



An Enhanced Account of Relative Identity: Double-Reference Starting Point and Dual-Track Feature

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ABSTRACT

This article gives a holistic re-examination of the semantic content and syntactic structure of the concept of relative identity: it suggests and explains an expanded and enhanced dual-track characterization of relative identity. It is expanded in this sense: its due coverage is not narrowly restricted to the *equal-status* case of *identity* statements (the *symmetric* case for *identity* simplex) but also includes the *category-assimilating* case (the *asymmetric* case for *identity* complex), both of which are unified by the shared semantic core content of relative identity. It is enhanced in this sense: it is intended to give a more refined characterization of relative identity for the sake of enhancing our understanding of the structure and content of real-life relative-identity statements in people's basic employment of language in view of the relation between thought, language, and the world.

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The purpose of this paper is to give a re-examination of the structure and content of relative identity/sameness as revealed in real-life identity predication statements in people's basic employment of language (something said about an object). As one jointly concerned issue in logical theory and philosophy of logic in view of philosophy of language and metaphysics, the examination is carried out in the explanatory direction from real-life relative identity statements to their theoretic reflection in logic, rather than in the reverse direction taken not only by the traditional approach to absolute identity but also by the standard modern approach to relative identity. I intend to suggest and explain an expanded and enhanced dual-track account of relative identity for two purposes: < 1 > to capture some key features of real-life relative identity as revealed in the semantic-syntactic structure of identity-predication statements in people's basic employment of language; < 2 > to accurately present them through enriched modern logic resources. This account is expanded in this sense: its due coverage is not narrowly restricted to the *equal-status symmetric* case as shown in the *equivalence-identity* statements (the 'equal-status identity' case for short, addressing *identity* simplex) but also includes the *unequal-status asymmetric* case as shown in the *category-assimilating-identity* statements (the 'category-assimilating-identity' case for short, addressing *identity* complex),¹ and both of which are unified by the shared

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¹ Historically speaking, in my view, Gongson Long was the first in the history of philosophy who has explicitly and reflectively addressed the case of *category-assimilating-identity* statements in his 'White-Horse-Not-Horse' argumentation and shown



47 semantic core content of real-life relative identity. This account is enhanced in this sense: it
 48 is intended to give a more refined theoretic characterization of relative identity for the sake
 49 of enhancing our understanding of the structure and content of real-life relative-identity
 50 statements concerning the relation between thought, language, and the world.

51 1. Methodology and Background in Modern Treatment

52
 53
 54 In this section, I briefly explain the methodology underlying this examination: the explana-
 55 tory direction in treating the issue of identity is that from real-life identity-predication
 56 statements to its theoretic elaboration in logic, rather than in the reverse direction taken
 57 not only by the traditional approach to absolute identity but also by the standard modern
 58 approach to relative identity. This does not amount to indiscriminately denying the lat-
 59 ter *top-down* explanatory direction; rather, the addressed *bottom-up* explanatory-direction
 60 approach is sensitive to the purpose here. That is, an enhanced dual-track account of
 61 relative identity is to be explained for this purposes: to capture some key features of real-
 62 life relative identity as revealed in the semantic-syntactic structure of identity-predication
 63 statements in people's basic employment of language (saying something about an object),
 64 rather than some purely theoretic features of a certain ideal theoretic model (such as a math
 65 model) for the sake of a certain theoretic need and in view of the standard logic resources.

66 Historically, the concept of absolute identity appeared in the literature as a *top-down*
 67 theoretic construction (rather than a *bottom-up* reflective abstraction of real-life iden-
 68 tity statements), which can trace back to Leibniz's Law ('LL' for short) which sometimes
 69 collectively means two distinct principles:

$$70 \quad \forall x \forall y [x = y \rightarrow \forall F (F(x) \leftrightarrow F(y))]$$

71
 72
 73
 74 (LL.1) indiscernibility of identical:

75
 76 in plain words, identical objects have exactly the same properties.

77
 78 (LL.2) identity of indiscernibles:

$$79 \quad \forall x \forall y [\forall F (F(x) \leftrightarrow F(y)) \rightarrow x = y]$$

80
 81
 82 In plain words, objects with exactly [all relevant] the same properties are [absolutely]
 83 identical. In (LL.1), the sign '=' for absolute identity is used as a presupposed primitive,
 84 while in (LL.2), absolute identity is what is defined. However, it is controversial exactly
 85 which one in the two distinct principles, the indiscernibility of identical and the identity of
 86 indiscernibles, the label 'Leibniz's Law' is used to stand for. (LL.1) and (LL.2) can be com-
 87 bined into the following bi-conditionals in second-order predicate calculus while avoiding
 88

89 what can be labeled 'double-reference' semantic-sensitivity. This author's relevant discussions have been partially inspired
 90 by Gongsun Long's approach. However, the central content of this essay (its central points and their argumentations and
 91 explanations) does not rely on how to interpret Gongsun Long's relevant texts/ideas but is examined independently of
 92 them. In this way, this essay does not examine Gongsun Long's text/thought in this connection; for this author's recent
 detailed explanation of Gongsun Long's relevant text/thought, see *Mou 2020*, chapter 8.

