claim that cases of distribution to parts like (43a) are not event-internal. This is harder to demonstrate as a precise specification of the number of event units in a plural event is generally dispreferred with Hausa pluractionals. However, if a speaker allows for this kind of modification at all, they also allow for it in cases of distribution to parts, as in (44):

- (44) %?Gidân yaa rur-rùushee à wurii biyaĩ
 house.the 3SG.M.PF RED-collapse at place five
 ‘The house collapsed in five places’

Finally, application of criterion (c) gives the same result: the individual event units can be described using the same basic verb. In (45a), for example, every event unit of the plural event is an event of collapsing, and can be described by *rushe* ‘collapse’ as in (45b):

- (45) a. Gidân yaa rur-rùushee
 house.the 3SG.M.PF RED-collapse
 ‘The house collapsed in many places’

⁵⁵ Event-internal pluractionals in Kwarandzyey and Kaqchikel, as described in Souag (2010) and Henderson (2010), respectively, do not (necessarily) involve a change in the character of the event and thus the same basic predicate applies to the subevents as to the whole event.

- b. Katangaa taa ruushèe
 wall 3SG.F.PF collapse
 ‘A wall collapsed’

I conclude, then, that cases of pluractionals in which parts of participants serve as anchors for the individual event units are not event-internal. However, it is more accurate to say that event-internal pluractionality is not a necessary consequence of distributing the individual event units to different parts of a single participant. In the remainder of this section, I will argue that there is one subtype of ‘distribution to parts’ cases that should probably be analyzed as event-internal.

As demonstrated in sections 2.4.3. and 2.6.2., there are cases of pluractionals that can be described as referring to actions that are performed superficially or not seriously enough.⁵⁶ These cases are not extremely frequent, but they do appear in the data of many speakers. Despite the fact that these uses are probably best understood in terms of event-internal pluractionality, I will argue that they do not require a separate analysis. My claim will be that tentative interpretations arise as a side effect of non-exhaustive distribution to parts, which in turn is a consequence of the preference for the anchors to be clearly separate. Later in the chapter (section 3.6.2.), I will come back to the issue of event-internal pluractionality, in connection to another type of cases that can be characterized as event-internal. What connects these two types, I will argue, is the fact that they both arise as a consequence of restricting the event plurality to a single participant. Nevertheless, each type is a result of using a different strategy to ensure the necessary plural interpretation.

Let us look at some examples of tentative readings:⁵⁷

- (46) a. %³Yaa shàs-shàari ðaakii
 3SG.M.PF RED-sweep room
 ‘He swept the room superficially’
 N.B. the effort was not serious enough
- b. %Mun yiy-yi aikii
 1PL.PF RED-do work
 ‘Occasionally we found some time for work’
 N.B. this sounds like the people are not serious workers

⁵⁶ Cf. also the discussion in section 1.4.4.

⁵⁷ The sentences in (46) are well-formed only for a subset of speakers and, in addition, only a subset of this subset receive the ‘superficial action’ interpretation. Usually, speakers who find the sentences acceptable interpret them simply as ‘he swept all/ different parts of the room’, ‘we did different kinds of jobs’ and ‘they read many/ all the books’, respectively.

- c. %Sun kak-kařàntà littàttàfàn
 3PL.PF RED-read books.the
 ‘They read the books superficially’
 N.B. a bit here, a bit there

Sentence (46a) describes a situation in which the room was not swept properly. In (46b), the use of the pluractional implies that the people did not work seriously enough. Similarly, the reading in (46c) is described as rather superficial. In all these cases, the meaning contribution of the pluractional form seems to be some kind of superficiality in the way the actions are carried out.

Tentative cases of pluractionals are often considered typical examples of event-internal plurality.⁵⁸ I will defend the same view, despite the fact that the criteria adopted in this thesis do not actually provide a completely straightforward result. Both criterion (a) and (b) are hard to apply here for lack of relevant data. The pluractional forms themselves are never restricted to contexts with a single participant (criterion (a)), and some of the examples above actually involve plural participants. In such cases, I assume that the ‘superficial action’ interpretation can only arise when each of the participants is linked to a plurality of event units. In particular, each of the books in (46c) has to be associated with a plurality of reading events. Alternatively, the pluractional can get the tentative reading if *littàttàfàn* ‘the books’ is interpreted collectively, that is, as a singular entity.⁵⁹ As for criterion (b), the accessibility of the event units, this is generally the most difficult criterion to apply in Hausa. Moreover, I do not have any relevant data for the tentative type. Nevertheless, I do not expect precise specification of the number of event units to be possible in such cases at all, as the event plurality meaning is in fact pushed into the background by the superficiality effect. Finally, according to criterion (c), these pluractional uses might be considered event-internal, since the individual event units can be said to be ‘degraded’ versions of the basic event. Even though the criteria for event-internal pluractionality adopted in this thesis do not give a completely clear result in the case of tentative readings, I consider changes in the nature of the event like the emergence of the superficiality effect a rather reliable sign of event-internal pluractionality. The reasons why this is so will be made more explicit below and in section 3.6.2., where the other type of event-internal pluractionality is discussed.

Tentative cases are typically put together with other cases involving diminution or decrease. The intuitive explanation for the diminution effect that can be sometimes found in the literature (Cusic 1981, Tovenà & Kihm 2008) can be paraphrased as follows: if an event is divided into many pieces the pieces are necessarily rather small. However, it is not very easy to express the intuition more precisely than this. I will not

⁵⁸ Or, more generally, cases that involve some form of diminution; cf. Wood (2007), Tovenà & Kihm (2008), Greenberg (2010).

⁵⁹ This is in fact very likely since the sentence was used to talk about students not studying hard enough. The books can thus be understood as a collection of study texts required for an exam.

offer a general explanation for the diminutive effect applicable to all cases found across languages. Nevertheless, I will propose an explanation for the emergence of tentative interpretations according to which the connection between the diminution effect and event-internal plurality is very natural.⁶⁰ In particular, I will suggest that what the examples in (46) have in common is the fact that they all involve what I will be calling ‘non-exhaustive distribution’, which in turn is a consequence of the need to secure plural anchors in situations that involve a single participant.

In section 2.8.1., I showed that pluractionals seem to give rise to exhaustive interpretations in some cases (47) and to non-exhaustive interpretations in others (48):

- (47) a. Sunàa zàz-zàune
 3PL.IMPF RED-sit.ST
 ‘They were all seated’
 b. Naa nàn-nèemee tà
 1SG.PF RED-look.for her
 ‘I looked for her everywhere’
- (48) a. Gidân yaa rur-rùushee
 house 3SG.M.PF RED-collapse
 ‘The house collapsed in some parts’
 N.B. several places are damaged but the house is probably still usable
 b. %Kankanaa yaa rur-rùbee
 watermelon 3SG.M.PF RED-rot
 ‘The melon is partly rotten’

In (47), the pluractionals are interpreted as implying that all the participants were seated (a) and that all possible places were searched (b). The sentences in (48) exemplify the opposite effect: not all parts of the house have collapsed (a) and not all parts of the watermelon are rotten (b). In section 2.8.1., I also showed that even in the seemingly exhaustive cases, exhaustivity is not a genuine requirement, as the effect can be cancelled easily. Still, it is rather puzzling that the same form can sometimes lead to an apparently exhaustive interpretation while in other cases the interpretation is basically the opposite, i.e. clearly non-exhaustive.

In order to solve this puzzle, I would like to suggest that the ‘exhaustive’ and ‘non-exhaustive’ interpretations both result from the tendency to emphasize the event plurality. I propose that the seemingly exhaustive interpretation is the result of stressing the fact that the participants took part in the event strictly individually:

⁶⁰ Tentative interpretations are the only regular cases of Hausa pluractionals that involve some form of diminution. Other diminutive cases are not formed productively in Hausa – unless conative cases are considered diminutive as well – but repetition of ‘smaller’ events is sometimes found with frozen pluractionals, e.g. *gùrguràa* ‘gnaw’.

- (49) Mutàanên sun zaz-zàunaa
 people.the 3PL.PF RED-sit.down
 'The people all sat down'

If the individual involvement of the participants in the event is stressed, this can give rise to the implication that all the participants were involved.

However, the tendency for high individuation can also lead to the opposite effect. In particular, in cases where the anchors correspond to parts of a single individual, inserting 'gaps' between the parts makes the plurality clearer. In other words, if some parts of an individual are not involved in the plural event and thereby interrupt the continuum, the separateness (plurality) of the entities involved in the plural event becomes more obvious (e.g. in the examples in (48)).

I propose that tentative interpretations arise in some cases as a consequence of such non-exhaustive interpretations.⁶¹ To see how, consider the examples given above again. In (46a), there is a plural event of sweeping for which the event units are mapped to different parts of a single room. If not all but only some parts of the room are associated with an event unit of sweeping, however, the resulting interpretation will be that of an action performed superficially. Similarly for the book reading example in (46c): the sentence describes a situation in which the individual units of the plural reading event are not distributed to all parts of the books. Again, if one reads only some, instead of all, parts of the books, it suggests that the reading was not very thorough.⁶² Example (46b) is less transparent since the sentence does not specify what the single participant is that provides the part structure over which the plural event can be (non-exhaustively) distributed. Nevertheless, I suggest that this example represents the same phenomenon. One could think of a number of different tasks that together constitute the 'work' that was supposed to be carried out.⁶³ If only some of these tasks are done, the result is an interpretation implying superficiality.

As mentioned above, the fact that pluralization sometimes goes hand in hand with decrease or diminution has often been noticed in the literature. Kouwenberg & LaCharité (2003, 2005) offer an approach to this type of effect (in adjectival reduplication in Jamaican Creole) that is very similar to mine. They discuss different cases of reduplication in Jamaican Creole and suggest that the general meaning contribution of reduplication can be paraphrased as 'more of the same'. An apparent counterexample to that generalization can be found in the adjectival domain, where the

⁶¹ As can be seen from (48a-b), tentative readings are not a necessary consequence of non-exhaustive distribution to parts. Whether a pluractional receives a tentative interpretation or not depends also on the lexical meaning of the verb and the specific context.

⁶² Recall that in this case either the books are interpreted collectively, or each of the books is associated with a plurality of reading events.

⁶³ Speakers who accept the sentence in (46b) but do not assign it a tentative interpretation, usually translate it as 'we did many different things/ tasks/ jobs'.

semantic effect of reduplication is a lower degree of the relevant property compared to the non-reduplicated form, or distribution of the property in small portions all over the place, for instance, *yelo-yelo* ‘yellowish, yellow spotted’. According to Kouwenberg & LaCharité (2003:538), “[t]hese [Jamaican Creole] data provide a clue for the possible source of the diminutive reduplication: more of the same form indeed stands for more of the same meaning, but in the case of *yala-yala/ yelo-yelo*, more means many occurrences distributed over a single surface”. The characterization “distributed over a single surface” clearly refers to distribution to some (and not all) parts of the surface. Each occurrence of the relevant property is then necessarily ‘smaller’. In that sense the adjectival case in Jamaican Creole is completely parallel to the tentative cases in Hausa.⁶⁴

The suggestion that the diminution effect is caused by the restriction of a plurality of events to a single individual is also supported by the following data from Modern Hindi. In these cases, the diminution effect can be observed when the adjective modifies a singular NP, but not when it modifies a plural NP:⁶⁵

- (50) a. hariiharii (pattiyan) [Modern Hindi]⁶⁶
 green-green (leaves)
 ‘very green (leaves)’
 b. hariiharii saarii
 green-green sari
 ‘greenish sari’

To sum up, I suggest that the diminution/ superficiality effect found in Hausa pluractionals arises as a consequence of non-exhaustive distribution of a plural event over parts of a single participant, which in turn serves the purpose of highlighting the plurality of the participant anchors. This type of reading might be considered event-internal. Nevertheless, I suggest that this effect is just a side effect of restricting the event plurality to a single participant, and should not be encoded in the meaning of the pluractional morpheme itself.

3.5.5. Related proposals in the literature

It should be clear now that the so-called participant-based cases of pluractionals are by no means simple, as they give rise to interpretations with a high degree of complexity. One of the reasons for this is that even though in many cases participant-based interpretations rely on the existence of natural units, other types of participant units can

⁶⁴ Note that Kouwenberg & LaCharité’s explanation accounts directly only for the meaning paraphrased as ‘yellow spotted’. However, it seems plausible that the low degree interpretation (‘yellowish’) can develop from the more clearly plural one (‘yellow spotted’).

⁶⁵ The fact that the example in (50a) also involves intensification is not important at this point but see section 3.7.3.

⁶⁶ Singh (2005:268).

be created, both above and below the natural ones (groups and parts, respectively), or in cases in which no natural units are available in the first place. Another reason is that verbs often have more than one argument, which makes the situation even more complex.

In this section, I briefly discuss some of the proposals dealing with interpretations that can arise when verbs combine with (syntactically) plural NPs. The insights of these studies are relevant for the discussion of pluractionality because the facts are largely parallel to what can be observed with Hausa pluractionals combining with plural NPs. However, the applicability of such theories to the Hausa data is limited, as these readings represent only a subset of the interpretations found with Hausa pluractionals.

Let us start by looking at an example representing the type of data relevant for the present discussion (repeated from (20)):

- (51) Yârân sun dāɗ-dāgà teebùŋooŋii
 children.the 3.PL.PF RED-lift tables
 ‘The children lifted some/ the tables’

As already discussed in section 3.5.2., sentences like (51) can be used in many different situations: the children can be involved in the lifting individually or in smaller groups, and the tables can be lifted one by one or in stacks, as long as the event is plural. To obtain more insight into this type of interpretations, let us have a look at how Schwarzschild (1996) and Landman (1996, 2000) deal with the interpretations that sentences with two plural arguments can be assigned. The focus will be on the applicability of Schwarzschild’s and Landman’s proposals to parallel cases of Hausa pluractionals.⁶⁷

Starting with Landman’s (1996, 2000) theory of plurality, one of the basic distinctions is a distinction between singular and plural predication. Singular predication involves the application of a semantically singular predicate to a semantically singular argument. Plural predication refers to cases where a plural predicate is predicated of a plural argument. Singular arguments have two types of denotation: they are either individual atoms, or group atoms. Plural arguments denote sums. Groups are created by a group formation operation ($\uparrow$) from sums. The fact that plural NPs can have either a sum interpretation or a group interpretation makes it possible for sentences like (52) to have both an interpretation according to which each of the boys carried the piano upstairs on his own (distributive interpretations) and an interpretation according to which all the boys together carried the piano (collective interpretation).

- (52) The boys carried the piano upstairs

⁶⁷ It should be kept in mind that neither theory was proposed to deal with pluractional verbs: the ‘plural interpretations’ are plural interpretations of English predicates.

The distributive reading is a case of plural predication. By definition, if a semantically plural predicate (*P) applies to a sum of individuals (e.g. $a \cup b \cup c$), then the corresponding singular predicate (P) applies to each atom in the sum (a , b and c). The collective reading arises when the predicate is interpreted as singular and the argument as a group, rather than as a sum. This means that collective readings involve singular predication.

For the present discussion, it is necessary to consider cases like (53), which involve more than one argument:

(53) Three boys invited four girls

The number of readings assigned to sentences like (53) varies from author to author. On Landman's account, the sentence has eight basic readings, which are derived from the fact that both the subject and the object can be interpreted either as a sum, or as a group, and the availability of a scope mechanism that can derive scoped readings. Scoped readings will not be discussed here as there is no evidence for scope interactions between the arguments of pluractionals. However, it is not very easy to demonstrate that arguments of pluractionals indeed do not interact scopally since sentences with pluractionals parallel to (53) cannot be constructed. This is because pluractionals are incompatible with a precise specification of the number of participants, as shown in section 2.5. of Chapter 2.⁶⁸ It is possible for various expressions to take scope over the pluractional but a plural expression scoping over the pluractional cannot license it. Consider the following sentence:

(54) Sàu dà yawàa taa bub-bùgà teebùr̃
 times with many 3SG.F.PF RED-hit table
 'Many times, she hit the table repeatedly'

The adverbial in (54) takes scope over the pluractional. This means that each occasion has to involve repeated hitting. It is not possible to use this sentence if each occasion involved only one hit, which shows that *sàu dà yawàa* 'many times' cannot license the pluractional in this sentence.

Having excluded scoped interpretations from the discussion, let us return to sentence (53) and the interpretations Landman assigns to it. The basic scopeless readings are the following: both the subject and object are interpreted as groups (a), the subject is interpreted as a sum and the object as a group (b), the subject is interpreted as a group and the object as a sum (c), and both the subject and object are interpreted as sums (d):

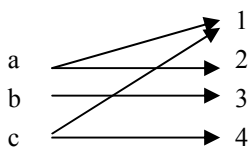
⁶⁸ Examples containing a pluractional and an indefinite that could potentially be interpreted as co-varying with the individuals forming the plural subject like 'many boys insulted a teacher' turn out to be extremely difficult to construct and the speaker's judgments are very inconsistent.

