

## Participant Nominalization as Relative Clause Formation

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### 1. Introduction

Participant nominalizations (PNs) are interpreted as denoting a participant in the event/state described by the verb from which they are derived:

- |    |    |  |                     |
|----|----|--|---------------------|
| 1. | a. | The <i>players</i> left the field early.                       | AGENTIVE/SUBJECTIVE |
|    | b. | I used an old <i>lawn-mower</i> and still finished the job.    | INSTRUMENTAL        |
|    | c. | The <i>interviewees</i> lined up for the application check-up. | THEME               |

Largely ignored in typological<sup>1</sup> work (e.g. Comrie and Thompson (1986:349)):

*“(participant nominalizations) typically behave syntactically like other nouns in the language, bearing only morphological and (often unpredictable and idiosyncratic) semantic relations to the associated verb or adjective.”*

Based on earlier and recent theoretical work<sup>2</sup> I assume a syntactic derivation of PNs. More specifically I propose that:

- PNs are derived from clausal strings of different sizes that contain a verbal core
- They have the syntactic structure of reduced headless relative clauses.

The evidence for this comes mainly from English and Malagasy data. In these languages PNs:

- may contain additional verbal morphology (transitive; causative; reciprocal);
- present certain aspectual distinctions (eventive; episodic; dispositional);
- allow for non-intersective interpretations with certain adverbial adjectives;
- allow for domain-internal licensing of reflexives (lack of ‘*i-within-i*’ effects).

In addition, Malagasy PNs (and PNs in many other languages):

- allow for accusative-marked internal arguments;
- permit adverbial modifiers;
- present a strong morphosyntactic parallelism with relative clauses with respect to voice morphology; (use of same relativizers/nominalizers in TibetoBurman)
- crosslinguistically participant nominalizations and headless relative clauses have an overlapping (if not identical) distribution.

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<sup>1</sup> Most typological work on nominalizations concentrates on the properties of so-called ‘action’ nominals (e.g. Comrie 1976; Noonan 1985; Comrie & Thompson 1986; Koptjevskaja-Tamm 1993; Malchukov 2004), with only limited reference to participant nominalizations.

<sup>2</sup> Exceptions include between others Fabb 1984; Levin & Rappaport 1988; Rappaport & Levin 1992; Keyser and Roeper, 1992, Moortgat, 1987; van Hout & Roeper 1998; Baker and Vinokurova 2008; Alexiadou and Schäfer 2010; and many others.

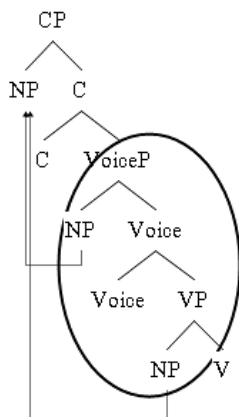
## 2. The proposal:

Early transformational grammar (e.g. Lees 1960): PNs derive from a ‘deep structure’ in which a (null) head noun (interpreted as generic) dominates a restrictive relative clause (Bach 1968:92; Vendler 1968:26; McCawley 1988).

2. a. birdwatcher → N<sup>3</sup> who watches birds  
b. gatecrasher → N who crashes a gate

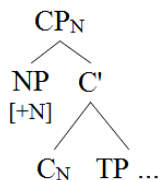
Building on this intuition I assume that participant nominals have the structure of (reduced) headless relative clauses. A null nominal element (a generic NP) moves from inside the verbal domain to the specifier of a reduced relative clause structure achieving the relative clause interpretation:

3.

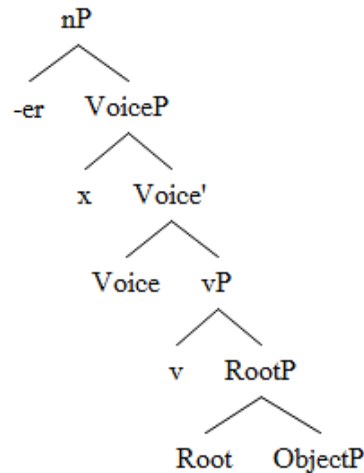


In this representation the PN morphology can be crosslinguistically either an overt realization of the relative NP (usually historically derived from a generic noun) or the nominalizer/complementizer C. The structure becomes nominal through categorial feature agreement as in the model developed by Koopman (2005):

4.