93 the use of '=' as a primitive:

$$94 \quad (LL)\forall x\forall y[x = y \leftrightarrow \forall F(F(x) \leftrightarrow F(y))]$$

96 where 'x' and 'y' are syntactical individual variables, and 'F(α)' is a syntactical predicate
97 variable. It is Frege² who uses two axiom schemas thus explicitly taking absolute identity
98 (as captured by indiscernibility of identical) to be a primitive and formulating a theory of
99 absolute identity:

$$101 \quad x = x[\text{reflexivity}]$$

102 and

$$103 \quad ((x = y) \wedge F(x)) \rightarrow F(y)[\text{indiscernibility of identical}]$$

104 Then we can validly derive from (LL) all the following formulas: (LL.1) and (LL.2); the
105 reflexivity, symmetry, and transitivity of identity as follows:

$$106 \quad \forall x(x = x) \quad [\text{Reflexivity}]$$

$$107 \quad \forall x\forall y(x = y \rightarrow y = x) \quad [\text{Symmetry}]$$

$$108 \quad \forall x\forall y\forall z((x = y \wedge y = z) \rightarrow x = z) \quad [\text{Transitivity}]$$

109 Though absolute identity theory as highlighted above is a well-established branch in
110 logic and has been used in philosophical reasoning where questions of identity arise, there
111 are well-known substantial difficulties with absolute identity theory (such as that with non-
112 extensional predicate being substituted for 'F(α)' and that with its making no allowance
113 for change through which one self-same object gains or loses attributes).³ In the modern
114 logic, it is Geach who suggests his account of relative identity for the sake of overcoming
115 the difficulties of absolute identity theory in classical logic:

116 I am arguing for the thesis that identity is relative. When one says 'x is identical with y', this, I
117 hold, is an incomplete expression; it is short for 'x is the same A as y', where 'A' represents some
118 count noun understood from the context of utterance – or else, it is just a vague expression of
119 a half-formed thought.⁴

120 This relativist reductionist line is to reduce all (absolute) identity statements to relative
121 identity statements, which, following Wiggins, can be summarized as:

122 (D): absolute identity statements requires completion to give a statement of the form 'a
123 is the same as A as b',⁵

124 In view of the current purpose and focus of this writing, I will not go to further details
125 regarding the differences and debates among the advocates of variants of the Geach-style

135 ² Frege 1879.

136 ³ Cf. Griffin 1977, chapter 1; Deutsch & Garbacz 2018, sections 1 and 2. For related issues, also cf., Lowe 1997; Noonan
137 1997; Noonan & Curtis 2018.

138 ⁴ Geach 1967, 238 (the page number is that of its reprint in his 1972). Later in his 1969, he takes restricting the
interpretation
of 'A' to count nouns (as sortal general terms) to be a slip of pen and allows both sortal general terms and mass terms. s
Wiggins 1967, 1.



139 standard account of relative identity; rather, I highlight in what sense and to what extent the
140 Geach-style standard account of relative identity still share the same *top-down* explanatory
141 direction from its theoretic construction in logic (in view of some theoretic need and the-
142 oretic expectations such as simplicity and symmetry) to detect, recognize and characterize
143 what counts as *identity/sameness* in real-life identity-predication statements.

144 First, as far as their syntactic construction/requirement is concerned, both absolute-
145 identity theory and the Geach-style standard relative-identity theory presuppose that their
146 theories can be expressed in theoretic resources of classical logic. It is arguably correct
147 that Geach thinks that what need be challenged by relative identity is not the syntax of
148 absolute identity but only its interpretation (by re-interpreting identity and reducing all
149 identity statements to relative identity statements). The latter's *syntactic* change (if any) can
150 be viewed as a *quantity* modification on the syntactic structure of absolute relative, instead
151 of a *quality* change: what is addressed in (LL) regarding all general attributes changes to
152 being relative to one certain general attribute. In this way, for example, the basic syntactic
153 requirement for the *identity* relation is still one kind of *equivalence* relation with its *sym-*
154 *metry* character. This point can be illustrated by how the Geach-style standard account
155 of relative identity typically presents its key point '*a* is the same as *A* as *b*' in a formal
156 way. Interesting enough, in his earlier formulation (1967, 2), Wiggins locates the relative-
157 identity (sortal) parameter at the right-hand side of the sign '=', like $a =_F b$; later on, he
158 relocates the relative-identity (sortal) parameter from the right-hand side of the sign '='
159 to the middle position beneath the sign '=' in his 1980 (17–18 footnotes 3 and 4, 18) and
160 2001 (17, 24), like $a =_F b$. Though I have yet to see Wiggins' explicit explanation of why he
161 makes this change, his motivation might be this: the relative-identity (sortal) parameter put
162 at the middle-position beneath '=' can better or accurately illustrate the *symmetry* charac-
163 ter of relative identity as addressed in the Geach-style standard account. That is, following
164 the requirement of classical logic and its classical identity theory in this connection, the
165 Geach-style standard theory of relative identity treats the *symmetry* character as one indis-
166 pensable feature of identity/sameness and thus theoretically stipulates the *identity* relation
167 as one kind of *equivalence* relation.

168 Second, as far as their *semantic* coverage of the identity relation is concerned, both
169 restrict the *identity* (sameness) relation to that between *symmetric* things (between indi-
170 vidual objects and between classes at the same class level), a theoretic *syntactic* feature that
171 intrinsically bears on the *semantic* coverage of both absolute identity (as addressed in the
172 classical absolute-identity theory) and relative identity (as addressed in the Geach-style
173 standard account). Indeed, because the classical logic account theoretically stipulates the
174 *identity* relation in terms of *equivalence* relation with *symmetry* character, this brings about
175 ignoring or failing to recognize the *identity* relation between the asymmetric things that
176 is substantially revealed in real-life identity-predication statements [such as that between
177 the individual object (what the singular term refers to) and the its *belonging* class (what the
178 general term refers to) and that between sub-class and its *belonging* class], to be explained
179 below.