(55) *Basic scopeless interpretations of sentences with two plural arguments*
(Landman 2000):

- a. group subject – group object
- b. sum subject – group object
- c. group subject – sum object
- d. sum subject – sum object

Illustrating the different readings using sentence (53), reading (a) is the reading on which a group of three boys invites a group of four girls. Reading (b) is the reading on which each of the boys individually invites a group of four girls.⁶⁹ Reading (c) corresponds to the situation in which a group of three boys invites each of the girls individually. Finally, reading (d) is a reading on which each of the three boys invited some girl and each of the four girls was invited by some boy and it is not specified exactly how the inviting is done (but all the participants are involved in the event individually). A possible scenario that makes the sentence true on reading (d) is given in Figure 3.7. (Landman 2000:208).⁷⁰

Figure 3.7.: Possible scenario for reading (d) of sentence (53)



Note that readings (b-d) are plural, since at least one of the argument NPs is interpreted as a sum. The double collective reading in (a) is singular because both arguments are interpreted as group atoms. In accordance with this, Hausa pluractionals can be used to describe situations corresponding to the plural readings (b-d) but not situations corresponding to the double collective reading (a). This is illustrated by the fact that for sentences like (51) to be felicitous, it is not possible to interpret both the subject and the object collectively.

The plural readings above do not exhaust the interpretive possibilities of sentences like (51), as such sentences are also true on cover readings (which do not belong to the set of basic readings according to Landman 2000). Cover readings are readings where the participants do not take part in the event strictly individually, but rather in subgroups.

⁶⁹ Since the reading is scopeless, it has to be the same group of girls for each boy. The same holds for reading (c): each girl is invited by the same group of boys. For details, see Landman (2000).

⁷⁰ Landman labels reading (d) ‘cumulative’ (cf. Scha 1981). Nevertheless, not everyone uses the term in this rather narrow sense. For other researchers (Kratzer 2003), the term ‘cumulative reading’ includes other cases that involve two plural arguments without scopal interaction as well, that is, also cover readings, which are discussed below.

Landman (2000:210) gives as an example of a cover reading the most natural reading of the following sentence:

(56) Four hundred fire fighters put out twenty fires

The relevant reading here is the reading according to which some groups of fire fighters put out fires, the total number of fire fighters being four hundred and the total number of fires twenty. Note that sentence (56) does not have reading (d) described above, as a situation in which four hundred fire fighters put out fires as individuals would require at least four hundred fires. By contrast, sentence (53) does have a number of cover readings. For instance, a cover reading would be a reading on which the group consisting of *boy 1* and *boy 2* and the group consisting of *boy 2* and *boy 3* invite two groups of girls, one being formed by *girl 1* and *girl 2* and the other being formed by *girl 3* and *girl 4*. Landman's (2000) definition of cover is given below:⁷¹

(57) group β is a subgroup of group α iff $\downarrow(\beta) \sqsubseteq \downarrow(\alpha)$.

Let X be a set of subgroups of group α .

X covers α iff $\sqcup\{\downarrow(x) : x \in X\} = \downarrow(\alpha)$.

A plural NP like *four hundred fire fighters* can be assigned any number of cover interpretations, with each block or cell of the cover corresponding to a subgroup.

As shown above, pluractional verbs do allow for cover interpretations. In the case of (51), the children can perform the lifting in smaller groups and the tables can be lifted a few at a time. Thus, one could summarize the applicability of Landman's theory to the relevant Hausa data by saying that sentences like (51) give rise to (scopeless) plural readings: the three basic readings (b-d) and cover readings.

A different approach is taken by Schwarzschild (1996). According to Schwarzschild, there is no need to make a distinction between distributivity to atoms and distributivity to subpluralities: both represent distributivity to the cells of whatever cover is contextually relevant in any particular case. That is, in some cases each cell contains only a single individual – distributivity to atoms – in other cases more – distributivity to subpluralities. All plural readings are thus cover readings. Note that the definition of cover used by Schwarzschild differs slightly from that of Landman's: it makes reference to subsets, rather than subgroups.⁷²

⁷¹ Compare this definition to the definition given in (58). $\downarrow$ maps groups to their members (the corresponding sums).

⁷² Cf. also Gillon (1987) and Chierchia (1998). The difference between the two definitions of covers is relevant for the present discussion as will be shown below.

- (58) C is a cover of P if and only if:
1. C is a set of subsets of P
 2. Every member of P belongs to some set in C
 3. $\emptyset$ is not in C

Schwarzschild's theory of distributivity has a strong pragmatic element to it, which also means that sentences are not assigned a number of different readings but rather a single interpretation that can be validated by several different scenarios, depending on what cover is chosen in the given context.

This type of approach seems to be better suited for Hausa cases like (51), since it does not seem to make sense to differentiate between distributivity to atoms and subpluralities/ subgroups there. Nevertheless, what seems to be less well suited for dealing with Hausa pluractionals is the fact that Schwarzschild does not set collective readings apart from plural readings. In other words, collective readings are not considered singular. On Schwarzschild's account, collective readings constitute a subtype of cover, i.e. plural, readings: they arise in cases where the cover has a single cell. On the other end of the continuum, there are covers that have as many cells as the plurality has members. Thus, collective readings and readings that involve distributivity to atoms are just two extremes, two borderline cases of the same meaning. As a consequence, the distinction between collective and distributive readings disappears from the grammar. As far as Hausa pluractionals are concerned, this does not seem to be a desirable result since now it is not clear why collectively interpreted arguments cannot license pluractionals. Notice that the same holds for distribution to subgroups. For an adequate account of Hausa pluractionals, it is important that each individual event unit is associated with a singular participant which is either an individual or a (sub)group.⁷³ In Schwarzschild's theory, however, there are no (sub)groups, just (sub)pluralities. One might consider enriching Schwarzschild's system by a condition saying that only readings involving more than one cell are plural. If the cover contains a single cell the interpretation would be singular. This addition would probably solve the problem. Nevertheless, this solution would go against the spirit of the proposal which eliminates the collective vs. distributive distinction from the grammar because they are just extreme cases of the same meaning.

Comparing Landman's and Schwarzschild's proposals, it seems that in order to capture the range of readings that pluractional verbs can give rise to in cases like (51), an intermediate position is desirable. Landman differentiates a number of plural readings where no distinctions are necessary.⁷⁴ By contrast, Schwarzschild's approach, despite the

⁷³ Recall that this is the principle of anchoring: a singular anchor defines an event unit and plural anchors correspond to plural events.

⁷⁴ Landman actually has to extend the theory to account for cover readings: they do not belong to the eight basic readings. Cover interpretations are shifted interpretations. In fact, Landman himself points out that once there are cover readings in the theory, all other scopeless readings can be considered borderline cases of the (double) cover reading – just like in Schwarzschild (1996). Landman considers Schwarzschild's theory a

advantage of putting all plural readings elegantly together and leaving a lot to pragmatics, seems to run into problems by not separating (double) collective readings. What seems to be needed for Hausa pluractionals is a theory that does not make unnecessary distinctions on the one hand, but that treats collective readings as singular on the other. This extends to how covers should be defined. In particular, an adequate treatment of Hausa pluractionals would require covers whose cells behave like atomic entities, i.e. subgroups, rather than subsets/ subpluralities. The existence of group atoms and covers defined in terms of subgroups (as in Landman 2000) thus seems necessary. Nevertheless, Schwarzschild's (1996) approach offers a more natural explanation of the range of situations in which sentences like (51) are true. In other words, both proposals bring important insights but neither is perfectly suited to account for the participant-based interpretations of Hausa pluractionals.

Recall that the two theories just discussed were intended to account for non-pluractional data. They are basically theories of how verbs apply to plural arguments. As a result, the overlap with the types of readings found in the case of (Hausa) pluractionals is only partial. A theory explaining how pluractional verbs apply to their arguments would also need to account for cases of distribution to parts, for example. An approach that relies on a general notion of part structure, such as Moltmann (1997), might be better suited for such an endeavor. Nevertheless, it should be clear that even a theory covering all participant-based cases could not be considered a theory of pluractionality, since participant-based interpretations are not the only type of interpretation that pluractionals give rise to.

3.5.6. Conclusion

This section discussed cases of Hausa pluractionals derived from predicates that are not naturally atomic. I argued that in such cases, the event units forming a plural event have to be individuated with the help of anchors (see Component 2 in Figure 3.4.). I also argued that there is a constraint on the anchoring process in Hausa: the non-equivalence condition. This condition states that the individual event units should not be just identical copies of each other but that they should rather differ from each other in some way. This effectively rules out cases with temporal anchors, which would result in iterative interpretations. As for the other potential anchors, it was argued that there is no need to differentiate any further subtypes. Locations and participants can be treated alike as far as their anchorhood is concerned. Despite that, participant-based cases deserve special attention because of the level of complexity they give rise to.⁷⁵ This complexity

serious alternative to his own but points to some problems of Schwarzschild's approach as well. For details see Landman (1996, 2000).

⁷⁵ Recall that the elements functioning as anchors do not have to be expressed in the sentence and that in some cases it is not even clear what exactly should be understood as anchoring the individual event units. Therefore, not only participant-based interpretations but all types of anchoring cases are more complex than those that do not rely on anchoring.

is mainly due to the existence of collective interpretations and the fact that verbs often have more than one argument. Another reason is the existence of cases where the individual event units of a plural event are anchored by parts of participants. The so-called tentative cases, which represent one of the two types of event-internal interpretations in Hausa, were treated as a subtype of the ‘distribution-to-parts’ cases. Finally, two proposals were discussed that deal with plural interpretations parallel to those found with participant-based cases of Hausa pluractionals. Their applicability to Hausa pluractionals is limited, however, because Hausa pluractionals also give rise to other than participant-based interpretations. Some of them will be discussed in the following section.

3.6. Event individuation through natural atomicity

The core meaning of pluractional verbs in Hausa is event plurality: pluractional verbs denote sums of events (cf. Component 1 in Figure 3.4.). As events are very abstract entities, it is also necessary to have a theory of event individuation. I have argued that most verbal predicates refer to events that are not inherently individuated as a result of which the relevant event units have to be created. This is done with the help of individuators that I call anchors (see Component 2 in Figure 3.4.). The previous section was devoted to discussing such cases. Nevertheless, there are also naturally atomic verbs for which the event units are specified lexically, for instance, *shùuraa* ‘kick’, *bugàa* ‘hit’, *màaraa* ‘slap’ (Component 2 does not apply). These cases are dealt with in the present section.

Pluractionals derived from naturally atomic predicates deserve special attention for the following reasons. First, they are the only cases that give rise to temporal-like (repetitive) interpretations. Second, it is not clear whether these verbs should be classified as event-external or event-internal. It seems that in some languages these pluractionals have event-internal characteristics, while in others they pattern with event-external pluractionals. In the following, I will explain how repetitive interpretations arise. I will also argue that these cases should not be considered event-internal with the exception of a specific subtype: the conative cases.

3.6.1. Naturally atomic predicates: no anchoring needed

At first sight, the examples below seem to be blatant counterexamples to the claim that Hausa lacks iterative readings:⁷⁶

- (59) a. Taa tat-tàbà hancintà
 3SG.F.PF RED-touch nose.her
 ‘She tapped her nose/ touched her nose repeatedly’

⁷⁶ This type of examples is very common and speakers do not hesitate about their well-formedness.

- b. Yaa shùs-shùuri teebùr̃
 3SG.M.PF RED-kick table
 ‘He kicked the table repeatedly’
- c. Yaa sàs-sòoke shi
 3SG.M.PF RED-stab him
 ‘He stabbed him repeatedly’
- d. Bellò yaa bub-bùgà koofāṛ
 Bello 3SG.M.PF RED-hit door.the
 ‘Bello knocked/ banged on the door’

In the situation described by sentence (59a), the nose is touched repeatedly. Sentences (59b) and (59c) refer to repeated kicking and stabbing, respectively. Similarly, in (59d), the felicitous use of the pluractional requires there to be repeated knocking. Looking at these pluractionals more closely, however, it becomes clear that they differ from the unacceptable iterative cases by being derived from semelfactive verbs.⁷⁷ Semelfactive verbs refer to short actions that can be, and often are, repeated immediately. This can be related to the fact that they typically involve a movement that ends in the same position where it started. These events lack complex internal structure, and most importantly, they are inherently individuated by virtue of the predicates being naturally atomic (Rothstein 2008; cf. section 3.2.). Natural atomicity means that what counts as one kick or hit does not depend on the verbs’ arguments, context or anything else: it is lexically specified. It is enough to know what verbs like *knock* or *hit* mean to know what constitutes one event of knocking or hitting. This by itself explains why semelfactives in the pluractional form can receive an interpretation involving repetition. Recall that the non-equivalence condition, which rules out all other iterative interpretations, is a constraint on anchoring only. Naturally atomic verbs, however, do not have to rely on anchoring for event individuation. As a result, they are not subject to the non-equivalence condition, which means that the individual event units of plural events can be essentially identical (Component 2 in Figure 3.4. does not apply in these cases).

If pluractional semelfactives combine with singular arguments, the resulting interpretation is naturally that of repetition (cf. (59) and (60)). Nevertheless, repetition is not a necessary interpretation of these verbs, as can be seen in (60b):

- (60) a. Yaaròn yaa bùb-bùgee ni
 boy.the 3SG.M.PF RED-hit me
 ‘The boy hit me repeatedly/ beat me up’

⁷⁷ Recall that in my use of the term, semelfactive verbs are verbs that have a semelfactive use, rather than being used to refer exclusively to single events.

- b. Yârân sun búb-búgee sù
 children.the 3PL.PF RED-hit them
 ‘The children beat them up’

N.B. there were multiple hits involved, each person could have been hit just once (but possibly many times)

If the pluractional verb has only singular participants, as in (60a), the only possible interpretation is repetition: a single agent hitting a single patient repeatedly. However, if there are plural participants as in (60b), it is possible that no one was hit repeatedly and the hits did not even have to occur in (strict) succession. The only requirement is that the event involves multiple hits.⁷⁸

Note that this is not a case of ambiguity – the sentences in (60a) and (60b) do not represent two different readings of the pluractional. Rather, in both cases the pluractional simply conveys event plurality. The way in which this plurality is distributed over the participants referred to by the verbs’ subjects and objects is not specified by the pluractional itself. While with singular arguments all the event units are necessarily associated with the same participant, in the case of plural arguments each participant can be matched with one or more event units.

Semelfactives are not the only naturally atomic verbs. Rothstein (2008) considers achievements naturally atomic as well and, indeed, verbs like *karyàa* ‘break’ are in some respects very similar to semelfactives, at least in contexts like the following:

- (61) Naa kak-kàryà fensiĩ
 1SG.PF RED-break pencil
 ‘I broke the pencil many times/ into many pieces’

Events like breaking are not repeatable with the same participant. Therefore, if the pluractional combines with a singular argument, the event units are necessarily associated with different parts of the participant, rather than being just repeated.⁷⁹

Having explained how repetitive readings arise, let us have a look at an example that seems to constitute a problem for the plurality analysis. It is the apparent continuous case presented in section 2.3.7.:

- (62) Naa tut-tùurà mootàa
 1SG.PF RED-push car
 ‘I pushed the car’
 N.B. %continuously, without stops

⁷⁸ Nevertheless, total simultaneity is very unlikely because that would suggest collective action (cf. section 3.5.3).

⁷⁹ There is some evidence that cases like (61) should be understood as involving natural atoms, rather than anchoring by parts. In particular, (61) is accepted without any problems even by speakers who generally disprefer distribution to parts.

As already suggested in section 2.3.7., example (62) could be analyzed as describing a situation involving repeated inputs of energy: the person pushes again and again, repeats his or her effort, but the movement is actually never interrupted. Looking at the example in light of my account of how the event units in a plural event are individuated, it is clear that a repetitive interpretation should only be possible with predicates that are naturally atomic. Indeed, I suggest that *tuuràa* ‘push’ is used in a semelfactive sense here. This kind of meaning is the meaning of *push* in *push the button*. Pushing a button is different from pushing a cart. It is like kicking or hitting in that it can be represented by the same type of trajectory (characterized by returning to the starting point), and it is also naturally atomic. Presumably, *tuuràa* ‘push’ receives this type of reading in (62) more easily if the car is heavy and thus repeated inputs of energy are required. Thus, the semelfactive sense of *tuuràa* enables the repetitive interpretation, but the repetitiveness of the action is obscured because the agent maintains contact with the object pushed. The fact that the individual event units of pushing can be repeated almost without any visible transitions gives the impression that the event is continuous. In comparison to pushing, repeated hitting can also consist of hits that follow each other without any pauses between them, but in the case of hitting it is always clear where one hit ends and another begins. The fact that the gaps are much less visible in the case of (62) explains also why the example is only marginally accepted: the use of pluractionals generally requires that the plurality of event units is evident.

There is one more type of repetitive cases that has not been discussed yet: the so-called conative cases. I will analyze them in the following section since these uses are best discussed in relation to the question of whether repetitive pluractionals (the so-called *knock*-type pluractionals) should be considered event-internal or not. I will argue that, with the exception of the conative cases, repetitive interpretations do not represent event-internal plurality.