<sup>3</sup> In the clauses on the right side of (2), N stands for a group of human nouns: *man, woman, person, boy, girl*, etc. In more formal terms we can assume that N stands for any nominal that has the feature [+HUMAN].



**An alternative** (e.g. Alexiadou and Schäfer, 2008, 2010):

- n-layer = nominalizer (in this particular case is spelt out as *-er*).
- main function: introduce the R-argument, argued by Williams (1981) to be responsible for the referential reading of the noun. Grimshaw (1990): R is identified with an argument of the base verb;
- each affix must specify which argument it binds:
- clean (x (y)) cleaner (R = x) such that x cleans y

(3) and (**Error! Reference source not found.**) are structurally very similar. The reasons for assuming (3) here have to do with predominately voice-morphology in Malagasy as well as binding effects (and their remnants in English) discussed in the following two sections.

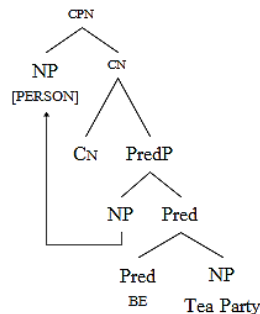
### 3. English

agentive *-er* nominals in English: a relative clause source allows intra-speaker variation with (contra- Rappaport and Levin (1992) or Baker and Vinokurova (2009)) non-external-argument readings (unaccusatives, nominal, adjectival, and so on):

5. It seems she's a frequent faller who has made something of a career out of suing stores and employers for fall injuries<sup>4</sup>.
6. "All our children were early developers," Franca added. "But it was easier for the boys—being tall made them feel big and important."<sup>5</sup>

The relative clause interpretation becomes more obvious with *-er* attached to idiomatic phrases:

7. The World's Fair brought many *out-of-towners* to New Orleans<sup>6</sup>.
8. The Tea Party movement is not a national political party; polls show that most Tea *Partiers* consider themselves to be Republicans ...<sup>7</sup>
- 9.



<sup>4</sup> <http://bighominid.blogspot.com/2003/12/frequent-faller.html> (Last accessed 05/12/2012)

<sup>5</sup> [http://www.pearsonhighered.com/showcase/berkcd9e/assets/pdf/Berk\\_0205149766\\_Ch5.pdf](http://www.pearsonhighered.com/showcase/berkcd9e/assets/pdf/Berk_0205149766_Ch5.pdf) (Last accessed 05/12/2012)

<sup>6</sup> <http://dictionary.reference.com/browse/out-of-towner> (Last accessed 05/12/2012)

<sup>7</sup> [http://en.wikipedia.org/wiki/Tea\\_Party\\_movement](http://en.wikipedia.org/wiki/Tea_Party_movement) (Last accessed 05/12/2012)

Agentive *-er* nominals: more complex structure than most underived common noun phrases, which allows for aspectual distinctions: *-er* nominals vary with respect to the [ $\pm$ event] specification (Rappaport & Levin 1992, Fabb 1984, Keyser & Roeper 1984, van Hout & Roeper 1998):

10. The exiled king of Greece. (*May never have ruled Greece.*)
11. The exiled ruler of Greece. (*Must have ruled Greece.*)

Usually associated with the presence of a complement structure: an *-er* nominal has a complement structure if and only if it has an eventive interpretation:

12. a saver of lives (can only refer to a person that has saved a life)
13. lifesaver (has not necessarily saved lives)

Modification by adjectives such as *frequent* reinforces the event interpretation and thus requires complement structure:

14. \*a frequent king
15. \*a frequent ruler
16. a frequent ruler of small European monarchies

This event/complement structure may be associated with the presence of a v-layer. Alexiadou & Schäfer (2008) reject this correlation assuming that all *-er* nominals are eventive and introducing a dispositional vs. an episodic aspectual distinction (based on aspectual operators):

Dispositional *-er* nominals allow for eventive/non-intersective readings of adverbial adjectives but not frequent-type modification:

17. a big car-seller (one who is big/ one who sells many cars)
18. \*a frequent car-seller

Episodic *-er* nominals allow both:

19. a big seller of American cars (one who is big/ one who sells many American cars)
20. a frequent seller of American cars