180 Third, as far as the semantic (referential) sensitivity is concerned, one theoretic feature
181 of classical logical theory is this: the classical logical theory is not referentially sensitive to,
182 and thus has no room for, particular attributes as specific-part aspects of what the subject
183 referring term (in an identity-predication statement) refers to; that is, it is not referen-
184 tially sensitive to the double-reference feature of real-life identity-predication statements

185 in people's basic employment of language, to be explained below. In this way, both absolute
 186 identity theory and the Geach-style standard relative-identity theory formulated in terms
 187 of classical logical resources are not sensitive to, and fail to recognize, the double-reference
 188 feature of real-life identity-predication statements in people's basic employment of lan-
 189 guage. Without due referential sensitivity, an account of identity cannot really answer the
 190 question of how an identity-predication statement is possible, because, as I will explain, the
 191 dual-track feature of an identity-predication statement starts from the double reference of
 192 the subject referring term in the identity-predication statement.

193 The *bottom-up* explanatory direction of the suggested *dual-track* account of relative
 194 identity, which is intended to capture the identity relation as revealed in real-life identity-
 195 predication statements, distinguishes itself from the *top-down* explanatory direction in
 196 the foregoing three connections. At this point, it is important to note that, in the dual-
 197 track-enhanced account of relative identity to be explained below, the traditional absolute-
 198 identity approach is not totally discarded; rather, absolute identity is treated as one special
 199 case of relative identity; furthermore, the relative identity case that is covered by the Geach-
 200 style standard account of relative identity is treated as one type (i.e. the aforementioned
 201 *equal-status* case with its manifest level of *identity* simplex), instead of the exclusive one.

202 2. A Preliminary Examination of Real-Life Relative Identity Statements

203
 204 In this section, I present two typical cases of real-life relative identity statement of subject-
 205 predicate structure that are *explicitly*⁶ shown in peoples' basic employment of language
 206 (given an object, something is said of the object) in ordinary discourses of natural lan-
 207 guage, giving a preliminary examination of their structures and contents. This preliminary
 208 examination of real-life relative identity is not intended to be exhaustive to the extent that
 209 it focuses on the *explicitly given* identity statements in people's basic employment of lan-
 210 guage, instead of also examining some implicitly given identity statements which appear
 211 to be non-identity-predication statements in a *grammatical* sense but somehow share the
 212 same or similar semantic-syntactic structure of identity-predication statements, which is
 213 shown by the second type of explicitly-given identity statements, to be explained below.

214
 215 Several notes are due at this point. First, by the phrase 'real-life relative identity' I mean
 216 what is shown in distinct types of identity statements of subject-predicate structure that
 217 are *explicitly* shown in peoples' basic employment of language (given an object, something
 218 is said of the object) in ordinary discourses of natural language.

219
 220 Second, unless indicated otherwise, by the phrase 'an object' I primarily mean a variety
 221 of *first-order* material objects that are generated or produced and exist in space and time
 222 in this natural world of which humans are parts, either generated naturally or produced
 223 in an artifact way; they have their natural life spans; each of them typically has its distinct
 224 multiple attributes. They distinguish themselves from *second-order* objects that are created
 225 by human minds as thoughts which are timeless and whose identities can be stipulated
 226 with their definite attributes only. A *second-order* object can be absolutely identical with

227
 228
 229
 230 ⁶ It is arguably the case that the addressed second type of real-life relative identity is also *implicitly* in the general subject-
 predicate statements of people's basic employment of language, which I will explain in another writing rather than here
 for two considerations. On the one hand, the explanation of this case deserves a separate writing in view of its significance;
 on the other hand, the central features of the enhanced characterization of relative identity, which are focused on in this
 writing, can be sufficiently shown by the two explicit types as *explanans*.

231 itself as all of its attributes are permanent without change (such an object is identical with
232 itself being relative to all the attributes possessed by it).

233 Third, in this preliminary examination, I use such plain words as ‘same’/ ‘identical’,
234 ‘different’, ‘collection’ in their pre-theoretic literal senses or based on people’s pre-theoretic
235 understandings with no theoretic burdens that are sometimes imposed upon them.

236 Fourth, though in plain words, the following preliminary analyses of distinct cases of
237 the identity-predication statements are intended to identify and specify certain structures
238 and contents, which are shared but manifested by token cases of the addressed two types
239 of *identity* statements at a deep semantic-syntactic level, rather than given at a mere
240 grammatical level; these preliminary analyses thus do not necessarily use some colloquial
241 natural-language expressions with usual grammatic labels but might use more accurate
242 natural-language expressions: for example, in one sample *identity* statement of case type
243 (B), I use a phrase like ‘*is identical to the human being*’ as part of this preliminary analysis,
244 instead of simply using ‘*is a human being*’, because the former is more accurate to capture
245 part of the structure and content of this case type of *identity* statements.

246 Fifth, the cited example above involves the well-known grammatical distinction
247 between what are respectively labeled ‘is’ of identity and ‘is’ of predication; in my prelimi-
248 nary analysis in this section, I will show how they partially share the same *identity* semantic
249 structure; in my further theoretic explanation in the next section, I will explain how they
250 are respectively the cases of *identity* simplex and of *identity* complex.

251 In each of the following sample identity-predication statements of the two types, the
252 ‘regarding...’ part is the semantic completion of what is incomplete when its natural
253 language utterances are made without this part explicitly given.⁷

254 Case type (A):

- 255 (A.1) Biden is identical with (the same as) Trump regarding (being relative to) their shared
256 attribute of) being a USA President.
257 [Or: they are the same as each other regarding (being relative to their shared attribute
258 of) being a USA President.]

259 Preliminary analysis:

260
261 In this *identity*-predication statement, Biden as a whole person is talked about (designated)
262 while at the same time his specific attribute of being a USA President is pointed to and focused
263 on, and then the sentential-predicate comment (the identity-predicate explicitly given) ‘is
264 identical with Trump regarding (relative to) the addressed general attribute of being a USA
265 President’ is made on Biden via (being relative to) his specific attribute of being a USA Pres-
266 ident that is *generalized* as (or manifests) the addressed general attribute (expressed by the
general term ‘a USA President’) which is shared by Trump.