3.6.2. Event-internal status of ‘repetitive’ cases and conative interpretations

Some researchers have proposed analyses of pluractional semelfactives (*knock*-type pluractionals) in terms of event-internal plurality (cf. Wood 2007, Henderson 2010, Souag 2010, Greenberg 2010; for a different view see Toven & Kihm 2008). While this might be the right approach for some languages, I will argue that in Hausa the *knock*-type cases are not event-internal pluractionals since they do not fulfill the criteria for event-internal plurality presented in section 3.5.4.2. Nevertheless, I will also argue that there is a subtype of repetitive cases that are probably best analyzed as event-internal, namely, the so-called conative cases.

Let me start by demonstrating on the basis of *mammara* ‘slap.PLC’ that pluractional semelfactives are not event-internal. Criterion (a) states that the individual event units of an internally plural event are necessarily mapped to the same argument. Sentence (63)

below demonstrates that argument identity across event units is not required with verbs like *mammara*:

- (63) Taa màm-màari yârân
 3SG.F.PF RED-slap children.the
 ‘She slapped the children’
 N.B. many slaps in total but possible if she slapped each child once only

The fact that each child could have been slapped once only shows that each of the individual event units forming the plurality can have a different participant. Criterion (b), the accessibility criterion, is harder to use in Hausa, since pluractionals are in general not compatible with numerals specifying the number of events. However, some speakers do accept modification by *x-times* adverbials – at least if they contain vague quantity modifiers, rather than numerals, as is the case of *sàù dà yawàa* ‘many times’. In those cases the adverbials can specify the number of the individual subevents:

- (64) %Taa màm-màaree shì ?sàù goomà/ ?sàù dà yawàa
 3SG.F.PF RED-slap him times ten/ times with many
 ‘She slapped him ten/ many times’

In (64), the relevant reading is the one in which the total number of slaps was ten/ many. Thus, it can be concluded that the event units are accessible for counting if the speaker allows for more or less precise specification of the number of event units in general.⁸⁰ Finally, criterion (c) points to the same conclusion. Every individual slap constituting the plural slapping in (65a) can be described using the simple verb *màaraa* ‘slap’ (65b):

- (65) a. Taa màm-màaree shì
 3SG.F.PF RED-slap him
 ‘She slapped him many times’
 b. Taa màaree shì
 3SG.F.PF slap him
 ‘She slapped him’

The conclusion is very clear then: pluractionals like *màmmaaràa* are not event-internal. The same pattern is found with all lexical semelfactives. However, it is an interesting fact about this type of pluractionals that they appear to be event-internal in other languages (Wood 2007, Henderson 2010, Souag 2010). This is in accordance with Tovenà & Kihm’s (2008) suggestion that *knock*-type pluractionals constitute a special class, standing somewhere between event-external and event-internal pluractionality. I

⁸⁰ Recall that for some speakers the *x-times* adverbials can also specify the number of sequences of slaps. Nevertheless, in such cases, the adverbial would normally be placed at the beginning of the sentence:

- (i) Sàù goomà taa màm-màaree shì
 times ten 3SG.F.PF RED-slap him
 ‘Ten times, she repeatedly slapped him’

suggest that this is due to the nature of this type of events, in particular, their simplicity. It has been observed in the literature that for events to be suitable event units of internally plural or complex events, they must not be complex themselves (Wood 2007:134). Semelfactives, as predicates that refer to very simple events, thus have the potential to give rise to event-internal pluractionality. An explanation of why they sometimes do and sometimes not can be proposed if Henderson's (2010) distinction between two types of event atoms is adopted, namely, the distinction between mereological and aspectual atoms. For example, events of the accomplishment type, are not aspectually atomic, since they consist of several parts/ phases (preparatory process, culmination, consequent state, in Moens & Steedman's 1988 terminology). A single (complete) event of the accomplishment type can however be considered a mereological atom. By contrast, events of the semelfactive type are not only mereological atoms, they are also aspectual atoms because they do not have any subparts. Both types of atoms can serve as the units that pluractionals make use of. Naturally, however, pluractionals that are formed with respect to these two different types of atoms also have different properties. In Henderson's (2010) paper, this is illustrated by the contrast between Karitiana pluractionals, which arguably make use of mereological atoms, and one type of Kaqchikel pluractionals, which take aspectual atoms as their units and exhibit some properties of event-internal pluractionality. If event-internal pluractionality presupposes aspectual atoms, and if semelfactives have units in their denotation that are both mereological and aspectual atoms, it is not surprising that they can form both types of pluractionals. Thus, in Hausa, whose pluractionals presumably operate on mereological atoms, pluractional semelfactives do not have event-internal properties. Nevertheless, nothing prevents semelfactives to derive event-internal pluractionals in other languages.

While semelfactive (*knock*-type) pluractionals are not event-internal in Hausa, I would like to argue that Hausa has one more type of event-internal pluractionals, apart from the tentative cases. These are the so-called conative cases. Despite the fact that conative cases are best analyzed as cases of event-internal pluractionality, I will argue that it is not necessary to assume a separate analysis for them. Conative cases represent a subtype of repetitive cases, and the conative interpretation is a result of coercion. Consider the following two examples (cf. section 2.4.3.):

- (66) a. %Naa dàd-dàgà teebùr̃
 1SG.PF RED-lift table
 'I tried to lift a table'
- b. Naa tut-tùurà kaayân
 1SG.PF RED-push stuff.the
 'I tried (repeatedly) to push the things in'

In (66a), the person is (repeatedly) trying to lift the table. Sentence (66b) can be used, for example, if someone is attempting to fit things into a car that is already too full. I will first discuss how conative interpretations arise. Subsequently, I will show that, according

to the criteria adopted in this thesis, these cases seem to represent event-internal pluractionality. Finally, I briefly discuss what the two types of event-internal interpretations found in Hausa – the tentative and conative interpretations – have in common. I will also address the related question why event-internal pluractionals tend to give rise to special meaning effects of this type.

I propose that cases like (66) above should be treated as cases of coercion. A more complex event of the accomplishment type is coerced into a simpler one in which the culmination phase is eliminated (cf. Wood 2007, Henderson 2010) and it is this reduced event that is pluralized. Further, I propose that this kind of coercion is a way to provide an interpretation for sentences that would otherwise be unacceptable due to the lack of plural anchors.⁸¹ Coercion into a simpler event type is a successful rescue strategy because it turns the given verbal predicate into an inherently atomic one that does allow for a repetitive interpretation.

Let us have a look at how this works. In the situation described by sentence (66a), if someone tries to lift a table and does not succeed, the event resembles events referred to by semelfactive verbs: since the culmination stage is not reached, the movement ends where it started. This kind of ‘trajectory curve’ is characteristic of events such as winking, knocking, kicking, hitting etc. It is precisely what identifies the event units in these cases, making the events immediately repeatable at the same time. By turning a lifting event into an attempt to lift, the culmination stage of the lifting event is removed. As a result, an event of the accomplishment type is turned into a semelfactive event. This means that the predicate becomes inherently atomic, allowing for the repetitive interpretation to arise in the way described in the previous subsection. In the case of (66a), the repetition involves the atomic events of table-lifting attempts. The same can be said about (66b): if the subject fails to push something into its target location, she ends up where she started. Thus, in this case as well, by cutting off the culmination stage, an atomic event of the semelfactive type is created. The meaning of such an atomic event is comparable to the one discussed in connection with the apparent continuous example (62): *tuuràa* ‘push’ in (66b) resembles the ‘count’ use of *push* in *push a button*.

Coercion should be a strategy employed only when necessary (cf. de Swart 2011a). Also the type of coercion found with conative cases is presumably only available with certain types of predicates, namely those that refer to events whose culmination-less forms resemble events of the semelfactive type. Hence conative cases are relatively rare, despite the systematicity with which this type of interpretation is assigned.

Note also that the approach to the conative readings taken here is in accordance with Henderson’s (2010) observation that semelfactive verbs do not seem to give rise to conative readings when pluralized: the pluractional form of the verb meaning ‘wink’

⁸¹ In example (66b), one could possibly imagine another plural interpretation, namely, one where parts of the load were pushed in the car one by one. However, this type of interpretation did not seem available for the speaker who offered this judgment.

cannot mean ‘try to wink’. This is expected on the present account as well. The purpose of the coercion is to create a naturally atomic predicate, thus it does not occur with predicates that already are naturally atomic.⁸²

The diagnostics for event-internal pluractionality used in this thesis provides a clearer picture in the case of conative interpretations in comparison to the tentative cases (see section 3.5.4.2.). The argument identity criterion (a) is satisfied: there are necessarily plural attempts per individual. Criterion (b), based on the accessibility of the event units, cannot be used in these cases for lack of the relevant data. Criterion (c), however, provides a clear answer: conative cases are event-internal since the individual event units in e.g. the table-lifting context (66a) are not themselves table-lifting events because they do not reach the culmination stage.

I conclude that conative interpretations are event-internal. Importantly, just as in the case of the tentative readings, a separate analysis for conative cases is not necessary, since in both cases the event-internal interpretation arises as a side effect of the restriction of the event plurality to a singular participant. In the tentative cases, it is a result of the requirement to provide parts within the single participant of the event that are clearly separate. In the conative cases, sentences that would otherwise be unacceptable are saved by coercing the verbal predicate into an inherently atomic one, which then allows for a repetitive interpretation. Since both tentative and conative interpretations arise as a consequence of linking the event plurality to a singular argument, it is not surprising that these cases pattern with event-internal pluractionals. One of the defining properties of event-internal plurality is exactly that: plural event units per argument (criterion (a)). The explanation for these two types of event-internal interpretations offered in this thesis relates them in a meaningful way by defining the link between event-internal plurality on the one hand, and the tentative and conative meaning effects on the other.

3.6.3. Conclusion

This subsection concludes the discussion of how event units of plural events are individuated. All Hausa pluractionals refer to plural events. However, the way in which event plurality is manifested depends on what type of predicate is used in any given case. I have suggested that all verbal predicates can be divided into two categories: those that

⁸² Both Wood (2007) and Henderson (2010) propose an analysis of conative cases that is very similar to the one offered here. The difference is that while on my approach, coercion saves the sentences because it leads to natural atomicity and by that enables repetitive interpretations, in their formulation, coercion is necessary for creating events that are sufficiently simple. This is connected to the event-internal nature of conative cases. According to Wood (2007), in the case of event-internal pluractionality, the events that get pluralized should not be complex themselves. For Henderson (2010), the type of pluractionals that can give rise to conative readings in Kaqchikel operate on aspectual atoms, i.e. events that have no internal aspectual structure. Clearly, these different explanations are not in conflict: semelfactives, while being naturally atomic predicates, refer to events that are also aspectually simple. The differences in the accounts rather reflect differences in the requirements various pluractional markers impose on the predicates they combine with.

are naturally atomic and those that are not. In the case of naturally atomic predicates, the event units are lexically specified. All other predicates need to rely on ‘anchors’ for the event units to be separated from each other.

In the next section, I turn to the discussion of the third component of the meaning of pluractionals in Hausa, which is responsible for many of their specific properties: the conditions on use following from the fact that Hausa pluractionals are special plurals.

3.7. Meaning effects of special plurality

In section 3.3., I proposed that the interpretation assigned to Hausa pluractionals is a result of three components: (a) the core meaning of the pluractional (event plurality), (b) independent principles of event individuation constrained by the non-equivalence condition, and (c) additional conditions on use following from the fact that pluractionals are special plurals (see the schema of the three-component system in Figure 3.4.). The first two components have been discussed in the previous sections. The present section deals with the third component. It will be argued here that the remaining properties of Hausa pluractionals follow from their ‘special plural’ nature. An important aspect of these properties or meaning effects that should be kept in mind is that the conditions they follow from are not fixed and inviolable to the same extent as the other meaning components, i.e. the plurality condition and the non-equivalence condition. These conditions are weaker and the meaning effects they give rise to are much harder to pin down. At the same time, as shown in Figure 3.4., the third component plays a role for all types of verbs. In this respect it differs from the second component, which only applies to non-atomic predicates.

The notion of special plurality has already been introduced. Special plurals are plurals that express meanings that go beyond simple plurality (‘more than one’). I propose that Hausa pluractionals are special plurals and this accounts for the remaining properties of Hausa pluractionals. The most prominent additional meaning effects associated with the use of Hausa pluractionals are: large number of event units, high individuation and intensification. These and other additional meanings seem to arise as a consequence of the fact that the non-pluractional form is number-neutral, that is usable in plural contexts as well. In addition, the special status of Hausa pluractionals is emphasized by the fact that they are rather marked and infrequently used forms.

In the subsections to follow, these individual effects representing an addition to the basic plurality meaning will be discussed one by one. The section is organized as follows. The requirement that the number of event units should be large will be discussed in section 3.7.1. Section 3.7.2. deals with the preference for high individuation, which is related to but separate from the non-equivalence condition. Cases of intensification will be discussed in section 3.7.3. Section 3.7.4. discusses an interesting interaction of the three meaning effects mentioned above. Section 3.7.5. deals with some other meaning effects,

which occur only with some speakers. Section 3.7.6. concludes the discussion of special plural effects.

3.7.1. Large number

In Hausa, the use of the pluractional form implies that the event units are relatively many, rather than simply plural. ‘Many’ should be understood as implying that the number of the event units is large but also impossible to specify precisely. Consider the following examples:

- (67) a. Mutàanee [?]dà yawàa/ [?]dārii/ ??biyaĩ/ [?]*biyu sun fiĩ-fiĩto
 people [?]with many/ ?hundred/ ??five/ [?]*two 3PL.PF RED-come.out
 ‘Many/ ?hundred/ ??five/ [?]*two people came out’
- b. Taa mām-màaree shì [?]sàu dà yawàa/ ??sàu biyaĩ
 3SG.F.PF RED-slap him [?]times with many/ ??times five
 ‘She slapped him (repeatedly) [?]many/ ??five times’

(67) illustrates that the number of the event’s participants (a) or repetitions (b) should not be specified. The degree of degradedness is higher if the number is very low. Vague quantity expressions are generally quite acceptable. Nevertheless, it is best if the number of event units is not specified at all:

- (68) a. Mutàanee sun fiĩ-fiĩto
 people 3PL.PF RED-come.out
 ‘Many of people came out’
- a. Taa mām-màaree shì
 3SG.F.PF RED-slap him
 ‘She slapped him many times’

I propose that this effect reflects the fact that Hausa pluractionals are special, rather than simple, plurals. Recall that a comparable effect can be found in the nominal domain in Arabic, for example:

- (69) ašja:r šajar [Arabic]⁸³
 ‘lots of trees’ ‘tree’ (generic/ collective)

In (69), the non-plural form *šajar* is number-neutral and the plural form *ašja:r* is a ‘plural of abundance’. This is clearly parallel to the situation found with Hausa pluractionals.

The ‘large number’ effect seems to be rather typical of pluractionality (cf. Corbett 2000). Nevertheless, there do seem to be cases of pluractionals indicating simple plurality. Consider the following example from Karitiana:

⁸³ Cusic (1981:18).

⁸⁶ Another argument in favor of treating the ‘large number’ effect as following from special plurality will be presented in section 3.7.4. A comparison to how this effect is captured in Lasersohn’s (1995) theory is given in section 3.9.

- c. Mutàanee sunàa zàz-zàune
 people 3PL.IMPF RED-sit.ST
 ‘The people are sitting’
 N.B. %here and there/ scattered around

Sentence (71a) can be used, according to some speakers, if the event is an event of buying different kinds of things, in different shops, at different times. Also (71b) has a ‘different kinds’ interpretation for many speakers. (71c) is sometimes interpreted as implying that the people were scattered. The preference for high individuation or diversity can also be seen from the fact that expressions like *dàban-dàban* ‘different/distinct’ are often used in sentences volunteered by the speakers:

- (72) Mutàanee sun ɓùɓ-ɓullà a wuràaree dàban-dàban
 people 3PL.PF RED-appear at places different-different
 ‘People have appeared in different places’

In section 3.5., I showed that the event units of pluractional events have to be individuated: they must be distinguished from each other in some dimension. Nevertheless, as can be observed in (71a), this individuation or differentiation often takes place in more than one dimension. In fact, this is typically the case.

Note that the high individuation requirement cannot be analyzed as an optional strengthening of the non-equivalence condition. In fact, even though these two conditions probably have the same source, the high individuation condition represents an independent requirement. This can be seen from the fact that the high individuation effect is also sometimes found in cases where the non-equivalence condition does not apply at all:

- (73) Taa màm-màaree shi
 3SG.F.PF RED-slap him
 ‘She slapped him many times’
 N.B. %not simple repetition: hitting the person in different places⁸⁷

Repetitive interpretations can only arise with inherently atomic predicates. In such cases, the non-equivalence condition does not apply since it is a condition on anchoring only. Nevertheless, some speakers still tend to interpret these cases not as involving simple repetition but rather repetition with some internal variation. In addition, some speakers report this effect with conative cases as well:

- (74) %Naa dād-dāgà teebũr
 1SG.PF RED-lift table
 ‘I tried to lift a table’
 N.B. %not just repeated attempts: trying different angles, corners of the table etc.

⁸⁷ Also with more strength; cf. the following subsection.

Recall that the non-equivalence condition does not apply in conative cases either, since this type of interpretation is a result of coercion of a predicate that is not inherently atomic into one that is. Evidence of this type supports the conclusion that the high individuation requirement is independent of the non-equivalence condition.