Roy and Soare (2012) connect the distinction to the type of the complement: specific complements elicit episodic readings while non-specific complements dispositional readings:

21. un consommateur fréquent de cette drogue  
a frequent consumer of this drug
22. \*un consommateur fréquent de drogue  
a frequent consumer of drug(s)

Profession names behave like common noun phrases in this respect:

23. \*a frequent teacher (one who teaches frequently)

24. \*a big teacher (one who teaches a lot)

In most cases contrasts between derived and underived nominals exist:

25. Helen is a beautiful dancer. vs. Helen is a beautiful ballerina.  
26. Peter is a fast writer vs. Peter is a fast author.

There seems therefore to be a contribution that the suffix *-er* brings to the structure which allows for event-binding (see for example Winter and Zwarts, 2011).

However, the eventive interpretation with non-intersective adjectives is not a bullet-proof test – it applies to classes of non-derived nouns (Larson, 1998):

27. Mary is an old friend. (Friend for a long time)  
28. Arthur is a just king. (He rules justly.)  
29. Helen is an efficient boss. (She manages the company efficiently)

A certain class of nouns then seem to behave on a par with PNs. There are two possibilities:

- PNs behave like non-derived common nouns
- Some common nouns have a “richer” structure which contains an event projection

The latter is the route followed by Larson (1998).

Additional evidence comes from a well-known violation of i-within-i effects with relative clauses (of various degrees of reduction, see Jacobson 1993):

30. The woman<sub>i</sub> [ who has married her<sub>i</sub> childhood sweetheart] left.  
31. The woman<sub>i</sub> [who still loves her<sub>i</sub> childhood sweetheart] left.  
32. The woman<sub>i</sub> [married to her<sub>i</sub> childhood sweetheart] left.  
33. The woman<sub>i</sub> [still in love with her<sub>i</sub> childhood sweetheart] left.  
34. The woman<sub>i</sub> [in her<sub>i</sub> car] is my sister.  
35. The boy<sub>i</sub> [on his<sub>i</sub> bike] is graduating soon.

When similar structures involve PNs then judgments seem to vary. Baker and Vinokurova (2009) find these structures almost completely ungrammatical:

36. ?\*A promoter of himself/oneself alienates everyone else.  
37. ?\*Every class has at least one raiser of her hand.

However, a Google search reveals thousands of hits with such expressions:

38. Every door opening into the wide and various life of a great government must be thrown

- wide open before this *ruler of himself* and others<sup>8</sup>.
39. Narcissus or *the lover of himself*. (Book title by Jean-Jacques Rousseau)
40. The meaning of liberty ... gets a lot more interesting when we add in the perspective of a young boy who is held in slavery by these *promoters of their own liberty* ...<sup>9</sup>
41. ...if the brethren I have mentioned had resolutely refused to have any fellowship whatever with these dividers of churches, *these lovers of their own bellies*, we would have had a very different story to tell now<sup>10</sup>.

Jacobson (1993) finds that they improve when some intensifier (e.g. *own*) is used:

42. ?\* The builder<sub>i</sub> of her<sub>i</sub> house left.
43. ?? The builder<sub>i</sub> of her<sub>i</sub> father's house left.
44. ? The builder<sub>i</sub> of her<sub>i</sub> own house left.

While these are not perfect they contrast with underived common nouns:

45. \*The wife<sub>i</sub> of her<sub>i</sub> /her<sub>i</sub> own childhood sweetheart left.
46. \*The wife<sub>i</sub> of her<sub>i</sub> sister's childhood sweetheart left.
47. \*The wife<sub>i</sub> of the author of her<sub>i</sub> biography left.
48. ?The lover<sub>i</sub> of his<sub>i</sub> mother's art collection will get to inherit it.
49. \*The lover<sub>i</sub> of his<sub>i</sub> mother's hairdresser will get many wigs.

The underived nominals that allow for an event interpretation do not seem to license anaphoric elements. Underived near-synonyms of *ruler* or *leader*, *promoter*, and *supporter* do not provide any cases in simple Google searches and native speakers seem to find these cases completely ungrammatical even in the presence of intensifiers:

50. \*The king<sub>i</sub> of his<sub>i</sub> own people will lead them to freedom.
51. \*?A patron<sub>i</sub> of his<sub>i</sub> own artist friends cannot expect to profit.
52. \*People will always vote for an ally<sub>i</sub> of his<sub>i</sub> own friends.