- 267 (A.1)* Biden is not identical with Trump regarding (relative to) the attribute of being a
268 former USA Senator that is possessed by Biden but not possessed by Trump.

270 ⁷ As those in the relative-identity track would typically agree that such identity statements of the form ‘*a* is identical
271 with [to] or the same as *b*’ is ‘incomplete’ (including something implicit) and need to complete what is incomplete (or
272 make explicit what is implicit). However, such sayings concerning what is incomplete or what is implicit can be ambigu-
273 ous and vague. Following *Grice 1975* and *Bach 1994*, we can label ‘implicature’ (*Grice 1975*) such implicit meanings in
274 statements/utterances: one says and communicates one things and thereby communicates something else in addition
275 (though the latter is closely related to the former); in contrast, we label ‘implicature’ such implicit meanings in state-
276 ments/utterances: ‘part of what is communicated is only implicit in what explicitly expressed, either because the utterance
is semantically underdeterminate and completing is required or because what is being communicated is an [pragmatically]
expanded version of the proposition expressed’ (*Bach 1994*, 324). In the current logical context, by default, the addressed
‘incompleteness’ is *semantic* underdetermination, neither conversation *implicature* nor *pragmatic* expansion.

277 [Or: they are different from each other regarding (being relative to) Biden's
278 specific attribute of being a former USA Senator which is not possessed by
279 Trump.]

280 Preliminary analysis:

281 In this *identity*-predication statement, Biden as a whole person is talked about (designated)
282 while at the same time his specific attribute of being a former USA Senator is pointed to
283 and focused on, and then the sentential-predicate comment (the identity-predicate explicitly
284 given) 'is not identical with (or different from) Trump regarding (relative to) the addressed
285 general attribute of being a former USA Senator' is made on Biden via (being relative to)
286 his specific attribute of being a former USA Senator that is *generalized* as (or manifests) the
287 addressed general attribute (expressed by the general term 'a former USA Senator') which is
288 shared by Trump.

289 One special case (sub-type) of this general type of the *relative-identity* statement, when
290 both sides of the identity indicator 'is' ('is' of identity) or 'is identical with' designate the
291 same individual object, is one significant paradigm case that is addressed by the law of
292 identity, whose token case can be given as follows:

293 (A.1.1) Biden is identical with himself regarding (being relative to) one (or more than one)
294 of his *unchanging* attributes.

295 Preliminary analysis:

296 In this *identity* statement, Biden as a whole person is talked about (designated) while at the
297 same time one (or more than one) of his specific attributes that are unchanging throughout
298 his life (whatever they are) is(are) pointed to and focused on, and then the sentential-
299 predicate comment 'is identical with himself regarding (relative to) his addressed *unchanging*
300 attribute(s)' is made on Biden via (being relative to) his addressed specific attribute(s) that
301 is(are) generalized as the addressed general attribute(s) which is(are) possessed by Biden
302 himself.

303 It is important to note that the foregoing preliminary analysis renders the addressed object's
304 own specific attribute *general once it is expressed in the sentential predicate*, whether the
305 individual object that is rendered *identical with* is this object itself (say, Biden) designated
306 by the subject referring term or some object else (say, Trump) somehow addressed in the
307 sentential predicate. This is because of the *general* character of predication: in reference,
308 one's specific attribute is pointed to and focused on (though in a *descriptive* way); in con-
309 trast, in the predication that is addressed through a sentential predicate, one's specific
310 attribute addressed in reference is *generalized* as (or manifests) a general attribute (whether
311 nominally or conceptually or ontologically⁸).

312 (A.1.1)* Bident [today] is not identical with himself [yesterday] regarding (being relative to)
313 one (or more than one) of his *changing* attributes.

314 Preliminary analysis:

315 In this *identity* statement, Biden as a whole person is talked about (designated) while at the
316 same time one (or more than one) of his specific attribute that is (are) possessed by him at a
317 certain time [today] during his life (whatever they are) is(are) pointed to and focused on, and
318 then the sentential-predicate comment 'is not identical with himself regarding (relative to) the
319 addressed general attitude(s)' is made on Biden via (being relative to) his specific attribute(s)
320

321 ⁸ The examination here is ontologically neutral regarding the debate over the nature of universals in treating the problem
322 of universals in metaphysics.

323 that is(are) *generalized* as the addressed general attribute(s) which is not possessed by Biden
 324 at another time [yesterday].

325 (A.2) The brown cat [the class collection of individual brown cats]⁹ is identical with the grey
 326 cat regarding (being relative to) their shared attribute of being a cat.

327 Preliminary analysis:

329 In this *identity* statement, the class collection of individual brown cats as a whole is talked
 330 about (designated) while at the same time their [i.e. those individual brown-cat members']
 331 collectively shared and individually possessed specific attribute of being a cat is pointed to
 332 and focused on, and then the sentential-predicate comment (the identity-predicate explicitly
 333 given) 'is identical with the grey cat (i.e. the class collection of individual grey cats) regarding
 334 (relative to) the addressed general attribute of being a cat' is made on the collection of individ-
 335 ual brown cats via (being relative to) their specific attribute of being a cat that is *generalized* as
 336 (or manifests) the addressed general attribute (expressed by the general term such as 'cat' or
 337 the description 'any things that are cats') which is shared by the collection of individual grey
 cats [by the individual-grey-cat members of the grey-cat class].

338 (A.2)* The brown cat is not identical to the grey cat regarding (being relative to) the attribute
 339 of having brown color that is possessed by any member of the former but not by any
 340 member of the latter.