The high individuation effect, when present, makes Hausa pluractionals resemble the distributive forms found in e.g. North-American languages, both in the verbal and nominal domains, as illustrated by the examples in (75):

- (75) a. Wa'khninónnion' [Mohawk]⁸⁸
 FACTUAL-1SG.AGENT-buy-DISTRIBUTIVE.PRF
 'I bought different things'
- b. otsikhe'ta'shòn:'a' otsikhè:ta' [Mohawk]⁸⁹
 'various candies' 'sugar, candy, candies'

Also, notice that the 'large number' and 'high individuation' effects can often be found with a single form:

- (76) ?asmāk samak [Syrian Arabic]⁹⁰
 'many or various fish' 'fish'

This is not surprising if they are both analyzed as manifestations of special plurality. Since there is a clear parallel between Hausa pluractionals and the nominal special plurals illustrated above, I suggest that the 'high individuation' effect reported for Hausa pluractionals is best analyzed, just like the 'large number' effect, as a consequence of these forms being special plurals.

3.7.3. Intensification

Pluractional verbs, also in Hausa, have sometimes been called 'intensive verbs' (e.g. Frajzyngier 1965, Schaefer 1994). The term suggests that the meaning of these markers involves degree semantics, rather than plurality. This is, however, not confirmed by the data, at least in Hausa, where the core meaning of pluractionality is clearly that of event plurality. Nevertheless, there are some cases that look very much like degree modification. Consider the following examples:

- (77) a. Yâraa sun rur-rùudèe
 children 3PL.PF RED-be.confused
 'The children were very confused (beyond control, alarmed)'

⁸⁸ Mithun (1999:90); the translation is modified based on the discussion in the text.

⁸⁹ Andrade (1933:187); as quoted by Mithun (1999:88).

⁹⁰ Cowel (1964:369).

- b. %Mun gàg-gàji
 1PL.PF RED-be.tired
 ‘We are very tired’

Notice that if the subjects are singular, the sentences become unacceptable:

- (78) a. %?Yaa rur-rùudée
 3SG.M.PF RED-be.confused
 intended: ‘He is very confused’
 b. ??Naa gàg-gàji
 1SG.PF RED-be.tired
 intended: ‘I am very tired’

It should be mentioned that not all speakers accept the pluractional forms above on the high degree interpretations, if they accept the forms at all. In fact, many speakers would assign these pluractionals simply plural interpretations. (77b) would, then, mean simply ‘We are (all) tired’. In spite of that, some high degree cases are found in the pluractional data of most speakers.

In this subsection, I propose that the ‘high degree’ effect should be treated as another manifestation of the fact that Hausa pluractionals are special plurals. This approach explains (a) why plurality is still required in high degree cases – cf. the unacceptability of (78), (b) why the effect can be sometimes cancelled or replaced by another ‘special plural’ effect (to be demonstrated below and in the following subsection) and (c) how it is possible that the intensification effect is not found only with gradable predicates (see below).

I propose that even in cases like (77) above, event plurality is the basic meaning of the pluractional. The high degree interpretation is an additional meaning, the extra ingredient that makes the plural a special one in these cases. Just like the ‘large number’ or ‘high individuation’ effects are possible ‘additions’ to simple plurality, intensification provides such a supplementary meaning as well. Intensification is just another way of enhancing the basic plurality meaning.⁹¹ The fact that intensification can accompany plurality in the nominal domain as well supports this analysis:

- (79) buyu:ta:t bayt/buyu:t [Arabic]⁹²
 ‘big, important houses’ ‘house’/‘houses’

⁹¹ Součková & Buba (2008) propose that the semantics of Hausa pluractionals contains a degree component that is responsible both for the ‘large number’ and ‘high degree’ effects. I no longer believe that this is the right way to approach these cases. Nevertheless, the idea that the ‘large number’ and ‘high degree’ effects are tightly connected is part of the present proposal as well. For a discussion of degree effects found with pluractionals in other languages cf. Wood & Garrett (2002), Wood (2007) and Henderson (2010).

⁹² Cusic (1981:17).

Thus, as in the case of the other special effects, I propose that intensification is not part of the core meaning of the pluractional. Rather, it can arise as one of the special meaning effects that pluractionals generally have. Apart from the parallel with the nominal domain, there is more evidence for treating the intensification effects this way.

First, some of the speakers who get high degree readings with pluractionals can subsequently negate the high degree interpretation without giving rise to a contradiction:

- (80) a. Mun gàg-gàji
 1PL.PF RED-be.tired
 'We are very tired'
- b. %Mun gàg-gàji àmmaa bà sosai ba
 1PL.PF RED-be.tired but NEG very.much NEG
 'We are tired but not very much'

This suggests that at least for some speakers intensification is a cancellable part of the meaning of the pluractional. By contrast, the plurality meaning can never be cancelled. This shows that the high degree interpretation comes from a much less stable part of the meaning of the pluractional. Some speakers seem to be able to drop this additional meaning completely, even though they normally interpret a certain class of cases as intensified.

A second piece of evidence for the idea that the high degree effect is a manifestation of Hausa pluractionals being special plurals (rather than it being the result of degree modification) is that the intensification effect is also found with verbs that are not strictly speaking gradable:

- (81) a. Naa tòokàree shi
 1SG.PF poke him
 'I poked him'
 N.B. it can be gentle
- b. Naa tàt-tòokàree shi
 1SG.PF RED-poke him
 'I poked him'
 N.B. %repeatedly and with strength

In cases like (81), it is hard to speak of a higher degree of a property expressed by the verb. Instead, the 'intensification' effect can be described as an implication that the event was somehow more 'serious' or 'abnormal' in some way. Rather than degree modification, these cases seem to involve some kind of very general emphasis that with gradable and semi-gradable verbs might be translated as intensification.

Finally, it should be also said that some cases involving intensification might be simply lexicalized as such. This is clearly the case in the following example:

- (82) Yaa bub-bùudě idòo/idàanu
 3SG.M.PF RED-open eye/eyes
 ‘He opened his eyes very wide, in a threatening way’

The form *bubbùuděe* ‘open.PLC’ has otherwise a regular plural meaning: the pluractional can, for example, be used to talk about opening many windows (cf. example (56) in Chapter 2). In (82), the interpretation involves intensification, but the sentence also conveys that the person being talked about opens his eyes in this way in order to threaten someone, which is by no means a regular contribution of the pluractional marker. Apart from this very clear case, there might be other lexicalized cases. The form *urriiuděe* ‘be.confused.PLC’ (77a) is another candidate. Even speakers who reject all other potential high degree cases generally do accept this one.

Having discussed the three most typical additional meaning effects accompanying the use of the pluractional form in Hausa, I will show in the next subsection how these effects can interact with each other. This interaction can be taken as direct evidence for the claim that these three special effects have the same source.

3.7.4. Compensation effects

The three meaning effects discussed above typically cooccur: the event units in a plural event are often both many and various or many and intensified. The following example nicely illustrates that all three effects can combine in a single form:

- (83) Taa mà-màaree shi
 3SG.F.PF RED-slap him
 ‘She slapped him many times’
 N.B. one speaker describes the situation as involving many slaps, coming from all directions and being stronger than usual

This is only natural if all these meaning effects are a consequence of the pluractional form being a special plural. Nevertheless, probably the strongest argument for analyzing these special effects as having the same source is the fact that the presence of one special effect can compensate for the lack of another. The data are rather subtle but the effect is found with a number of speakers. Consider the comments offered by the speakers for the examples below. The two examples are from two different speakers.

- (84) a. Sun jij-jiraa shi
 3PL.PF RED-wait.for him
 ‘They waited for him’
 N.B. the speaker comments that the sentence can be used to talk about as few as two people if they are waiting for different reasons (they might have separate appointments); if the reasons are not different (one appointment), the people waiting should be many

- b. Mun gog-gòodee
 1PL.PF RED-thank
 ‘We thank you so much!’
 N.B. it is possible that ‘we’ refers to two people only, provided that the degree of being thankful is very high

Normally, the number of the event units in a plural event (as reflected in the number of the participants) in the cases above should be relatively large. However, for some speakers at least, the number of the event units (reflected in the number of participants) can be low if the events are clearly differentiated (84a) or if the degree of the property expressed by the predicate is high (84b). This is in fact expected on the present account. If the three additional meaning effects have the same source – special plurality – it is only natural that for certain speakers they are partly interchangeable. Another example of the same phenomenon is given below:

- (85) %Yaa bub-bùudè kafaafuwànsà/ hannuwànsà
 3SG.M.PF RED-open legs.his/ arms.his
 ‘He opened his legs/ arms wide’

Sentences like the one above are generally not accepted because people normally have only two legs/ arms, which for most speakers is not enough to license a pluractional. There are speakers who accept cases like (85). However, these speakers then usually report an additional meaning effect: intensification. Note that this effect does not arise if the number of affected objects is larger. Again, I propose that the high degree interpretation compensates for the low number of the event units and that that is only possible because these are both just different manifestations of special plurality.

Other examples demonstrating essentially the same can be found. Examples where the number of events can be specified (and low) if the event units are sufficiently differentiated along a certain dimension (86a), or where a comical effect is obtained because the low number of events forces an interpretation of the pluractional as referring to an event that is very serious (86b):⁹³

- (86) a. %Anàa gíg-ginà màkàřàntun sakandāřèe gùdaa biyař
 IMP.IMPF RED-build schools.of secondary unit five
 ‘Five secondary schools are being built’
 N.B. the sentence is acceptable if the building takes place in different towns
- b. %?Kàajiinaa biyu sun muř-mutù
 chickens.my two 3PL.PF RED-die
 ‘My two chickens died’
 N.B. there is a comical effect because the use of the pluractionals makes the event sound very serious

⁹³ The example in (86a) is based on an example from Pawlak (1975:146).

To conclude, the fact that pluractionals are special plurals is typically manifested as an implication that the event units are many and varied and, where possible, also somehow more serious or ‘intensive’. Nevertheless, at least some speakers can accept pluractionals without some of these meaning effects, as long as this lack is compensated by another special effect, i.e. as long as the special character of the plural form is manifested in some way. These compensation effects thus provide a strong argument for the claim that all these special effects have the same source.

3.7.5. Other special effects

In this subsection, I discuss several other related special effects that the use of the pluractional form can have. It is not completely clear to me to what extent these are still to be considered manifestations of special plurality, and to what extent they follow from the fact that pluractionals are simply marked forms in Hausa. Most likely, the stylistic effects can be derived from the fact that pluractionals are not used very frequently. The other effects can be viewed as extensions of some of the special plurality effects discussed above. In any case, the special effects to be discussed below occur in the data of only a subset of the speakers I have consulted. However, considering that variation in judgments is so typical for Hausa pluractionals and especially in the case of these additional meanings, I briefly discuss even these less common effects. The effects discussed here are: affective connotations (typically negative), implication of disorder and/or unintentionality/ unpredictability and colloquial style.

To start with the effect that is most clearly stylistic in nature, some speakers associate the use of pluractionals with colloquial Hausa, and do not consider their use appropriate in contexts that would require standard or more formal language. As a result, speakers who intend to speak ‘proper Hausa’ might avoid their use altogether or use only those forms that are very common.

Another effect that could potentially be considered stylistic are certain affective connotations associated with the use of the pluractional form. In particular, for some speakers the use of the pluractional implies that the event being described is to be evaluated negatively in some sense. For example, one speaker commented on the sentence below that it sounds like someone is complaining about what happened:

- (87) Mutàanee sun fĩr-fítoo
 people 3PL.PF RED-come.out
 ‘Some people have come out’
 N.B. the speaker comments that this is not what was supposed to happen – for example, these are people who went to watch a movie but left the cinema soon after the movie started

However, in some cases the negative evaluation might be just a consequence of a different implication brought about by the use of the pluractional form, namely, that the action was performed in a disorderly fashion:

- (88) Yaa dāf-dòorà littàttàfai a kân teebũr
 3SG.M.PF RED-put books on top.of table
 ‘He put some/ the books on the table’
 N.B. the books are spread all over, there is no space for other things (the speaker
 is complaining about the fact)

The ‘disorderly event’ effect is not stylistic. It can be understood as a variation of the ‘high individuation’ effect. The requirement that the event units should be possibly clearly individuated can lead to the implication that the events occur ‘here and there’ and as such are scattered. In situations in which ‘scatteredness’ is not appropriate, the use of the pluractional can imply negative evaluation.

The tendency for high individuation of the event units could also be behind the following effect. Some speakers find combinations of certain TAMs (e.g. habitual, future etc.) with pluractionals less acceptable:

- (89) %?Takàn tāt-tàmbàyeè nì kuḍīn kaayaa
 3SG.F.HAB RED-ask me money.of things
 ‘She always asks me how much everything costs’

The generalization seems to be that some speakers find pluractionals less felicitous when combined with TAMs that presuppose a high level of predictability because the use of the pluractional implies unpredictability for these speakers.⁹⁴ This effect does not seem to be very different from the ‘disorderly action’ effect and as such it could also be understood as an extension of the ‘high individuation’ effect. However, the ‘unpredictability’ effect can be cancelled quite easily if a suitable context is provided. Once the context ensures predictability, the sentences improve.⁹⁵

⁹⁴ Alternatively, it could also be just a reflection of the idea that the events described by pluractionals are simply ‘unusual’ in some way or another, which makes the use of these forms e.g. in habitual contexts less plausible.

⁹⁵ This explanation, however, does not extend to all cases of incompatibility of pluractionals with specific TAMs. In particular, I have no explanation for why some speakers find pluractionals in combination with the relative TAMs (used in relative clauses, focus constructions and *wh*-questions) less acceptable. In addition, there are other similar effects (reported by a small number of speakers) that are not discussed here. In particular, some speakers reject pluractionals in combination with certain grades (these are in fact some of the same speakers rejecting pluractionals in certain TAMs). One grade that is not easily compatible with the pluractional semantics for some speakers is grade 5, i.e. the grade expressing roughly causativity (cf. section 2.2.3.). I could speculate that the idea of deliberate actions like selling or teaching; *sayaŕ* (*dà*) ‘sell’, *kaŕantaŕ* (*dà*) ‘teach’ gr5 cf. *sàyya* ‘buy’, *kaŕàntaa* ‘read, study’) is not compatible with the event being disorderly or unpredictable.

3.7.6. Conclusion

The most basic condition on the felicitous use of pluractional verbs is that they can only refer to plural events. In addition, there are also other conditions. These can be roughly described as conditions stating that the pluractional can only be used if the event is more than just plural. Most often, this means that the event units in the plural event should be relatively many. High individuation is another common ‘addition’ to simple plurality. Special plurality can also take the form of intensified interpretations with some verbs. Apart from the parallel with the nominal special plurals, one of the main arguments for the claim that all these instantiate special plurality is the existence of compensation effects. Some speakers display other conditions on the appropriate use of pluractionals as well, at least some of which are in my view also related to the special plural status of the pluractional form. The high level of variation with respect to what exactly the additional meaning effects or conditions on use are and their interchangeability reflect the fact that the third meaning component is much less fixed and well-defined than the other two.

Below is a possible way to formulate the specific conditions that follow from special plurality and which, together, form the third and most peripheral meaning component of pluractionality in Hausa:⁹⁶

- (90) **Pluractionals are used to express special plurality**
- a. Pluractionals can be used if the event units are many
 - b. Pluractionals can be used if the event units are highly individuated
 - c. Pluractionals can be used if the event units (or the whole event) are intensified

Before I conclude this section, I would like to make a final point. In my view, the analysis of the special effects of pluractionals as following from a more or less separate component, an addition to the core plurality meaning, provides a better understanding of certain similarities and differences both across languages and across domains. For example, comparing Hausa pluractionals to those found in Karitiana, where pluractionals seem to express simple plurality (cf. section 3.7.1.), the main difference can be described by saying that Karitiana pluractionals lack the special plural component. In comparison to verbal distributives of the type that are found in Papago, on the other hand (cf. section 1.8.4.), the analysis proposed here suggests that Papago makes very precise in what sense these verbal forms are special plurals: they are distributive plurals.⁹⁷ Hausa, by contrast, does not specify how exactly the special character of its pluractionals is to be expressed. The type of approach proposed here captures the relation to simple plurality in a very straightforward way, and preserves the connection between the different

⁹⁶ Most likely, the exact number and form of these conditions would differ from speaker to speaker. The list given here is intended to represent the most typical judgments.

⁹⁷ Papago not only specifies that it is the high individuation condition that constitutes their addition to simple plurality. The exact way in which the event units are individuated is also determined: the different event units are individuated by being associated with different locations (see 1.8.4.).

‘flavors’ of special plurality while allowing for the possibility that some languages fix one (or more) of them as obligatory. Moreover, the approach defended in this thesis also makes it easier to see how pluractionality in Hausa relates to different kinds of nominal plurals. In particular, it is very clear that the similarities between Hausa pluractionals and English nominal plurals are limited: the only meaning component they share is the simple plurality component.⁹⁸ However, if Hausa pluractionals are compared to ‘big plurals’ in Arabic, it is clear that the similarities go much further, as Arabic ‘big plurals’ are special plurals of a very similar type. In addition, if special plurality is a common consequence of forming an opposition with number-neutral rather than singular forms, it is also clear why special plurals seem to be so much more common in the verbal domain given that non-pluractional verbs are typically number-neutral.