Thus, the clausal space within agentive nominals must be large enough to accommodate an antecedent for these pronominals while underived nouns must lack this space.

#### 4. Malagasy

Malagasy is a Western Malayo-Polynesian language of the Austronesian family.

- Conventionally characterized as having a VOS basic word order.

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<sup>8</sup> [www.archive.org%2Fstream%2Fhomileticreview20unkngoog%2Fhomileticreview20unkngoog\\_djvu.txt&ei=hd7CULe\\_F4yGrAf3s4GoAw&usq=AFQjCNGfwM9cTdxIQ4cWyKZ1Norjp53CMg&sig2=JefgP8x2ywIU8KLKXcviGw](http://www.archive.org%2Fstream%2Fhomileticreview20unkngoog%2Fhomileticreview20unkngoog_djvu.txt&ei=hd7CULe_F4yGrAf3s4GoAw&usq=AFQjCNGfwM9cTdxIQ4cWyKZ1Norjp53CMg&sig2=JefgP8x2ywIU8KLKXcviGw) (Last accessed 05/12/2012)

<sup>9</sup> <http://hammersyapicks.blogspot.com/2009/09/astounding-life-of-octavian-nothing.html> (Last accessed 05/12/2012)

<sup>10</sup> <http://oneinjesus.info/2007/04/a-theological-history-of-restoration-movement-thought-part-76-harding/> (Last accessed 05/12/2012)

- Complex voicing system that promotes verbal arguments (agent, theme, instrument, etc.) to a predicate-external position called the ‘trigger’ in theory-neutral terminology.
- The promotion of arguments affects word order and is also reflected in distinctive verb morphology (Keenan & Polinsky (1998); Pearson (2001, 2005); Paul (1999)).

53. n.i.vídy      boky    ho an’ny      mpianatra      ny    mpampianatra.  
 PST.V.buy      books    for’ DET      student      DET    teacher  
 ‘The teacher bought books for the student.’

54. no.vid.in’      ny      mpampianatra ho an’ny mpianatra ny boky.  
 PST.buy.TT/LNK’ DET    teacher      for’ DET student    DET books  
 ‘The books were bought by the teacher for the student.’

55. n.i.vidi.ana.n’      ny mpampianatra boky ny    mpianatra.  
 PST.V.buy.CT/LNK’ DET teacher      books DET    student  
 ‘The student was bought books for by the teacher.’

Relative Clause Formation: *An NP position in a sentence can be relativized into if, and only if, it is the subject position of the sentence.*” (Keenan, 1972:173).

This means that the ‘head’ of a relative clause in Malagasy must function as the trigger of the subordinate clause:

56. ny      mpampianatra (izay) n.i.vídy      boky    ho an’ny      mpianatra  
 DET    teacher      (REL) PST.V.buy      books    for’ DET      student  
 ‘The teacher (who) bought books for the student.’

57. \*ny      boky (izay) n.i.vídy      ho an’ny mpianatra    ny mpampianatra  
 DET    books (REL) PST.V.buy      for’ DET student    DET    teacher  
 ‘The books (which) the teacher bought for the student.’

58. ny      (boky) (izay) no.vídin’      ny mpampianatra    ho an’ny mpianatra  
 DET    books (REL) PST.buy.TT/LNK’ DET    teacher      for’DET student  
 ‘The books (which) the teacher bought for the student.’

59. \*ny      mpianatra      (izay) n.i.vídy      boky    ny mpampianatra  
 DET    student      (REL) PST.V.buy      books    DET teacher  
 ‘The student (who) the teacher bought books for.’

60. ny      (mpianatra)      (izay) n.i.vídi.an’      ny mpampianatra boky  
 DET    student      (REL) PST.V.buy.CT/LNK’    DET teacher      books  
 ‘The student (who) the teacher bought books for.’

61. ny (fotoana) n.an.orat.an-dRaso      ilay taratasy dia (tamin’) ny roa sy dimy  
 DET time    PST.V.write. CT/LNK-Raso    DEM letter TOP (PST.at’) DET two and five  
 ‘The (time when) Rabe wrote this letter was five past two.’