341 Preliminary analysis:

342 In this *identity* statement, the collection of individual brown cats as a whole is talked about
 343 (designated) while at the same time their collectively shared and individually possessed
 344 specific attribute of having brown color is pointed to and focused on, and then the sentential-
 345 predicate comment (the identity-predicate explicitly given) 'is not identical with the grey
 346 cat (i.e. the collection of individual grey cats) regarding (relative to) the addressed general
 347 attribute of having brown color' is made on the collection of individual brown cats via (being
 348 relative to) their specific attribute of having brown color that is *generalized* as (or manifests)
 349 the addressed general attribute (expressed by the general term such as 'the brown thing' or the
 350 description 'any things that are brown') which is *not* shared by any member of the collection
 351 of individual grey cats.

352 Furthermore, it is important to note that the *identity* as *sameness* (a certain *same*
 353 attribute shared between addressed things) is not narrowly restricted to the *equal-status*
 354 *symmetric* case concerning individual objects or classes at the same level as shown in the
 355 *equivalence-identity* statements (i.e. the *equal-status identity* case) but also occurs in the
 356 *unequal-status asymmetric* case as show in the *category-assimilating-identity* statements (i.e.
 357 the *category-assimilating-identity* case), both of which are holistically covered by real-life
 358 identity-predication statements, and both of which are unified by the shared semantic core
 359 content of real-life relative identity. That is, the *identity* statements are not limited to the
 360 *equal status* case in which the objects that are referred to respectively the terms besides the
 361 'is identical with' have the same reference status: either both are individual objects (such
 362 as Biden and Trump) or both are collections which are not each other's sub-class (such as
 363 the brown cat and the grey cat).

365 ⁹ Such phrases [the definite article 'the' + a common noun] as 'the brown cat' and 'the cat' used in this context does not
 366 mean one specific or unique individual object (such as one specific cat) but the collection of all individual objects in the
 367 addressed class. It is noted that this usage in English is grammatical: the definite article 'the' plus a common noun can be
 368 used to express a collection of all individual objects that possess the (general) attribute given by (the descriptive content
 of) the common noun.

369 Case type (B):

370 (B.1) John is [is identical to and thus belongs to] a college instructor [the class collection
371 of college instructors] regarding (relative to) the shared attribute of being a college
372 instructor.

373 Preliminary analysis:

374
375 In this statement that grammatically uses 'is' of predication, the relative-identity predication
376 is also implicitly but substantially made at its *base* level concerning individual objects that
377 are addressed explicitly on the left-hand side of 'is' or implicitly on the right-hand side of 'is'.
378 John as an individual whole person is talked about (designated) while at the same time his
379 specific 'college-instructor' attribute is pointed to and focused on, and then, at the manifest
380 level, John is classified as a member of the college-instructor class via the sentential-predicate
381 comment 'is a college instructor' or 'is identical with' a member of the college-instructor class,
382 based on (or presupposing) the implicitly addressed relative-identity predication: at the *base*
383 level which gives a class-membership criterion or basis on which John can be classified as
384 one member of the college-instructor class, the predication made via the sentential-predicate
385 comment 'is a college instructor' has its *base* layer of relative-identity: the relative-identity
386 predication 'is identical to the class collection of college instructors regarding (relative to)
387 the addressed general college-instructor attribute' is made on John via (being relative to) his
388 specific college-instructor attribute that is generalized as (or manifests) the addressed general
389 attribute (expressed by the general term 'the college instructor') which is shared by John and
390 by any member of the class collection of college instructors.

389 (B.1)* John is not [is not identical to and thus does not belong to] a college instructor [the
390 class collection of college instructors] regarding (relative to) John's specific attribute
391 of being graduated from Smith High School.

392 Preliminary analysis:

393
394 In this statement that grammatically uses 'is' of predication, the relative-identity predication
395 is also implicitly but substantially made at its *base* level concerning individual objects that
396 are addressed explicitly on the left-hand side of 'is' or implicitly on the right-hand side of 'is'.
397 John as an individual whole person is talked about (designated) while at the same time his
398 specific attribute of being graduated from Smith High School is pointed to and focused on,
399 and then, at the manifest level, John is not classified as a member of the college-instructor
400 class via the sentential-predicate comment 'is not a college instructor' or 'does not belong
401 to the college-instructor class, based on (or presupposing) the implicitly addressed relative-
402 identity predication: at the *base* level which gives a class-membership criterion or basis on
403 which John is not classified as one member of the college-instructor class, the relative-identity
404 predication 'is not identical to the class collection of college instructors regarding (relative to)
405 the addressed general attribute of being graduated from Smith High School' is made on John
406 via (being relative to) his specific attribute of being graduated from Smith High School, which
407 is generalized as (or manifests) the addressed general attribute (expressed by the general term
408 'the graduate of Smith High School') which is possessed by John but not by any member of
409 the class collection of college instructors.

407 (B.2) The brown cat [the class collection of brown cats] is [is identical to and thus belongs in]
408 the cat [the class collection of cats] regarding (being relative to) their shared attribute
409 of being a cat.

410 Preliminary analysis:

411
412 In this statement that grammatically uses 'is' of predication, the relative-identity predica-
413 tion is also implicitly but substantially made at its *base* level concerning individual objects
414 that are addressed indirectly (via class) on both left-hand and right-hand sides of 'is'. The

415 class collection of brown cats as a collection whole is talked about (designated) while at the
 416 same time their [i.e. those individual brown-cat members'] collectively shared and individu-
 417 ally possessed specific attribute of being a cat, which is possessed by each of individual brown
 418 cats is also pointed to and focused on, and then, at the manifest level, the class collection of
 419 brown cats is rendered included as a sub-class in the class collection of individual cats via the
 420 sentential-predicate comment 'is the cat', based on (or presupposing) the implicitly addressed
 421 relative-identity predication: at the *base* level of this predication which gives a class-inclusion
 422 criterion and basis on which the class-inclusion predication is positively or negatively made
 423 (in this case, the class of brown cats is positively rendered included as a subclass in the class of
 424 individual cats), the relative-identity predication 'is identical to the class collection of individ-
 425 ual cats regarding (being relative to) the addressed general *cat-ness* attribute' is made about
 426 the individual brown cats via (being relative to) each's specific attribute of *being a cat* that is
 427 *generalized* as (or manifests) the addressed general attribute (expressed by the general term
 'the cat') which is jointly shared by any member of the subclass of individual brown cats and
 by any member of the class of individual cats.