3.8. Inter-speaker variation

As already mentioned at various points, there is a lot of variation in judgments among speakers. In fact, if I had to limit myself only to what all speakers agree on, everything interesting about Hausa pluractionals would have to be discarded. On the analysis I have proposed in this thesis, however, the variation can not only be accounted for, but it is in fact predicted to exist. In addition, it is also partly possible to predict what patterns can be found in the individual speakers’ idiolects.

The individual sources of variation will be discussed in subsection 3.8.1. Subsection 3.8.2. will present the idiolects of four speakers.

3.8.1. Sources of variation

In my view, the variation in judgments found among speakers has basically three sources: (a) the fact that the choice of the anchors is constrained only by the non-equivalence condition (Component 2 in Figure 3.4.), which allows speakers a lot of freedom in how they individuate the event units, (b) the fact that it is not completely fixed how the special character of pluractionals should be manifested and how strong the effects are (cf. Component 3 in Figure 3.4.), and (c) the fact that pluractionals are not used very frequently. In other words, the variation is a consequence of the fact that certain aspects of the meaning of pluractionals are left unspecified or not fully defined, and that pluractionals are generally special forms.

Recall that the way in which the individual event units are distinguished from each other is not encoded in the meaning of the pluractional marker itself but rather follows from general principles of event individuation, restricted only by the non-equivalence condition. The fact that speakers have so much freedom in the choice of the anchors

⁹⁸ In fact, the denotation of English nominal plurals, unlike that of Hausa pluractionals, might be better analyzed as including atoms; cf. footnote 5 in section 3.2.

leaves a lot of space for variation. Appropriate anchors are anchors that make the individual event units sufficiently different from each other. Apart from that, what individuates the event units is virtually only constrained by the lexical meaning of the verb and what is possible in the real world. As a consequence, the role of the speaker's imagination and inventiveness is rather important. Some speakers are better than others at creating contexts that make sentences with pluractionals felicitous. While some speakers reject a sentence because there is no obvious plurality present, other speakers are able to supply a context that will make the sentence felicitous, simply by conceptualizing a plurality of sorts. This is typical for cases with singular arguments. Consider the following example:

- (91) %Yaa bub-bùudě jàkaa
 3SG.M.PF RED-open bag
 ‘He opened the various compartments/ pockets of the bag’

The speakers that accept the sentence with the singular *jàkaa* ‘bag’ are able to interpret the sentence as involving a plurality of compartments or pockets of the bag and distribute the plural event units to those.

The ability to supply a context involving plural anchors is, however, not always sufficient. Some speakers simply have a strong preference for the anchors to be referred to by overt expressions. This means that some speakers reject certain sentences even if it is clear what the plural anchor should be in the given case. Once the anchor is expressed overtly, the pluractional form becomes felicitous (92b).⁹⁹

- (92) a. %??Naa tut-tùnaa
 1SG.PF RED-remember
 ‘I remembered them (different things)’
 b. Naa tut-tùnaa dà suu
 1SG.PF RED-remember with them
 ‘I remembered them (different things)’

In addition to the differences in the ability and willingness to rely on non-overt anchors, some speakers reject certain possibilities for no obvious reason. It might be that some speakers prefer to interpret the plurality in the subject, rather than in the object argument, while most other speakers can do both, for example. Alternatively, a specific lexical choice might be dispreferred by a given speaker. In other words, there is a certain percentage of cases where it seems to be just a matter of personal preferences what type of anchor is acceptable or preferred.

Apart from the relative freedom that speakers have in the choice of anchors, a substantial part of the variation follows from the fact that the exact way in which special plurality is

⁹⁹ Recall that it is very common in Hausa not to express the verb's arguments overtly (cf. section 2.2.2.). Most speakers thus find sentences like (92a) completely well-formed, just like their non-pluractional counterparts.

manifested can be different for every speaker. The extent to which pluractionals are special can also vary.

The different preferences for the individual ‘flavors’ of special plurality can be observed, for example, in the fact that some speakers frequently interpret pluractionals as referring to ‘intensified’ events, while others almost never do. These other speakers might instead have a strong preference for high individuation. Also, for a small number of speakers, the use of the pluractional can imply that the action was performed disorderly. This may be the reason why such a speaker would find the following sentence (slightly) degraded, while others find it perfectly acceptable:

- (93) %?Naa dāf-dōraa su a kân teebũr
 1SG.PF RED-put them on top.of table
 ‘I put them on the table’
 N.B. implied: in a disorderly fashion

If the use of the pluractional implies a disorderly performed action, it probably explains why the first person subject makes the sentence sound odd. The speaker himself commented on the sentence saying that one would not refer to one’s own actions in this way.

The varying degree to which pluractionals are special is undoubtedly another source of variation. For example, some speakers require that the individual event units be highly differentiated. This means that pluractionals are indeed very special forms for these speakers. For others, however, the pluractional form has lost most of its special (distributive) status and may be getting close to a simple plural. This can be illustrated by the different interpretations that (94a-b) can get:

- (94) a. Yaa sàs-sàyi littàttàfai
 3SG.M.PF RED-buy books
 i. ‘He bought (many) different books’
 ii. ‘He bought (many) books’
 b. Taa dad-dàfà àbinci
 3SG.F.PF RED-cook food
 i. ‘She cooked different kinds of food’
 ii. ‘She cooked food repeatedly’¹⁰⁰

While many speakers require the books or meals in (94) to be of different kinds for the pluractional form to be felicitous, some speakers only require them to be plural. The shift from special, especially distributive, plurality, to simple plurality is not uncommon

¹⁰⁰ Note that despite the translation, the interpretation is not iterative: one cannot re-cook a meal. Note, however, that on this interpretation it could be the same kind of food (even the same dish) every time.

and variation along these lines is rather typical.¹⁰¹ A related point of variation is the ease with which speakers can drop these special meanings. Most speakers might have a preference for pluractionals to refer to ‘many and varied’ events, but some give up this requirement rather easily while others consistently reject contexts that do not support the stronger type of interpretation.

The following more complex example can probably be understood as illustrating a similar point:

- (95) Yaa shàs-shàari ðaakii
 3SG.M.PF RED-sweep room
 ‘He swept the room’
 i. %superficially
 ii. %thoroughly

The two interpretations given above seem contradictory. The difference between the two interpretations is that one involves (what looks like) non-exhaustivity while the other interpretation seems to be exhaustive. I argued in section 3.5.4.2. that the non-exhaustive interpretation arises as a consequence of the tendency to make the participants clearly individuated. If the participants are parts of a single object, leaving ‘gaps’ between the parts makes their plurality more obvious. That in turn leads to the ‘superficial action’ interpretation. It is possible that for those speakers who report the ‘thorough action’ interpretation it is sufficient if the parts are plural by virtue of them being non-overlapping. In other words, the ‘high individuation’ requirement of these speakers is not very strong. If all parts of a room are swept, it suggests that the sweeping was very thorough. Alternatively, the choice between the two possible interpretations might be a matter of choosing one of the several competing ‘flavors’ of special plurality. For the speakers who accept the sentence on the interpretation in (i) the ‘high individuation’ meaning is more prominent, while for the speakers who have preference for the interpretation in (ii), the ‘intensification’ effect appears to be stronger.

Another important source of variation is the fact that pluractionals are rather unusual, infrequently used, forms. Since pluractional forms are not used very frequently, speakers are sometimes less sure about their usage. In particular, speakers sometimes express uncertainty as to whether a certain form exists or not. The awareness of what is common and what is not can be gleaned from comments like ‘people do/ do not say that’, ‘I’ve heard that many times’, ‘I’ve never heard that’ etc. Some speakers actually refuse many forms altogether regardless of the context: they consider them simply non-existent. The

¹⁰¹ The shift from distributive to simple plurality has often been reported in the literature (presumably usually for nominal distributives), e.g. for Indonesian (Rafferty 2002, referring to Gonda 1949) and for various North-American languages (Mithun 1999:91 and the references therein). I am not suggesting that Hausa pluractionals are undergoing a change from special to regular plurality. Nevertheless, I do think that there is a continuum of speakers with some interpreting pluractionals as plurals that are truly special at one extreme and others treating them as almost regular plurals at the other extreme.

variation can thus be seen as a reflection of whether the given speaker accepts ‘possible’ forms, or only ‘actual’ words (cf. Aronoff 1983, Bauer 2001, Haspelmath 2002).¹⁰²

Finally, recall that some speakers tend to reject certain pluractional forms for stylistic reasons, as being too informal or expressive, or because they are not considered ‘proper Hausa’.¹⁰³ Sometimes, the speaker offers a different way of expressing the same meaning, which is considered more formal or ‘correct’. For example, one speaker rejects (96a) with the explanation that (96b) is a better way to express the given meaning:¹⁰⁴

- (96) a. ??Yaa tāt-tāmbāyee nì
 3SG.M.PF RED-ask me
 ‘He asked me many questions’
 b. Yaa yi mini tambayoyii
 3SG.M.PF do me questions
 ‘He asked me (many) questions’

To summarize, pluractional forms may be rejected for many different reasons. The examples of cases where speakers may vary in their judgments given above by no means exhaust the possibilities. Hopefully, however, they sufficiently illustrate the main point, namely, that variation can not only be dealt with on my analysis, but that it is in fact expected. With the exception of the last two cases, where the sources of variation are not specific to Hausa pluractionals, the individual points of variation follow from the analysis. The exact way in which the event units of a plural event are individuated depends to a large extent on the context and the inventiveness of the speaker. How exactly the special plural nature of Hausa pluractionals is manifested and how strong the effects are varies as well. Moreover, pluractionals do not abound in everyday speech. It is thus only natural that speakers’ judgments are not entirely uniform and fixed.

In the next subsection, I will provide additional support for the way variation is dealt with in this thesis by presenting the idiolects of four different speakers and by showing that certain features of the idiolects that can seem random when considered in isolation are not random at all when each idiolect is considered as a whole. I conclude the section by offering several generalizations about the way speakers’ idiolects vary.

¹⁰² The fact that it matters for many speakers whether a given form is commonly used/ established or not, and that they may refuse those forms that are not common as ‘impossible’ provides support for the idea that not only lexicalized/ idiosyncratic forms are ‘stored’ but also some of the regularly formed ones (cf. Bauer 2001, Haspelmath 2002).

¹⁰³ The most frequent forms tend to lack the informal or expressive flavor, however.

¹⁰⁴ It is also possible to use a frequentative:

- (i) Yaa yi tāmbāye-tāmbāye
 3SG.M.PF do question.FREQ
 ‘He asked me many (different) questions’

3.8.2. Examples of idiolects

In the following demonstration of how speakers' idiolects might vary I will focus on several properties, in particular:

- a. productivity and idiosyncrasies of use
- b. presence of iterative readings
- c. necessity of high individuation of the event units
- d. necessity of large number of the event units
- e. possibility to specify the number of the event units
- f. presence of high degree readings
- g. distribution to parts – exhaustive/ non-exhaustive

The properties in (a-g) are not expected to be entirely independent of each other. Rather, my proposal predicts the existence of the following connections between the individual properties:

- (i) If iterative interpretations are acceptable, high individuation should not be required. This is because the high individuation requirement can be understood as a stronger version of the non-equivalence condition which rules out iteration as a possible interpretation of pluractionals.
- (ii) If high individuation is required, distribution to parts, if possible at all, should lead to a non-exhaustive ('superficial action') interpretation.
- (iii) If a given speaker forms pluractionals very easily, they are less likely to give rise to strong special effects (high individuation, large number, intensification). This is because unrestricted usage of pluractionals can be taken to signal that the pluractional form is becoming a simple plural for the given speaker, and does not require a special context anymore.

After discussing the selected idiolects I will comment on how the predictions above are borne out.

Speaker 1:

This speaker's formation of pluractional forms is moderately productive. Pluractional forms are clearly marked forms for him. In some respects, this speaker's idiolect is somewhat unusual: the use of pluractionals has some specific properties that are not found with most other speakers (see below). Iterative readings are completely excluded, which means that the non-equivalence condition cannot be violated. The preference for high individuation is very strong. The speaker does not allow for precise specification of the number of the event units, and the number of the event units should clearly also be large. None of these special effects can be dropped very easily. This speaker does assign a high degree interpretation to some forms. Distribution to parts does not seem to be very easy and if accepted the superficiality effect is often invoked. As for the less usual properties in this speaker's idiolect, the use of pluractionals seems to imply a certain

degree of unpredictability and unusualness of the events. This is probably why this speaker disprefers combinations of certain TAMs and pluractionals. For example, habitual, future or subjunctive TAMs do not very easily combine with pluractionals for this speaker. The ban is not absolute, however. This supports the idea that it is not a grammatical constraint.

Speaker 2:

The idiolect of Speaker 2 is similar to that of Speaker 1, the difference being that Speaker 2 uses pluractionals to describe more ordinary situations and does not require the context to be as special as Speaker 1 does (there are no restrictions on the compatibility with different TAMs, for instance). The idiolect of Speaker 2 is more representative of Hausa pluractionals in general. Otherwise, the basic properties are very similar: the productivity of the formation is moderate. Iterative readings are not accepted but the resistance is slightly less severe than in the case of Speaker 1. This can be seen from the fact that some of the forms, although degraded, are understood as referring to iterated actions. For this speaker, the individual event units in a plural event should be highly individuated if possible. Speaker 2's judgments are also typical in the sense that the number of events should not be specified, but they should be many. There are some, although only few, intensification cases in his data. Distribution to parts is much easier than for Speaker 1. There are no tentative cases in this speaker's data.

Speaker 3:

This speaker has very few restrictions on the formation and use of pluractionals. Pluractionals are less special than in the case of both Speaker 1 and 2, or than is typical, in fact. A few cases of iterative readings can be found in his data, suggesting that the non-equivalence condition can sometimes be suspended. This speaker exhibits the following special effects: a preference for the number of event units to be large but unspecified (or only vaguely specified), and the existence of a few high degree readings. Nevertheless, high individuation is not required. Even the other special effects can be dropped rather easily: the speaker accepts sentences describing situations in which the number of events is as low as two, and high degree interpretations can be cancelled easily. Distribution to parts is easy, and the effect is neither clear exhaustivity nor superficiality: it is simple distribution to different parts.

Speaker 4:

This speaker is the most liberal one of those that I interviewed. As such, he stands at the opposite end of the spectrum in comparison to Speaker 1. He forms pluractionals very regularly and there are very few restrictions on their appropriate use in his idiolect. Even iterative interpretations are accepted quite easily. Even for this speaker, however, they are not the first interpretations offered. The availability of iterative interpretations signals that the non-equivalence condition is weak to the extent that it can be dropped completely. High individuation of the event units is not required. The speaker does

exhibit other special effects, however. Specifically, the use of pluractionals generally implies some kind of emphasis or ‘intensification’, despite the fact that genuine high degree cases are non-existent in his idiolect.¹⁰⁵ Also, precise specification of the number of event units is dispreferred. If it is not explicitly stated, the number of event units can be low, however. Distribution to parts is easy and the interpretation is exhaustive (no superficial action readings).

From this very brief excursion into the idiolects of some of the speakers, several conclusions can be drawn. First of all, the first prediction is very clearly borne out: there is a clear correlation between the high individuation requirement and the lack of iterative readings (most clearly in Speaker 1’s idiolect). If iterative readings are possible, the speaker does not have the high individuation requirement or it can be dropped easily.¹⁰⁶ The second prediction seems to be confirmed as well: it appears that only those speakers who do not insist on high individuation can distribute to parts exhaustively. However, more data is needed to confirm this preliminary conclusion. Finally, the last prediction seems to be borne out as well. If a speaker forms pluractionals very easily, they tend not to have many special meanings, or they are cancellable. This seems to indicate that the speaker’s pluractionals might have partly lost the special plural status. Roughly, the more productive the formation of pluractionals is, the more likely it is that the requirement for large number and high individuation can be dropped, and that the high degree interpretation can be cancelled.

Finally, the overview of the idiolects given above provides support for the idea that some components of the pluractional meaning are more stable than others. Even though some speakers insist on the special plural effects (Component 3 in Figure 3.4.), this is where the speakers’ requirements can be relaxed most easily. Compared to that, the non-equivalence condition (Component 2) is harder to drop. Nevertheless, this still does happen sometimes, while the plurality condition (Component 1) is virtually never violated. The low degree of fixedness of some parts of the meaning of pluractionals is reflected also in the fact that speakers are often not consistent in their judgments. It is common that speakers require high individuation and do not accept iterative readings at first, only to become more liberal later on. This is most clearly the case for Speaker 4. Apart from illustrating the relative strength or fixedness of the individual meaning

¹⁰⁵ By ‘genuine degree cases’ I mean cases of pluractionals derived from gradable verbs where the degree of the property is higher.