62. hafa.hafa ny (fomba) an.oratan-Rakoto ny taratasy  
strange.RED DET manner AT.write. CT/LNK' DET Rakoto DET letter  
'Rakoto's way of writing the letter is a bit strange.'

Agentive nominalizations are formed on the AT verbal base (like agentive relative clauses):

63. ny mp.i.vidy boky ho an'ny mpianatra dia ny mpampianatra  
DET NMLZ.V.buy books for' DET student TOP DET teacher  
'The buyer of books for the student is the teacher.'

Instrumental or locative PN based on the same verbal base are formed with CT voice morphology (as expected from instrumental and locative relative clauses)

64. ny f.i.vidi.an' ny mpampianatra boky dia ny sekoly  
DET PST.V.buy. CT/LNK' DET teacher books TOP DET school  
'The (place where) the teacher bought books is the school.'

65. [ny f.an.doah.an-dRabe ridrina] dia ny fantsika  
DET NMLZ.V.drill. CT/LNK-Rabe wall TOP DET nail  
'Rabe's (instrument for) drilling walls is a nail.'

Similar patterns are widespread in Austronesian languages (Zeitoun 2002) and are also clearly observed in Tibeto-Burman languages (Matisoff 1972) and elsewhere. Malagasy agentive nominals exhibit additional verbal properties to English *-er* nominals:

They license accusative case marked complements (visible in pronouns and proper names):

66. ny mp.amp.i.anatra an-dRaso'a isan'andro....  
DET NMLZ. CAUS.V.learn ACC-Raso'a every day  
'The (one who) teaches Raso'a every day...'

They take frequentative adverbial modifiers:

67. [ny mbola mp.aha.ndro sakafy matetika] na dia antitra aza dia i Raso'a  
DET still NMLZ.V.cook food often even aged though TOP DET Raso'a  
'The one that still cooks food often even though she is old is Raso'a.'

Examples (66-67) denote an event, i.e. events of "teaching" or "cooking" must have taken place. In fact, the only difference between a tensed headless relative clause and an agentive nominal is time-anchoring:

68. hita.ko ny mp.onina ao an-tanàna  
see.1SG/GEN DET NMLZ.inhabit there LOC-village  
'I saw the (ones) living in the village.'

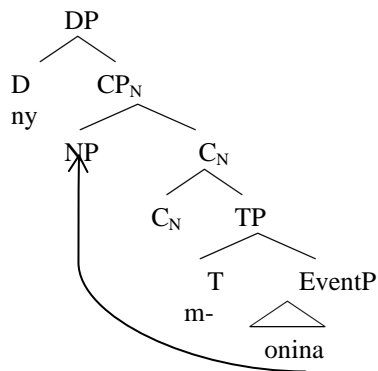


69. hita.ko ny m.onina ao an-tanàna  
 see.1SG/GEN DET PRS.inhabit there (invis.) LOC-village  
 ‘I saw the (ones) (currently) staying in the village.’

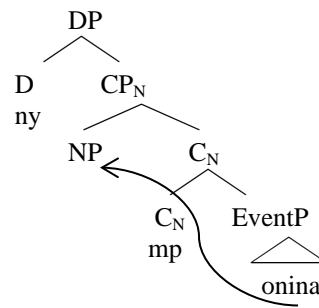
Headless relative (69): refers to people that were at the moment of the ‘seeing’ event present at the town, including any visitors. Agentive nominal (68): refers to the permanent residents of the village, excluding visitors and any other people that are temporarily there, and including inhabitants that are not there at the time of the utterance.

The difference between the agentive nominal of (68) and the headless relative of (69) is then not in the type of structure but in the amount of clausal structure present:

70. Headless Relative Clause



Agentive Nominalization



Both structures exhibit the full range of clausal properties except tense: (70) has tense morphology and is semantically anchored in time, while in (72) tense is replaced by the nominalizer and the interpretation is not time-anchored.

Finally, the syntactic space inside Malagasy agentive nominals permits binding of anaphors:

71. vanona [ny [mp.amp.i.anatra ny tena.ny<sub>i</sub>/ ny zana.ny<sub>i</sub>]]  
 successful DET NMLZ.CAUS.V.study DET self.3 GEN/DET child.3GEN  
 ‘The (one that) teaches himself/his children is successful.’