428 (B.2)* The brown cat [the class collection of brown cats] is not [is not identical to and thus
 429 does not belong in] the cat [the class collection of cats] regarding (being relative to)
 430 their attribute of having brown color.

431 Preliminary analysis:

432 In this statement that grammatically uses 'is' of predication, the relative-identity predication
 433 is also implicitly but substantially made at its *base* level concerning individual objects that
 434 are addressed indirectly (via class) on both left-hand and right-hand sides of 'is'. The class
 435 collection of brown cats as a collection whole is talked about (designated) while at the same
 436 time their [i.e. those individual brown-cat members'] collectively shared and individually pos-
 437 sessed specific attribute of having brown color, which is possessed by each of individual brown
 438 cats is also pointed to and focused on, and then, at the manifest level, the class collection of
 439 brown cats is rendered not included as a sub-class in the class collection of individual cats
 440 via the sentential-predicate comment 'is not the cat', based on (or presupposing) the implic-
 441 itly addressed relative-identity predication: at the *base* level of this predication which gives
 442 a class-inclusion criterion and basis on which the class-inclusion predication is positively or
 443 negatively made (in this case, the class of brown cats is negatively rendered not included as
 444 a subclass in the class of individual cats), the relative-identity predication 'is not identical
 445 to the class collection of individual cats regarding (being relative to) the addressed *general*
 446 attribute of *having brown color*' is made about the individual brown cats via (being relative to)
 447 each's *specific* attribute of *having brown color* that is *generalized* as (or manifests) the addressed
 448 general attribute (expressed by the general term 'having brown color') which is possessed by
 any member of the class of individual brown cats but not by *any* [all] member of the class of
 individual cats (because some of individual cats are not white).

449 There are three significant observations regarding the structure and content of the forego-
 450 ing real-life identity-predication-involved statements. First, it is already well known that
 451 identity predication is relative in nature: the predicative 'is identical with (to)'/ 'is the same
 452 as' [or 'is not identical with (to)'/ 'is different from'] is relative to a certain general attribute
 453 that are shared by both [or possessed by the former (by any individual members of the
 454 former) but not by the latter (or not by any individual members of the latter)].

455 Second, we notice that not only explicitly given *identity*-predication statements but also
 456 the *category-assimilating* predication statements (of class-membership predication and
 457 class-inclusion predication) intrinsically involve relative identity and thus constitute two
 458 typical cases of real-life relative-identity-predication statements; what is usually grammat-
 459 ically distinguished by 'is' of identity and 'is' of predication share the same *relative-identity*
 460

461 core which is either explicitly shown in the manifestly symmetric case or implicitly presup-
 462 posed in the manifestly asymmetric case. In the next section, I will give a further theoretic
 463 explanation of how it is possible for two distinct cases of relative identity to intrinsically
 464 share the same semantic *relative-identity* structure in terms of the distinction between
 465 *relative-identity* simplex and *relative-identity* complex.

466 Third, we also notice that, semantically and logically not only prior to making the iden-
 467 tity predication *but also prior to addressing the general attribute relative to which both are*
 468 *said to be identical or not identical*, a certain specific attribute of the subject referent is
 469 denoted by the subject referring term at the same time when it designates the subject refer-
 470 erent as a whole. This significant phenomenon shared in all these cases is the addressed
 471 *double-reference* phenomenon of people's basic employment of language that deserves a
 472 more examination, to be carried out in the next section.

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474 **3. An Enhanced Dual-Track Characterization of Relative Identity: From** 475 **Double-Reference Starting Point to Dual-Track Feature** 476

477 In the preceding preliminary examination of the two distinct typical cases of real-life rela-
 478 tive identity, we have realized that all these cases share one phenomenon (which becomes
 479 prominent especially when one *sameness* case is compared with and contrasted to its *differ-*
 480 *ence* case), i.e. the addressed *double-reference* phenomenon of people's basic employment
 481 of language. It provides one basis on which to understand the structure and content of
 482 real-life relative identity and the due starting point at which real-life identity-predication
 483 statements move into a dual track of relative-identity-setting process.

484

485 **3.1. Two Distinct Types of Identity Predication: Identity Simplex and Identity** 486 **Complex** 487

488 As shown in the preliminary analysis of real-life identity-predication statements, not only
 489 explicitly given *identity*-predication statements but also the *category-assimilating* predica-
 490 tion statements (of class-membership predication and class-inclusion predication) intrin-
 491 sically involve relative identity and thus constitute two typical cases of real-life relative-
 492 identity-predication statements. In this sub-section, I give a further theoretic explanation
 493 of how it is possible for two distinct cases of relative identity to intrinsically share the same
 494 semantic *relative-identity* structure in terms of the distinction between *relative-identity*
 495 simplex and *relative-identity* complex. In other words, I explain how the above addressed
 496 manifest grammatical distinction between 'is' of identity and 'is' of predication partially
 497 share the same *relative-identity* semantic structure in their distinct manifest ways.