¹⁰⁶ This shows that there is a connection between the non-equivalence condition and the high individuation requirement. However, the non-equivalence condition is more or less independent, which can be seen from the fact that for the absolute majority of speakers, iterative interpretations are excluded (even if high individuation is not necessary for them). In addition, the high individuation requirement is reported also for cases in which the non-equivalence condition does not apply: the repetitive case (cf. example (73)). Thus, what the correlation discussed above shows is that the non-equivalence condition and the high individuation requirement simply go in the same direction and if the weaker ‘distributive’ condition (the non-equivalence condition) is missing, it is only natural that the stronger one (the ‘high individuation’ condition) is as well.

components, this observation is also important in the sense that it clearly speaks for a very careful approach when working with speakers' judgments.

Although the selection of the points in which speakers judgments vary presented here is necessarily limited, the discussion of inter-speaker variation can be concluded by observing that the differences found in the different speakers' data are not quite random. In fact, each idiolect forms a coherent system, in which many of the properties are not independent of each other and can be at least partly predicted. The important conclusion here is that the extensive variation within the data, an aspect that can in principle be very problematic, turns out to be an important argument for the type of approach I chose in this dissertation. On a more general level, one of the contributions of the present thesis is that it shows that variation is not necessarily a problem but rather that it can provide an important insight into the phenomenon under scrutiny. Also, variation is not understood here as a consequence of the existence of several parallel grammars (e.g. different dialects). Rather, it follows, at least to some extent, from the nature of the phenomenon itself, that is from the fact that certain parts of the meaning are not fully specified and completely fixed. This means that variation is in fact one of the basic properties of pluractionality in Hausa.

3.9. Comparison with other theories

In the previous sections I presented my analysis of the meaning of pluractional verbs in Hausa. In this section I compare some aspects of my approach to other proposals, especially Lasersohn (1995), but also Ojeda (1998) and Henderson (2010). The issues that will be the focus of the comparisons below are the following: (a) the individuation of the event units, (b) the separateness/ diversification of the event units, (c) the cardinality of the event units, (d) the relation between simple and special plurality, and (e) the relation to nominal number.

Let me start with the issue of how the event units in a plural event are individuated. On my approach, if the event units are not individuated as a result of natural atomicity, individuation is achieved by what I call anchoring: the event units are individuated with the help of the elements that constitute them, e.g. their participants. In Lasersohn (1995), the event units are individuated by mapping the events to their (non-overlapping) participants, locations or times. The relevant part of Lasersohn's formula is underlined, with the possible values of f given below:

$$(97) \quad V\text{-PA}(X) \Leftrightarrow \forall e, e' \in X [P(e) \ \& \ \underline{\neg f(e) \circ f(e')} \ \& \ \exists x [\text{between}(x, f(e), f(e')) \ \& \ \neg \exists e'' [P(e'') \ \& \ x = f(e'')]]] \ \& \ \text{card}(X) \geq n$$

temporal distribution: $f = \tau$ (temporal trace function)

spatio-temporal distribution: $f = K$ (function that is actually a pair of functions
mapping events to their times and locations)

participant-based distribution: $f = \theta$ (theta roles)

In a sense, Lasersohn's approach and mine are very similar: the events are mapped to the elements that constitute them, and in this way they are individuated. There is a difference, however. On Lasersohn's approach, the participant-based, temporal and spatial readings are three clearly defined and distinct readings that the pluractional can give rise to. I have argued, however, that there is not enough evidence for making a distinction between participant-based and spatial readings in Hausa, and that there are other possibilities of anchoring that are harder to categorize. Moreover, the case of temporal readings is clearly more complicated in Hausa: some, but not all, types of interpretation involving repetition have to be excluded. It is not obvious how that could be done on Lasersohn's approach.

The issue just discussed is tightly connected to the next one, namely how the stronger effect of separateness and/or diversification of the event units (the distributive effect) is achieved. Lasersohn accounts for the separateness effect by making the following clause part of his formula (cf. (97)):

$$(98) \quad \exists x[\text{between}(x, f(e), f(e')) \ \& \ \neg \exists e''[P(e'') \ \& \ x = f(e'')]]$$

This clause ensures that there is a gap between any two event units (i.e. any two participants, times, or locations). Note, however, that this really captures only the idea of separation of the event units rather than accounting for the more general requirement that the event units be highly individuated. It is hard to see how (98) explains the 'different kinds' effect, for example, or the idea of diversification in general. In view of this, Ojeda's (1998) approach seems more appropriate, as it is more general.

Ojeda analyzes the semantics of distributive nouns and verbs in Papago:

- (99) a. $d\acute{a}d\acute{d}aiku\acute{d}$ [Papago]¹⁰⁷
 'several chairs from several households'
- b. $c\acute{ick}pan$
 'to work (more than once) at more than one location'

In Papago, distributives are used if the individual or event atoms belong to different 'loci' (Mathiot 1983). In the case of nouns this could mean belonging to different households (for artifacts/ objects) or herds (for animals). In the case of verbs, the event atoms should be distributed over different locations. To capture the idea of the individual atoms belonging to different 'loci', Ojeda uses the notion of (non-)equivalence: in his account, distributive plurals denote sums of non-equivalent atoms. By contrast, non-

¹⁰⁷ Ojeda (1998:249, 251).

distributive plurals are sums of equivalent atoms. He points out that what counts as different loci is culture-dependent. As a result, what counts as equivalent and what does not, is not a matter of semantics proper.

My approach is very similar to and in fact inspired by Ojeda's. There are some differences, however, which follow from the differences between Papago distributives and Hausa pluractionals. First of all, in my proposal, the non-equivalence condition is a condition restricting the choice of anchors that serve the purpose of individuating the individual event units. Whether or not the non-equivalence condition applies depends on the lexical properties of the predicate: pluractionals derived from naturally atomic verbs can refer to plural events consisting of equivalent event units. In other words, the non-equivalence condition does not play a role for all pluractionals in Hausa, while by definition all Papago distributives are sums of non-equivalent events.¹⁰⁸ Second, unlike in Papago, the distributive effects in Hausa can be attributed to two separate conditions: the non-equivalence condition and the high individuation requirement. This split is motivated by the fact that only a subset of the 'distributive' effects are obligatory and more or less uniform across speakers in Hausa, i.e. those triggered by the non-equivalence condition.

Ojeda's proposal is also very interesting with respect to the discussion of simple and special plurality in this thesis. Recall that Ojeda relates simple and distributive plurality by saying that simple plurals are based on the notion of identity, while distributive plurals are based on the notion of equivalence. Identity is a special case of equivalence, its strictest form in fact (cf. section 1.8.4.).¹⁰⁹ The way simple and special plurals are related in this thesis is less elegant than that of Ojeda's: under my account, special plurals are plurals that have an aspect of meaning in addition to simple plurality. However, this move is necessary since Hausa pluractionals are special plurals in a more general sense than Papago distributive verbs are. Distributive plurals are just a specific subtype of special plurals. As a result, Ojeda's specification of the relation between distributive plurals and regular/ simple plurals is too narrow to fit Hausa as well.

Another aspect of the meaning of pluractionals in many languages is the idea that the number of the event units in the plural event should be relatively large. I proposed that the nature of Hausa pluractionals as 'special' plurals accounts for the fact that they do not refer to events that are simply plural, but rather multiple. The 'large number of events' interpretation is therefore not part of their core meaning. In fact, it is not even a component of meaning that is completely fixed and obligatory. For Lasersohn (1995), by contrast, this condition is part of the meaning of pluractionality that is on the same level

¹⁰⁸ Not all types of verbal forms that could be called pluractional in Papago could be analyzed as sums of non-equivalent events, however. Apart from distributive plurals, there are also forms whose meaning is simple repetition (in the same location). Cf. the discussion in section 1.8.4.

¹⁰⁹ This also explains the ease with which (nominal) distributive plurals in many languages shift to regular plurals; cf. footnote 101 in section 3.8.1.

as all the other meaning components. It is defined in terms of the cardinality of the set of events (the value of n is fixed by context):

$$(100) \text{ V-PA } (X) \Leftrightarrow \forall e, e' \in X [P(e) \ \& \ \neg f(e) \circ f(e') \ \& \ \exists x [\text{between}(x, f(e), f(e')) \ \& \ \neg \exists e'' [P(e'') \ \& \ x = f(e'')]]] \ \& \ \underline{\text{card}(X) \geq n}$$

An alternative approach, closer in spirit to mine, was developed in Součková & Buba (2008) and Henderson (2010). In both papers, the intuition is that the ‘large number’ effect might in fact be a degree effect, very similar to the meaning effect of a degree expression such as *a lot* (cf. section 1.4.1.). In Součková & Buba (2008), the idea was that the semantics of the pluractional marker has a degree component. More precisely, there is a degree function, which, when applied to the verbal denotation, can access the ordering based on the size of the sums of events and pick the larger ones. In Henderson (2010), the semantics of the pluractional contains a conjunct very similar to Lasersohn’s cardinality conjunct, with the difference that it specifies the size of the group of events in terms of degree on the scale of cardinality, rather than number.

The type of approach found in Součková & Buba (2008) and Henderson (2010) is to be preferred over Lasersohn’s, in my view, because it captures better the degree-like feel of many pluractionals. Speakers often describe events referred to by pluractionals as ‘intensified’. This ‘intensification’ can be interpreted either as ‘large number’ or as ‘high degree’ (cf. also the compensation effects described in section 3.7.4.). Furthermore, the degree approach is better suited to capture the vagueness and context-dependence of the number value, since this is something very typical for degree expressions (cf. also Henderson 2010).

Finally, one general aspect in which theories of pluractionality can be compared is how they relate pluractionality to nominal number. My analysis of Hausa puts pluractionals closer to nominal plurals than Lasersohn’s (1995) account, which specifies how the event units are individuated in the semantics of the pluractional itself (the values of the f function). On my account, the differences between verbal and nominal plurals follow largely from the differences between events and objects and are not encoded in the meaning of the pluractional itself, since I assume the existence of independent principles of event individuation. Ojeda’s (1998) proposal goes even further in establishing a parallel between the nominal and verbal domains: the distributive forms of nouns and verbs in fact receive a uniform analysis under his analysis. This is enabled by the fact that the nominal and verbal number systems are parallel to such an extent in Papago.

This concludes the discussion of the individual aspects in which my approach diverges from other approaches. Summing up, I have claimed that the meaning of pluractional verbs should be modeled as consisting of several components whose contribution is not on the same level. This idea makes the present proposal quite different from other proposals dealing with similar data. My approach is motivated by the specific properties of the Hausa data, and in particular the observation that some aspects of the meaning of

pluractionals are less stable and more elusive than others, giving rise, among other things, to a large amount of variation in judgments.

3.10. Conclusion

The goal of the present thesis was to propose a semantic analysis of pluractionality in Hausa. To prepare the ground, I started, in Chapter 1, with a rather broad discussion of what should be included in the notion of pluractionality and what other notions are relevant in the study of the phenomenon. The first question that comes to mind is how pluractionality relates to nominal number. I suggested that there are striking similarities between the two domains, if the attention is restricted to phenomena that are truly comparable at least. Nevertheless, I argued that it makes sense to study pluractionality more or less separately from nominal number because some issues are specific to the verbal domain, in particular, the relation to aspect and the fact that events are typically individuated with the help of other entities. Special attention was devoted to delineating boundaries between pluractionality and aspect but also between pluractionality and degree phenomena, as these boundaries are not always clear. Other relevant issues were discussed there, namely the use of the terms ‘distributive’ and ‘collective’, and the usefulness of making certain distinctions within pluractionality, specifically, the distinction between event number and participant number and the distinction between event-external and event-internal plurality. The general discussion of pluractionality was concluded by presenting four theoretical accounts of pluractionality.

In Chapter 2, the focus turned to Hausa. After giving some basic information on Hausa and its grammatical system, most of the chapter was devoted to the presentation of the Hausa pluractional data. The main generalization is that Hausa pluractionals refer to plural events. The events are not simply plural, however. Instead, the event units are typically many and clearly individuated. Simple iterative interpretations are not possible, with the exception of cases that I called repetitive, which are basically pluractional semelfactives. In addition, pluractionals can sometimes have conative and tentative interpretations and in some cases the event plurality interpretation is accompanied by intensification.

In Chapter 3, I proposed an analysis of Hausa pluractionals that accounts for all the different interpretations described in Chapter 2. The proposal departs from other proposals dealing with pluractionality in dividing the labor of accounting for the individual meaning effects between several semi-independent components. This is intended to capture the fact that the different aspects of pluractionality in Hausa do not have the same status: they are not equally stable and necessary for the felicitous use of the pluractional form. The fact that some parts of the meaning of the pluractional are less fixed than others is also one of the main sources of the considerable variation in speakers’ judgments. The components co-determining the interpretations of

pluractionals were argued to be the following. The first and most stable component, which represents the core of the meaning of pluractionality, is (event) plurality: pluractionals denote sums of events. This is presumably also the meaning component that is shared by all (proper) plurals, nominal and verbal alike, abstracting away from the nature of the atoms forming the plurality. The second component is essentially a single condition constraining the process of event individuation through anchors, a process that is itself governed by independent principles that are not restricted to pluractionality. The constraint is called the non-equivalence condition. It is a conventionalized condition that is responsible for ruling out simple iterative interpretations. Iterative interpretations obtain when the individual event units only differ from each other in when they took place. The non-equivalence condition requires that the event units are interpreted as truly different from each other, which is a requirement that is not satisfied by event units that only differ in their temporal location. In contrast to the core meaning component, i.e. event plurality, the non-equivalence condition represents a slightly less fixed part of the meaning of pluractionality in Hausa: it can be marginally violated. The last meaning component, which is the outer layer of the pluractional semantics, so to speak, are additional conditions on the use of the pluractional form. This is, for instance, the requirement that the event units be many and/or diversified, rather than simply plural. These conditions follow from the fact that Hausa pluractionals are special plurals: they express meanings that go beyond simple plurality. The special meaning effects that these conditions give rise to represent a component of the meaning of Hausa pluractionals that is much more elusive than both the core meaning and the non-equivalence condition. This can be seen from the fact that they are often cancellable or replaceable by other special effects. These three meaning components together can explain essentially all properties of Hausa pluractionals, including the variation.¹¹⁰

Despite the fact that the analysis proposed in this thesis is intended to explain the specific properties of Hausa pluractionals and not pluractionality in general, the fact that it consists of three partly independent components makes it potentially applicable to different types of data. It is a project for future research to see how useful the tools developed in this thesis are for the study of pluractionality across languages.

¹¹⁰ I leave it for future research to specify at which point in the derivation the pluractional morpheme applies to the verb and how exactly the verb combines with its semantic arguments. How these questions are answered will have consequences also for the question of how exactly the plurality requirement is checked.

Bibliography

- Abeillé, Anne, Jenny Doetjes, Arie Molendijk & Henriëtte de Swart. 2004. Adverbs and Quantification. In: Francis Corblin and Henriëtte de Swart (eds.), *Handbook of French Semantics*. Stanford, CA: CSLI Publications, 143-184.
- Alexiadou, Artemis, Giannina Iordăchioaia & Elena Soare. 2007. *Plural marking in argument supporting nominalizations*. Paper presented at Workshop on Nominal and Verbal Plurality, Paris, 9-10 November 2007.
- Al-Hassan, Bello S. Y. 1998. *Reduplication in the Chadic Languages*. Frankfurt am Main: Peter Lang.
- Andrade, Manuel J. 1933/38. Quileute. In: Franz Boas (ed.), *Handbook of American Indian Languages*, vol. 3. New York: Columbia University Press.
- Aronoff, Mark. 1983. Potential words, actual words, productivity and frequency. *Proceedings of the 13th International Congress of Linguists*, 163-171.
- Aronson, Howard I. 1990. *Georgian: a reading grammar*. Columbus, OH: Slavica.
- Bach, Emmon. 1986. The algebra of events. *Linguistics and Philosophy* 9, 5-16.
- Baker, Mark. 2003. *Lexical categories: verbs, nouns, and adjectives*. Cambridge: Cambridge University Press.
- Bale, Alan & David Barner. In press. Semantic triggers, linguistic variation and the mass-count distinction. In Diane Massam (ed.), *A Cross Linguistic Exploration of the Count Mass Distinctions*. Oxford: Oxford University Press.
- Bar-el, Leora. 2007. *On the meaning of verbal number*. Paper presented at Workshop on Nominal and Verbal Plurality, Paris, 9-10 November 2007.
- Bar-el, Leora. 2008. Verbal number and aspect in Skwxwú7mesh. In: Lucia Tovená (ed.), *Aspect et pluralité d'événements*, Recherches Linguistiques de Vincennes 37, 31-54.
- Barker, M.A.R. 1964. *Klamath Grammar*. University of California Publications in Linguistics 38. Berkeley: University of California Press.
- Barner, David & Jesse Snedeker. 2005. Quantity judgments and individuation: Evidence that mass nouns count. *Cognition* 97, 41-46.
- Bauer, Laurie. 2001. *Morphological productivity*. Cambridge: Cambridge University Press.
- Beck, Sigrid. 2010. *Pluractional comparisons*. Paper presented at Workshop on Pluractionality, Leiden, 26 August 2010.
- Beck, Sigrid & Arnim von Stechow. 2007. Pluractional Adverbials. *Journal of Semantics* 24, 215-254.
- Bittner, Maria & Naja Trondhjem. 2008. Quantification as Reference: Evidence from Q-Verbs. In: Lisa Matthewson (ed.), *Quantification: a cross-linguistic perspective*. Bingley: Emerald, 7-66.