**Summing Up**

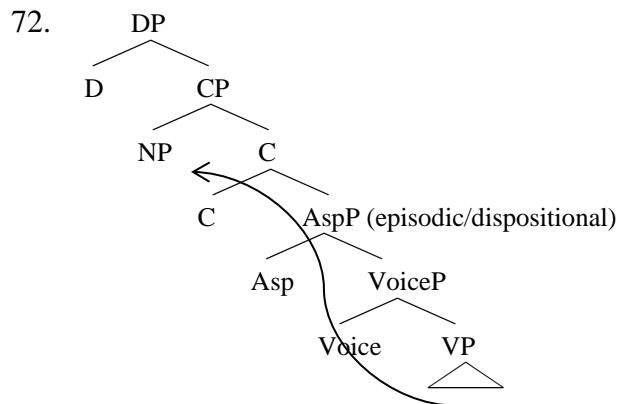
The main proposal here assumes that PNs are formed as headless relative clauses.

A nominalizer dominates a clausal string that can appear in different sizes. Certain verbal/clausal properties are manifested depending on whether their corresponding projections are available in the nominalizer-dominated structure:

- eventive (episodic/dispositional interpretations),
- adverbial/frequentative interpretation,
- accusative-marked complements/prepositional complements/incorporated arguments

English agentive/subjective nominals:

The nominalizer selects the vP phase domain. For certain speakers, maybe only the external argument in spec-vP/VoiceP is available. For other speakers, derived subjects (e.g. unaccusatives adjoined to vP as a phase-escape hatch) are also available:



Accusative case is licensed outside this domain (this is why only prepositional complements are allowed).

**Question**

If nominalization of PNs is relativization, why not long-distance nominalization?

- 73. (one who) plays football → football-player
- 74. \*(one who) John knows (who) plays football → ???

The reduced structure of the relative clause is derived because the nominalizer interrupts the clausal domain freezing the structure within the nominal. In this respect long-distance relativization/nominalization is not possible as it would require a full clausal domain within a higher nominalization, which cannot be derived from the proposed structures<sup>11</sup>.

**Some Typological Observations**

Typologically the following predictions are made:

- the moved generic NP may be null or overt (possibly related to a common noun phrase in the language – (e.g. Qiang, LaPolla & Huang, 2003 , examples (78-85))
- in some languages the C-element which participates in the formation of relative clauses is the same as the C-element that derives participant nominalizations ((75-77) in Chinese)
- in other languages two different functional elements may be used (English, Malagasy)

- 75. tā chǎo – fàn  
he cooks rice  
'He cooks.'
- CHINESE, MANDARIN  
Comrie & Thompson (1985: 353)

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<sup>11</sup> In languages like Malagasy there are additional reasons as to why long-distance nominalizations are not possible (including the relativization constraint).

76. chǎo – fàn de rén  
 cook - rice REL person  
 ‘a/the person who cooks...’
77. chǎo – fàn de  
 cook - rice REL  
 ‘one who cooks; a cook’

Qiang (Tibeto-Burman; LaPolla & Huang, 2003) *mi* ‘person; man’ → agentive PN suffix –m

78. *ɸua* ‘help’ → *ɸuam* ‘servant’ QIANG  
 79. *tɕiɸua* ‘house’ *le* ‘be’ → *tɕiɸualem* ‘occupant’  
 80. *ma* ‘not’ *qə* ‘have’ → *maqəm* ‘pauper’
81. qa.fɑ. ɸdʒe.m khuə  
 1SG.DIR.bite.NMLZ dog  
 ‘The dog which bit me...’
82. qa.panə.dele.m mi  
 1SG.thing.give.NMLZ person  
 ‘the person who gave me something...’
83. qa.wu.panə.dele.m mi  
 1SG.AG.thing.give.NMLZ person  
 ‘the person to whom I gave something...’
84. wutɕupu die.ʒe.m  
 husband DIR.die.NMLZ  
 ‘one whose husband had died...’
85. qa the:.tɕ ləyz de.le.m le:  
 1SG 3SG.GEN book DIR.give.NOM DET  
 ‘the one to whom I gave a book...’

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