498 I make the distinction between the *relative-identity* simplex and the *relative-identity*
 499 complex involved in the addressed two types of real-life identity predication statements.
 500 The *relative-identity* simplex is the *relative-identity* predication made on relation between
 501 *individual objects* (in logical terms, individual variables or constants at the *first-order*
 502 base level in the domain of quantification as specified in a semantics interpretation of a
 503 predicate-logic account) regarding (being relative to) a certain attribute that the addressed
 504 objects share or jointly possess; the *identity* simplex thus has the reflexivity, symmetry, and
 505 transitivity of the relative identity relation between the addressed individual objects. It is
 506 noted that *symmetry* here is more *semantic* (via a semantic interpretation) than *syntactic*:

507 it does not imply the syntactic conflation between the subject and the predicate; rather,
 508 such symmetry is in the context of the subject-predicate semantic-syntactic structure of
 509 the identity predication statements: ‘*x*’ on the left-hand side of the identity sign ‘=’ is still
 510 the subject term (its referent is what is talked about in making *identity* predication via a
 511 sentential predicate like ‘is *b*’) while ‘*y*’ on the right-hand side of the identity sign ‘=’ is still
 512 part of the identity predicate. In this way, the semantic symmetry character is compatible
 513 with a general *asymmetric* formal presentation, either ‘ $\alpha -_F \beta$ ’ in the Geach-style standard
 514 account, or ‘ $\alpha_{[f]-[F]} \beta$ ’ in the suggested dual-track account, to be explained below.

515 The *identity* complex is a multiple-layer predication that is a combination of its implicit
 516 *base* layer of *identity* simplex concerning individual-objects of the addressed class(es) with
 517 its manifest layer of class-membership predication or of class-inclusion predication. A
 518 natural question one might ask is this: how it is possible for the class-membership/class-
 519 inclusion predication statements to have the *identity* simplex as its *base* layer of predication.
 520 This question is intrinsically related to the question of why an object is classified as one
 521 member of a class and why a class is classified as one subclass included in its *belonging*
 522 class. The reason is quite straightforward. In the case of class-membership predication,
 523 because the individual-object members of the class are supposed to share something *same*
 524 or *identical*, the same membership, in least-metaphysically-loaded terms¹⁰; that is, they
 525 are identical with each other regarding their shared *identical* membership. By the same
 526 token, in the case of class-inclusion predication, because any individual-object members
 527 in the *subject* class are also individual-object members of the *predicate* class, and the former
 528 individual-object members and the latter individual-object members are supposed to share
 529 something *same* or *identical*, the same membership, in least-metaphysically-loaded terms;
 530 that is, they are identical with each other regarding their shared *identical* membership.

531 It is noted that the *identity* complex as a whole can be viewed from distinct perspectives
 532 and thus characterized in distinct *primary terms*. From the perspective of its routine use in
 533 people’s natural language use or of the manifest grammatical level, it is primarily a class-
 534 membership/class-inclusion predication; people usually use such predication statements in
 535 a linguistic-convention way in their natural languages without necessarily thinking about
 536 the justification foundation on which the addressed class-membership/class-inclusion
 537 predication is based. However, from the perspective of its deep semantic-syntactic struc-
 538 ture concerning the foundation on which class-membership/class-inclusion predication is
 539 based, it is primarily an *identity*-involved predication statements in the following sense.
 540 An *identity*-complex predication statement combines or associates its manifest class-
 541 membership/class-inclusion predication with its *base* layer of *identity* simplex that under-
 542 lies its manifest layer; it thus points to the *metaphysical* foundation for establishing the
 543 addressed class-membership/class-inclusion predication through the semantic-syntactic
 544 structure of such a predication statement in a way as explained in the previous passage.

545 The foregoing analysis can provide an explanation for how the grammatical distinction
 546 between ‘is’ of identity and ‘is’ of predication essentially share the same deep semantic-
 547 syntactic basis (i.e. the *identity* simplex) and why the addressed grammatical distinction is
 548 presented through or associated with ‘is’, instead of some other term. Take an example for
 549 the *identity* complex with its manifest layer of class-membership predication. Consider the
 550 statement ‘A brown cat is a cat’, whose complete presentation can be this: ‘An individual
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552 ¹⁰ It might be labeled ‘universal’ or ‘unifying force’,

553 brown cat is a member of the collection/class of cats with their *identical* relation regarding
 554 (being relative to) their shared general attribute of having cat-ness': < 1 > the addressed
 555 individual brown cat is identical with other individual-cat members of the cat class regard-
 556 ing their shared general attribute of being a cat (the cat membership), < 2 > the addressed
 557 individual brown cat is *thus* a member of the cat class, and < 3 > the class of brown cats
 558 is *thus* a sub-class of the class of cats. [It is noted that, although class membership is not
 559 a transitive relation (an individual object is a member of a class but is not necessarily a
 560 member of a larger class that has the former class as a subclass), the relation of class inclu-
 561 sion is transitive. It is also noted that, although the class-inclusion predication as a whole
 562 is asymmetric, the *identity* simplex layer of the class-membership predication is reflexive,
 563 symmetric and transitive.]

564 In this way, although its identity-simplex layer is symmetric, the identity complex as a
 565 whole is asymmetric because its manifest layer of class-membership/class-inclusion predi-
 566 cation is asymmetric. This explains why in the foregoing two cases of *identity* complex are
 567 asymmetric. Given that 'A brown cat is a cat', this statement as a whole cannot be rephrased
 568 as 'A cat is a brown cat': although its implicit layer of *identity* simplex concerning the indi-
 569 vidual object, cat, designated by the singular referring term 'a cat' at the subject position
 570 and any individual object as a member of the class of cats denoted by the general term 'a
 571 cat' in the sentential predicate is indeed symmetric, its manifest layer of class-membership
 572 predication is asymmetric, and thus the statement as one token of 'identity' complex is
 573 asymmetric. By the same token, given that 'The brown cat [the collection of brown cats]
 574 is the cat [the collection of cats]', this statement as a whole cannot be rephrased as 'The
 575 cat is the brown cat': although its implicit layer of *identity* simplex concerning the individ-
 576 ual object (a brown cat) as a member of the subclass of brown cats denoted by the general
 577 referring term 'the brown cat' (or 'the class of brown cats') at the subject position and any
 578 individual object as a member of the class of cats denoted by the general term 'the cat'
 579 (or 'the class of cats') in the sentential predicate is indeed symmetric, its manifest layer of
 580 class-inclusion predication is asymmetric, and thus the statement as one token of *identity*
 581 complex is asymmetric.