- Boas, Franz. 1911a. Introduction. In: Franz Boas (ed.), *Handbook of American Indian Languages* (Bureau of American Ethnology, Bulletin 40, part 1). Washington: Smithsonian Institution, 1-83.
- Boas, Franz. 1911b. Tsimshian. In: Franz Boas (ed.), *Handbook of American Indian Languages* (Bureau of American Ethnology, Bulletin 40, part 1). Washington: Smithsonian Institution, 283-422.
- Borik, Olga. 2002. *Aspect and Reference time*. PhD dissertation, Utrecht: LOT.
- Cabredo Hofherr, Patricia. 2010. *Verbal plurality and event plurality*. Course material, Summer School on Linguistic Typology, Leipzig, 15 August – 3 September 2010. http://www.eva.mpg.de/lingua/conference/2010_summerschool/pdf/course_materials/Cabredo2010plV.pdf
- Carlson, Gregory. 1998. Thematic roles and the individuation of events. In: Susan Rothstein (ed.), *Events and Grammar*. Dordrecht: Kluwer, 35-51.
- Chierchia, Gennaro. 1998. Plurality of mass nouns and the notion of “semantic parameter”. In: Susan Rothstein (ed.), *Events and Grammar*. Dordrecht: Kluwer, 53-103.
- Chung, Sandra. 2000. On reference to kinds in Indonesian. *Natural Language Semantics* 8, 157-171.
- Cole, Desmond T. 1955. *An Introduction to Tswana Grammar*. Cape Town: Longman.
- Collins, Chris. 2001. Aspects of plurality in #Hoan. *Language* 77, 3, 456-476.
- Comrie, Bernard. 1976. *Aspect*. Cambridge: Cambridge University Press.
- Comrie, Bernard. 1982. Grammatical relations in Huichol. In: Paul J. Hopper and Sandra A. Thompson (eds.), *Studies in Transitivity* (Syntax and Semantics 15). New York: Academic Press, 95-115.
- Corbett, Greville. 2000. *Number*. Cambridge: Cambridge University Press.
- Cowell, Mark W. 1964. *A reference grammar of Syrian Arabic*. Washington DC: Georgetown University Press.
- Crevels, Mily. 2006. Verbal number in Itonama. In: Grażyna J. Rowicka and Eithne B. Carlin (eds.), *What's in a verb? Studies in the verbal morphology of the languages of the Americas*, LOT Occasional Series no. 5, Utrecht: LOT Publications, 159-170.
- Cusic, David Dowel. 1981. *Verbal plurality and aspect*. PhD dissertation, Stanford University.
- Cusihuaman, Antonio. 2001. *Gramática Quechua: Cuzco-Collao*. Cuzco: Centro de Estudios Regionales Andinos “Bartolomé de las Casas”.
- Davidson, Donald. 1967. The logical form of action sentences. In: N. Rescher (ed.), *The logic of decision and action*. Pittsburgh: University of Pittsburgh Press.
- Dickey, Stephen M. 2000. *Parameters of Slavic Aspect. A Cognitive Approach*. Stanford: CSLI Publications.
- Doetjes, Jenny. 1997. *Quantifiers and Selection. On the distribution of quantifying expressions in French, Dutch and English*. The Hague: HAG.

- Doetjes, Jenny. 2004. Degree quantifiers. In: Francis Corblin and Henriëtte de Swart (eds.), *Handbook of French Semantics*. Stanford, CA: CSLI Publications, 83-98.
- Doetjes, Jenny. 2007. Adverbs and quantification: Degree versus frequency. *Lingua* 117, 685-720.
- Doetjes, Jenny. Count/mass distinctions across languages. To appear in: Claudia Maienborn, Klaus von Stechow and Paul Portner (eds.), *Semantics: an international handbook of natural language meaning, part III*. Berlin: De Gruyter.
- Dowty, David. 1979. *Word meaning and Montague grammar: the semantics of verbs and times in generative semantics and in Montague's PTQ*. Dordrecht, Boston, London: Reidel.
- Dressler, Wolfgang. 1968. *Studien zur verbalen Pluralität*. Vienna: Hermann Böhlaus.
- Durie, Mark. 1986. The grammaticization of number as a verbal category. In: Vassiliki Nikiforidou, Mary VanClay, Mary Niepokuj & Deborah Feder (eds.), *Proceedings of the Twelfth Annual Meeting of the Berkeley Linguistics Society*. Berkeley: Berkeley Linguistics Society, 355-370.
- van Eijk, Jan P. 1998. CVC reduplication in Salish. In: Ewa Czaykowska-Higgins and M. Dale Kinkade, *Salish Languages and Linguistics. Theoretical and Descriptive Perspectives*. Berlin: Mouton de Gruyter, 453-476.
- Faller, Martina. 2008. *Pluractionality in Cuzco Quechua*. Paper presented at Workshop on Nominal and Verbal Plurality, Paris, 7-8 November 2008.
- Filip, Hana. 2000. The Quantization Puzzle. In: Carol Tenny and James Pustejovsky (eds.), *Events as grammatical objects, from the combined perspectives of lexical semantics, logical semantics and syntax*. Stanford: CSLI Press, 3-60.
- Filip, Hana & Gregory N. Carlson. 2001. Distributivity strengthens reciprocity, collectivity weakens it. *Linguistics and Philosophy* 24, 417-466.
- Foley, William A. 1986. *The Papuan Languages of New Guinea*. Cambridge: Cambridge University Press.
- Frajzyngier, Zygmunt. 1965. An Analysis of Intensive Forms in Hausa Verbs. *Rocznik Orientalistyczny* 29, 2, 31-51.
- Garibay Kintana, Angel María. 1961. *Llave del Náhuatl*. Mexico: Porrúa.
- Garrett, Andrew. 2001a. Reduplication and infixation in Yurok: morphology, semantics, and diachrony. *International Journal of American Linguistics* 67, 264-312.
- Garrett, Andrew. 2001b. *The origin of the Latin frequentative*. Unpublished manuscript. University of California, Berkeley.
- Garrett, Andrew, Juliette Blevins & Lisa Conathan. 2005. *Preliminary Yurok Dictionary*. Berkeley: Department of Linguistics, University of California.
- Geach, Peter. 1962. *Reference and Generality*. Ithaca, New York: Cornell University Press.
- Gillon, Brendan. 1987. The readings of plural noun phrases in English. *Linguistics and Philosophy* 10, 199-219.
- Gonda, Jan. 1949. The Functions of Word Duplication in Indonesian Languages. *Lingua* 2, 170-97.

- Göksel, Asli & Celia Kerslake 2005. *Turkish: a comprehensive grammar*. London: Routledge.
- Green, Melanie. 2007. *Focus in Hausa*. Oxford: Blackwell.
- Greenberg, Yael. 2010. Event Internal Pluractionality in Modern Hebrew: A Semantic Analysis of One Verbal Reduplication Pattern. *Brill's Annual of Afroasiatic Languages and Linguistics* 2, 119-164.
- Grepl, Miroslav et al. 1995. *Příruční mluvnice češtiny*. (Grammar of Czech.) Brno: Lidové noviny.
- Grimshaw, Jane. 1990. *Argument structure*. Cambridge, Mass: The MIT Press.
- Gupta, Anil. 1980. *The logic of common nouns*. New Haven: Yale University Press.
- Haji-Abdolhosseini, Mohammad, Diane Massam, and Kenji Oda. 2002. Number and Events: Verbal Reduplication in Niuean. *Oceanic Linguistics* 41, 2, 475-492.
- Hartmann, Katharina. 2008. *A Cross-Linguistic View of Focus Realizations*. Unpublished Habilitationsschrift.
- Haspelmath, Martin. 2002. *Understanding Morphology*. London: Oxford University Press.
- Henderson, Robert. 2010. *Pluractional Distributivity and Dependence*. Ms., University of California, Santa Cruz.
- Hoeksema, Jack. 1983. Plurality and conjunction. In: A. ter Meulen (ed.), *Studies in Modeltheoretic Semantics*. Dordrecht: Foris.
- Holt, Jens. 1943. *Études d'aspect*. Acta Jutlandica 15.2. Copenhagen: Munksgaard.
- de Hoop, Helen & Irene Krämer. 2005. Children's optimal interpretations of indefinite subjects and objects. *Language Acquisition*, 13, 103-124.
- Horn, Laurence R. 1984. Towards a New Taxonomy of Pragmatic Inference: Q-based and R-based Implicature. In: D. Schiffrin (ed.), *Meaning, Form, and Use in Context: Linguistic Applications*. Washington, DC: Georgetown University Press.
- Houser, Michael J., Reiko Kataoka and Maziar Toosarvandani. 2006. *Pluractional reduplication in Northern Paiute*. Paper presented at a Friends of Uto-Aztecan Languages Conference, University of California, Berkeley.
- Iordăchioaia, Gianina and Elena Soare. 2008. Two Kinds of Event Plurals: Evidence from Romanian Nominalizations. In: O. Bonami & P. Cabredo Hofherr (eds.), *Empirical Issues in Syntax and Semantics* 7, 193-216.
- Isačenko, Aleksandr Vasil'evič. 1968. *Die Russische Sprache der Gegenwart*. Halle: Niemeyer.
- Jackendoff, Ray. 1990. *Semantic structures*. Cambridge, MA: MIT Press.
- Jacobs, R. 1975. *Syntactic change: a Cupan (Uto-Aztecan) case study*. University of California Publications in Linguistics 79. Berkeley: University of California Press.
- Jaggar, Philip J. 2001. *Hausa*. Amsterdam/Philadelphia: Benjamins.
- Key, H. 1960. Stem construction and affixation of Sierra Nahuat verbs. *International Journal of American Linguistics* 26, 2, 130-145.
- Kidda, Mairo. 1985. *Tangale Phonology: A Descriptive Analysis*. PhD dissertation, University of Illinois.

- Kouwenberg, Silvia & Darlene LaCharité. 2003. The meaning of 'more of the same': Iconicity in reduplication and the evidence for substrate transfer in the genesis of Caribbean Creole languages. In: Silvia Kouwenberg (ed.), *Twice as meaningful: Reduplication in Pidgins, Creoles and other contact languages*. London: Battlebridge.
- Kouwenberg, Silvia & Darlene LaCharité. 2005. Less is more: Evidence from diminutive reduplication in Caribbean Creole languages. In: Bernhard Hurch (ed.), *Studies on Reduplication*. Berlin: Mouton de Gruyter, 533-545.
- Kratzer, Angelika. 2003. *The Event Argument. Chapter 4*. Unpublished ms., University of Massachusetts, Amherst. <http://semanticsarchive.net> (Forthcoming: MIT Press)
- Kratzer, Angelika. 2007. On the plurality of verbs. In: J. Dölling, T. Heyde-Zybatow & M. Schäfer (eds.): *Event Structures in Linguistic Form and Interpretation*. Berlin, New York: Mouton de Gruyter, 269-300.
- Krifka, Manfred. 1986. *Nominalreferenz und Zeitkonstitution. Zur Semantik von Massentermen, Pluraltermen und Aktionsarten*. Doctoral dissertation, University of Munich.
- Krifka, Manfred. 1989. Nominal Reference, Temporal Constitution and Quantification in Event Semantics. In: R. Bartsch, J. van Benthem, P. von Emde Boas (eds.), *Semantics and Contextual Expression*. Dordrecht: Foris Publication.
- Krifka, Manfred. 1992. Thematic Relations as Links between Nominal Reference and Temporal Constitution. In: Ivan A. Sag and Anna Szabolcsi (eds.), *Lexical Matters*. Stanford: CSLI Publications.
- Laca, Brenda. 2006. Indefinites, quantifiers and pluractionals. In: Svetlana Vogeleer and Liliane Tasmowski (eds.), *Non-definiteness and plurality*. Amsterdam: John Benjamins, 191-217.
- Lamb, Sidney. 1957. *Mono grammar*. PhD dissertation, University of California, Berkeley.
- Landman, Fred. 1996. Plurality. In: Shalom Lappin (ed.), *The Handbook of Contemporary Semantic Theory*. Oxford: Blackwell.
- Landman, Fred. 2000. *Events and Plurality. The Jerusalem Lectures*. Dordrecht: Kluwer.
- Laserson, Peter. 1995. *Plurality, conjunction and events*. Dordrecht: Kluwer.
- Leisi, Ernst. 1953. *Der Wortinhalt. Seine Struktur im Deutschen und Englischen*. Heidelberg: Quelle und Mayer.
- Lienhard, Ruth & Ursula Wiese. 1986. La modalité du verbe daba. *JALL* 8:41-63.
- Link, Godehard. 1983. The logical analysis of plurals and mass terms: a lattice-theoretical approach. In: R. Bauerle, C. Schwarze & A. von Stechow (eds.), *Meaning use, and interpretation of language*. Berlin: de Gruyter, 302-323.
- Macdonald, Roderick Ross. 1976. *Indonesian reference grammar*. Washington, D.C.: Georgetown University Press.
- Massey, Gerald. 1976. Tom, Dick, and Harry, and All the King's Men. *American Philosophical Quarterly* 13, 89-107.

- Mathiot, Madeleine. 1973. *A Dictionary of Papago Usage*, vols. I, II, Bloomington (Language Science Monographs, 8/1 and 8/2). Bloomington: Indiana University.
- Mathiot, Madeleine. 1983. Papago Semantics. In: A. Ortiz (ed.), *Handbook of North American Indians*, Vol. 10 (Southwest). Washington: Smithsonian Institution, 201-211.
- Matthewson, Lisa. 2000. On Distributivity and Pluractionality. In: Brendan Jackson & Tanya Matthews (eds.), *Proceedings of Semantics and Linguistic Theory X (SALT 10)*, CLC Publications, Ithaca: Cornell University, 98-114.
- Mithun, Marianne. 1988. Lexical categories and the evolution of number marking. In: M. Hammond and M. Noonan (eds.), *Theoretical morphology*. San Diego: Academic Press, 211-234.
- Mithun, Marianne. 1999. *The Languages of Native North America*. Cambridge: Cambridge University Press.
- Moens, Marc & Mark Steedman. 1988. Temporal ontology and temporal reference. *Computational linguistics* 14, 2, 15-28.
- Moltmann, Friederike. 1997. *Parts and wholes in semantics*. Oxford: Oxford University Press.
- Moravcsik, Edith. 1978. Reduplicative Constructions. In: Joseph Greenberg (ed.), *Universals of Human Languages*. Stanford: Stanford University Press, 297-334.
- Moshinsky, J. 1974. *A grammar of Southeastern Pomo*. Berkeley: University of California.
- Mourelatos, Alexander. 1978. Events, processes, and states. *Linguistics and Philosophy* 2, 415-434.
- Müller, Ana & Luciana Sanchez-Mendes. 2007. The meaning of pluractionality in Karitiana. *Proceedings of SULA 4*, 1-17.
- Němec, Igor. 1958. Iterativnost a vid (Iterativity and aspect). *Slovo a slovesnost* 19, 189-200.
- Newman, Paul. 1980. *The Classification of Chadic within Afroasiatic*. Leiden: Universitaire Pers.
- Newman, Paul. 1991. *Nominal and Verbal Plurality in Chadic*. Dordrecht: Foris.
- Newman, Paul. 2000. *The Hausa Language: An Encyclopedic Reference Grammar*. New Haven & London: Yale University Press.
- Newman, Paul. 2007. *A Hausa-English Dictionary*. New Haven & London: Yale University Press.
- Newman, Paul. *Pluractional Verbs: An Overview*. To appear in Patricia Cabredo Hofherr and Brenda Laca (eds.), *Studies on Nominal and Verbal Plurality*. Tübingen: Max Niemeyer.
- Niepokuj, Mary. 1997. *The Development of Verbal Reduplication in Indo-European*. Washington, D.C.: Institute for the Study of Man.
- Ojeda, Almerindo E. 1992. The semantics of number in Arabic. In: Chris Barker and David Dowty (eds.), *Proceedings of the Second Conference on Linguistics and*

- Semantic Theory, held at the Ohio State University May 1-3, 1992*, Columbus, OH: The Ohio State University Department of Linguistics, 303-325.
- Ojeda, Almerindo E. 1998. The Semantics of Collectives and Distributives in Papago. *Natural Language Semantics* 6, 245-270.
- Ongaye Oda. 2010. *Pluractionality in Konso*. Paper presented at Workshop on Pluractionality, Leiden, 26 August 2010.
- Parsons, F.W. 1981. *Writings on Hausa Grammar: The Collected Papers of F.W. Parsons* (ed. Graham Furniss), Ann Arbor, Mich.: UMI Books on Demand.
- Pawlak, Nina. 1975. The semantic problems of “intensive” forms in Hausa verbs. *Africana Bulletin* 23, 139-149.
- Petr, Jan 1986: *Mluvnice češtiny II. Tvarosloví*. (Grammar of Czech. Morphology.) Praha: Academia.
- Rafferty, Ellen. 2002. Reduplication of Nouns and Adjectives in Indonesian. <http://sealang.net/sala/archives/pdf8/rafferty2002reduplication.pdf>
- Regier, Terry. 1998. Reduplication and the arbitrariness of the sign. In: M. Gernsbacher and S. Derry (eds.), *Proceedings of the Twentieth Annual Conference of the Cognitive Science Society*, 887-892. Mahwah, NJ: Lawrence Erlbaum Associates.
- Richardson, Kylie. 2007. *Case and aspect in Slavic*. Oxford: Oxford University Press.
- Romanova, Eugenia. 2006. *Constructing Perfectivity in Russian*. PhD dissertation, University of Tromsø.
- Rosen, Joan. 1977. The Functions of Reduplication in Indonesian. In: Ignatius Suharno (ed.), *Miscellaneous Studies in Indonesian and Languages of Indonesia*. Jakarta: NUSA.
- Rothstein, Susan. 2008. Telicity, atomicity and the Vendler classification of verbs. In: Susan Rothstein (ed.), *Theoretical and crosslinguistic approaches to the semantics of aspect*. Amsterdam: John Benjamins, 43-77.
- Rounds, Carol. 2001. *Hungarian: an essential grammar*. London: Routledge.
- Rubino, Carl. 2005. Reduplication: Form, function and distribution. In: Bernhard Hurch (ed.), *Studies on Reduplication*. Berlin: Mouton de Gruyter, 11-29.
- Rullmann, Hotze & Aili You. 2006. General Number and the Semantics and Pragmatics of Indefinite Bare Nouns in Mandarin Chinese. In: K. von Heusinger and K. Turner (eds.), *Where Semantics Meets Pragmatics*. Amsterdam: Elsevier, 175–196.
- Sauerland, Uli, Jan Anderssen & Kazuko Yatsushiro. 2005. The plural is semantically unmarked. In: Stephan Kepser and Marga Reis (eds.), *Linguistic evidence: empirical, theoretical, and computational perspectives*. Berlin: Mouton de Gruyter, 413-434.
- Scha, Remko. 1981. Distributive, collective, and cumulative quantification. In: J. Groenendijk, T. Janssen and M. Stokhof (eds.), *Formal Methods in the Study of Language*. Amsterdam: Mathematisch Centrum.
- Schaefer, Christiane. 1994. *Das Intensivum im Vedischen*. Göttingen : Vandenhoeck & Ruprecht.

- Schmitt, Cristina & Alan Munn. 1999. Against the nominal mapping parameter: Bare nouns in Brazilian Portuguese. In: *Proceedings of NELS 29*.
- Schuh, Russell G. 1981. *A Dictionary of Ngizim*. University of California Publications in Linguistics 99. Berkeley & Los Angeles: University of California Press.
- Schuh, Russell G. & Gimba, Alhaji Maina. Pluractional verbs. A draft chapter of a forthcoming grammar of Bole.
http://www.humnet.ucla.edu/humnet/aflang/Bole/Papers/Bole_grammar/gram_placV_1.pdf
- Schwarzschild, Roger. 1996. *Pluralities*. Dordrecht: Kluwer.
- Singh, Rajendra. 2005. Reduplication in Modern Hindi and the theory of reduplication. In: Bernhard Hurch (ed.), *Studies on Reduplication*. Berlin: Mouton de Gruyter, 263-281.
- Smith, Carlota S. 1991. *The Parameter of Aspect*. Dordrecht: Kluwer.
- Souag, Lameen. 2010. *Derivational Event Number Marking in Kwarandzyey (Songhay)*. Paper presented at Workshop on Pluractionality, Leiden, 26 August 2010.
- Součková, Kateřina. 2004. *Measure prefixes in Czech: Cumulative na- and delimitative po-*. Master's thesis, University of Tromsø.
- Součková, Kateřina & Malami Buba. 2008. Intensive plurality: Hausa pluractional verbs and degree semantics. In: Marjo van Koppen and Bert Botma (eds.), *Linguistics in the Netherlands 2008*. Amsterdam: John Benjamins, 133-144.
- Stump, G. 1981. The Interpretation of Frequency Adjectives. *Linguistics and Philosophy* 5, 221-256.
- de Swart, Henriëtte. 2011a. Mismatches and coercion. In: Claudia Maienborn, Klaus von Heusinger and Paul Portner (eds.), *Semantics: an international handbook of natural language meaning*. Berlin: De Gruyter (in press).
- de Swart, Henriëtte. 2011b. Verbal aspect across languages. In: Robert Binnick (ed.), *Handbook of Tense and Aspect*. Oxford: Oxford University Press (to appear).
- Tauli, V. 1958. *Structural tendencies of languages*, I. Helsinki: Suomalainen Tiedekatemia.
- Timberlake, Alan. 2004. *A Reference Grammar of Russian*. Cambridge: Cambridge University Press.
- Tovena, Lucia & Alain Kihm. 2008. Event internal pluractional verbs in some Romance languages. In: Lucia Tovena (ed.), *Aspect et pluralité d'événements*, *Recherches Linguistiques de Vincennes* 37, 31-54.
- Van Geenhoven, Veerle. 2004. *For*-adverbials, frequentative aspect and pluractionality. *Natural Language Semantics* 12, 135-190.
- Van Geenhoven, Veerle. 2005. Atelicity, pluractionality, and adverbial quantification. In: Henk Verkuyl, Henriëtte de Swart and Angeliek van Hout (eds.), *Perspectives on aspect*. Dordrecht: Springer, 107-124.
- Vendler, Zeno. 1967. *Linguistics in Philosophy*. Ithaca: Cornell University Press.
- Verkuyl, Henk J. 1972. *On the compositional nature of the aspects*. Dordrecht: Reidel.

- Verkuyl, Henk J. 1993. *A theory of aspectuality: the interaction between temporal and atemporal structure*. Cambridge: Cambridge University Press.
- Verkuyl, Henk J. 1999. *Aspectual issues: studies on time and quantity*. Stanford: CSLI Publications.
- Verkuyl, Henk J. et al. 2004. Tense and aspect in sentences. In: Francis Corblin and Henriëtte de Swart (eds.), *Handbook of French Semantics*. Stanford, CA: CSLI Publications, 233-270.
- Voegelin, C.F. 1935. *Tübatulabal grammar*. Berkeley: University of California Press.
- Wald, Jan. 1977. *Stuff and words: A Semantic and Linguistic Analysis of Nonsingular Reference*. PhD dissertation, Brandeis University.
- Westermann, Diedrich. 1911. *Die Sprache der Haussa in Zentralafrika*. Berlin: Dietrich Reimer.
- Wonderly, W.L. 1951. Zoque III. *International Journal of American Linguistics* 17, 3, 137-163.
- Wood, Esther Jane. 2007. *The Semantic Typology of Pluractionality*. PhD dissertation, University of California, Berkeley.
- Wood, Esther & Andrew Garrett. 2002. The semantics of Yurok Intensive infixation. *Proceedings from the Fourth Workshop on American Indian Languages*, 112-126.
- Xrakovskij, Viktor S. (ed.). 1997. *Typology of iterative constructions*. München, Newcastle: Lincom Europa.
- Yu, Alan. 2003. Pluractionality in Chechen. *Natural Language Semantics* 11, 289-321.
- Zimmermann, Malte. 2003. Pluractionality and complex quantifier formation. *Natural Language Semantics* 11, 249-287.
- Zimmermann, Malte. 2008. Quantification in Hausa. In: Lisa Matthewson (ed.), *Quantification: a cross-linguistic perspective*. Bingley: Emerald, 415-475.
- Zubizarreta, Maria Luisa. 1987. *Levels of representation in the lexicon and in the syntax*. Dordrecht: Foris.

Samenvatting in het Nederlands

Dit proefschrift gaat over de semantiek van pluractionele werkwoorden in het Hausa. Pluractionele werkwoorden, die in vele talen van de wereld voorkomen, zijn werkwoordsvormen die alleen gebruikt kunnen worden om naar meervoudige gebeurtenissen te verwijzen. Een aantal voorbeelden die het gebruik van pluractionele werkwoorden in het Hausa illustreren zijn te vinden in (1).

- (1) a. Mutàanee sun fĩr-fitoo
 people 3PL.PF RED-come.out
 ‘Veel mensen kwamen naar buiten’
 b. Yuusùf yaa sàs-sàyi littàttáfai
 Yusuf 3SG.M.PF RED-kopen boeken
 ‘Yusuf heeft veel (verschillende) boeken gekocht’
 c. Yaa shùs-shùuri teebùr̃
 3SG.M.PF RED-schoppen tafel
 ‘Hij heeft herhaaldelijk tegen de tafel geschopt’

De zin in (1a) kan alleen gebruikt worden als er veel mensen bij de gebeurtenis van het naar buiten gaan betrokken zijn geweest. In (1b) moet de hoeveelheid boeken die Yusuf gekocht heeft erg groot zijn, en het liefst moet het om verschillende soorten boeken gaan. Zin (1c) kan alleen maar een situatie beschrijven waarbij meerdere keren geschopt werd. De pluractionele vormen *fĩrfitoo*, *sàsàyi* en *shùsshùuri*, kunnen dus niet gebruikt worden om enkelvoudige gebeurtenissen te beschrijven. Enkelvoudige gebeurtenissen kunnen alleen worden uitgedrukt met behulp van de niet-pluractionele werkwoorden *fitoo* ‘naar buiten komen’, *sàyi* ‘kopen’, en *shùuri* ‘schoppen’.

Dit proefschrift heeft als doel een semantische analyse te geven van pluractionaliteit in het Hausa. Het eerste hoofdstuk bevat vooral achtergrondinformatie. In dit hoofdstuk komt aan de orde wat pluractionaliteit inhoudt en worden enkele basisbegrippen behandeld die relevant zijn om inzicht te verkrijgen in dit verschijnsel. De eerste vraag die naar voren komt is hoe pluractionaliteit zich verhoudt tot meervoudigheid bij nomina. Ik stel voor dat er duidelijke overeenkomsten zijn tussen de twee domeinen. Desondanks beargumenteer ik dat pluractionaliteit (werkwoordelijk meervoud) onafhankelijk van nominaal getal bestudeerd moet worden omdat bepaalde eigenschappen van pluractionaliteit uitsluitend betrekking hebben op het werkwoordelijk domein. Hierbij moet met name gedacht worden aan de relatie tot aspect en het feit dat gebeurtenissen gewoonlijk geïndividueerd worden met behulp van andere entiteiten. Naast het vaststellen van de grenzen tussen pluractionaliteit en aspect wordt ook aandacht geschonken aan de relatie tussen pluractionaliteit en graadverschijnselen en het gebruik van de termen ‘distributief’ en ‘collectief’. Ook wordt gekeken naar de bruikbaarheid van bepaalde onderscheiden binnen het verschijnsel pluractionaliteit, met name het onderscheid tussen meervoudigheid van gebeurtenissen en meervoudigheid van

deelnemers in die gebeurtenissen, en het onderscheid tussen gebeurtenis-externe- en gebeurtenis-interne pluractionaliteit. De algemene discussie over pluractionaliteit wordt afgesloten met een presentatie van vier theoretische benaderingen van het verschijnsel in de literatuur (Cusic 1981, Lasersohn 1955, Van Geenhoven 2004, 2005, en Ojeda 1998).

In Hoofdstuk 2 ligt de nadruk op het Hausa. Na een korte introductie van relevante onderdelen van de grammatica bevat dit hoofdstuk een uitgebreide uiteenzetting van de eigenschappen van pluractionele werkwoordsvormen in het Hausa. De belangrijkste generalisatie die gemaakt kan worden op basis van de data is dat de pluractionele vormen verwijzen naar meervoudige gebeurtenissen. Naast meervoudigheid zijn echter meestal nog andere factoren van belang. Eenvoudige iteratieve interpretaties zijn in de meeste gevallen niet mogelijk, behalve bij een klasse werkwoorden die ‘repetitief’ gebruikt kunnen worden (semelfactieven). Om de pluractionele vorm te kunnen gebruiken moeten er ofwel veel gebeurtenissen hebben plaatsgevonden, ofwel de gebeurtenissen moeten duidelijk van elkaar verschillen. Daar komt nog bij dat pluractionele werkwoordsvormen soms conatieve en tentatieve interpretaties kunnen hebben; in andere gevallen gaat de interpretatie van de meervoudigheid van de gebeurtenissen gepaard met intensificatie.

In Hoofdstuk 3 stel ik een analyse van pluractionaliteit in het Hausa voor die alle verschillende interpretaties die in Hoofdstuk 2 beschreven zijn verklaren. In tegenstelling tot andere analyses van pluractionaliteit maakt dit voorstel gebruik van drie semi-onafhankelijke componenten, die elk verantwoordelijk zijn voor een deel van de aangetroffen betekenis effecten.

De analyse laat zien dat verschillende aspecten van pluractionaliteit in het Hausa niet dezelfde status hebben. Sommige betekenisaspecten liggen minder goed vast dan andere. Dit is één van de oorzaken van de aanzienlijke variatie in oordelen onder sprekers. De componenten die de interpretaties van de pluractionals mede bepalen zijn als volgt. De eerste en meest stabiele component, die tevens gezien kan worden als de hoofdbetekenis van pluractionaliteit, is meervoud (van gebeurtenissen): een pluractionele vorm denoteert een som van gebeurtenissen. Dit is waarschijnlijk ook het betekenisonderdeel dat gedeeld wordt door alle (echte) meervouden, zowel nominale als werkwoordelijke, waarbij geabstraheerd wordt van de eigenschappen van de atomen die aan het meervoud ten grondslag liggen.

De tweede component van de analyse is een conditie op het individuatieproces van gebeurtenissen door middel van ‘ankers’. Dit type individuatie wordt verder bepaald door onafhankelijke principes die zich niet beperken tot pluractionaliteit. De conditie waar het hier om gaat, wordt de ‘non-equivalence condition’ (niet-gelijkwaardigheidsconditie) genoemd. Binnen het huidige voorstel is dit een geconventionaliseerde voorwaarde op ‘verankering’ van gebeurtenissen, die verantwoordelijk is voor het uitsluiten van eenvoudige iteratieve interpretaties. Bij iteratieve interpretaties verschillen de afzonderlijke gebeurtenis-eenheden slechts van

elkaar door het moment waarop ze plaatsvinden. Hoewel deze gebeurtenis-eenheden niet identiek zijn, kunnen ze alleen van elkaar onderscheiden worden op basis van hun ordening ten opzichte van elkaar. Ik neem aan dat dit niet voldoende is om ze te kwalificeren als ongelijkwaardige gebeurtenis-eenheden: de gebeurtenis-eenheden zijn weliswaar niet identiek maar ze zijn wel gelijkwaardig. In tegenstelling tot de hoofdbetekenis (meervoudigheid van gebeurtenis-eenheden) is de niet-gelijkwaardigheidsconditie een minder wezenlijk onderdeel van de betekenis van pluractionaliteit in het Hausa: de conditie kan marginaal geschonden worden.

De laatste betekeniscomponent, die gezien kan worden als de buitenste laag van betekenis van pluractionaliteit, bevat bijkomstige voorwaarden op het gebruik van de pluractionele vorm, zoals de vereiste dat er veel of duidelijk verschillende gebeurtenis-eenheden zijn, in plaats van alleen maar meer dan één. Deze condities volgen uit het feit dat Hausa pluractionele vormen ‘bijzondere’ meervouden zijn: ze drukken betekenissen uit die zich niet beperken tot meervoudigheid. De speciale betekenis effecten die hierdoor ontstaan zijn ongrijpbaarder dan de hoofdbetekenis (meervoudigheid) en de effecten van de niet-gelijkwaardigheidsconditie die hierboven besproken zijn. Dit kan aangetoond worden op grond van het feit dat ze niet altijd noodzakelijk aanwezig zijn, en dat één effect vervangen kan worden door een ander effect. Samen verklaren deze drie betekeniscomponenten in essentie alle eigenschappen van Hausa pluractionals, daarbij inbegrepen de variatie tussen sprekers.

Hoewel de voorgestelde analyse in dit proefschrift bedoeld is om specifieke eigenschappen van pluractionaliteit in het Hausa te beschrijven, en niet van pluractionaliteit in het algemeen, is de analyse in drie onafhankelijke componenten in principe ook geschikt voor de analyse van gegevens van andere talen. Verder onderzoek moet aantonen in hoeverre andere systemen van pluractionaliteit en variatie tussen verschillende pluractionele systemen met behulp van een geparametriseerde versie van de hier voorgestelde analyse geanalyseerd kunnen worden.

Curriculum vitae

Kateřina Součková was born on 13 June 1979 in Brandýs nad Labem, Czechoslovakia. In 1997 she started studying Czech language and literature at Charles University in Prague. In 2002 she interrupted her studies in Prague to study General Linguistics at the University of Tromsø, Norway, where she graduated in 2004 by defending her master's thesis with the title *Measure prefixes in Czech*. In 2006 she finished her Czech studies in Prague and obtained her second master's degree. In September 2006 she became a PhD student at the Leiden University Centre for Linguistics and the present dissertation is the result of her research at this institute.