582 It is important to note that the point of the foregoing analysis is neither to theoret-
 583 ically reduce all the predication statements to the identity-predication-*only* statements
 584 nor to practically persuade people to change their ordinary-language-use habits to some
 585 ideal way of complete presentations for revealing their identity structure. As explained
 586 above, on the one hand, the two cases for *identity* complex are still class-membership/class-
 587 inclusion predication at the manifest layer, instead of identity-predication only; on the
 588 other hand, in various types of identity-predication statements, the symmetric identity
 589 simplex concerning the relative identity between individual objects is either presented in
 590 a straightforward and manifest way (in the *equal-status* case) or lies implicitly in the *base*
 591 layer of the multiple-layer *identity* complex concerning individual-objects of the addressed
 592 class(es) that are explicitly treated in its manifest layer of class-membership/class-inclusion
 593 predication.

594 Rather, the point is to detect, recognize and adequately characterize the key features of
 595 relative identity as revealed in the deep and refined semantic-syntactic structure of various
 596 types of real-life relative-identity-predication statements in people's basic employment of
 597 language and, through this *bottom-up* explanatory direction as explicated in the preced-
 598 ing section, to enhance our understanding and treatment of the structure and content of

599 (the concept of) relative identity as one issue in logical theory and philosophy of logic and
 600 to accurately present them via enriched modern logic resources.

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3.2. Double-Reference Feature of People's Basic Employment of Language: Due Starting Point for Relative Identity

605 In the above, the double-reference feature is identified and traced up in a detour way from
 606 the predication all way down to the reference where the subject referring term designates
 607 the object as a whole and at the same time points to some specific attribute of it; in the fol-
 608 lowing, to have a better understanding of the due starting point of real-life relative identity
 609 statements, I examine the double-reference feature of people's employment of language in
 610 a straightforward way by analyzing how reference is possible in people's basic employment
 611 of language.

612 It is known that one basic employment of language is this: when referring to an object
 613 (a physical object in space and time, a number in math, or a fictional figure in a story, etc.)
 614 via a referring name in linguistic activities (such as doing communication via ordinary
 615 language, doing math via math language, etc.), typically and generally speaking, a speaker
 616 intends to say something (and she can say different things or different speakers can say
 617 different things) of the (same) object as a referent, or, in a more semantically-oriented
 618 way (treating those pragmatic elements like *a speaker's intention* as the presupposed back-
 619 ground elements), *something is said of a referent*. In the following, first, I illustrate the
 620 double-reference character of the foregoing basic employment of language via two typi-
 621 cal groups of sentences in our folk linguistic practice, which says something about what
 622 a referring name refers to, respectively concerning two typical kinds of referring names
 623 [i.e. a proper name such as '(Joe) Biden' that refers to an individual object (the current US
 624 President), and a descriptive referring name such as 'the white horse' that refers to either (a
 625 typical case) one collection of individual objects that fit the description or one distinctive
 626 (or even unique) individual object that fits the description¹¹]. Second, I highlight a num-
 627 ber of pre-theoretic characterizations of our ordinary *double-reference* linguistic practice
 628 that are intrinsically related to the dual-track feature of relative identity. It is noted that the
 629 previously addressed *basic employment of language* has both its *semantic* dimension and
 630 its *pragmatic* dimension, which can be linguistically or conceptually distinguished, though
 631 they are entangled with each other and cannot be totally *metaphysically* separated or cannot
 632 exist without each other; all the following linguistic observations that are given in *prag-*
 633 *matic* terms can be presented in non-pragmatic terms when the focus is on the *semantic*
 634 dimension of the addressed linguistic phenomenon.¹²

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¹¹ In the latter case, a descriptive name is sometimes labeled 'a definite description' in its technical sense.

¹² There is the need for clarifying what I mean by the 'semantic' dimension. Given the identities of the semantic and the pragmatic, two presuppositions can be made concerning the legitimacy of the semantic examination of the basic employment of language: (1) we can presuppose pragmatic contributing elements and give a non-pragmatic semantic examination focusing on the semantic dimension of the basic employment of language; (2) in the foregoing non-pragmatic semantic examination, sentences are used to linguistically *express* manifestations (tokens) of the pre-sentential basic employment of language(type). Several notes are due. First, one implication of presupposition (1) is that, as a matter of fact, the semantic dimension and the pragmatic dimension of the *double-reference* character of the basic employment of language are not absolutely separated from each other but are distinct and somehow complementary dimensions. Second, when the semantic dimension is focused on in one's semantic examination, it does not automatically imply that those relevant pragmatic elements (or those elements in the pragmatic dimension of the issue of how reference is possible concerning the basic employment of language) are ignored or dismissed; rather, they can be legitimately presupposed, although they

645 Let me start with the first sample group of sentences, giving a preliminary *double-*
646 *aboutness* analysis in terms of *double-reference* semantic paraphrase for each of them:

647 (1.1) Biden was born on 20th November 1942.

648 A preliminary *double-aboutness* analysis in terms of *double-reference* semantic paraphrase: in
649 this sentential context, ‘Biden’ refers to Biden as a whole *and at the same time* points to his specific
650 *birth* part (talking about his *birth* part as well as Biden as a whole person); the sentential
651 predicate *further comments* on Biden as a whole in view of this specific-part referent.¹³ [He is
652 the same as the collection of the people who were born on 20th November 1942 regarding (or
653 relative to) the general attribute of being born on 20th November 1942]

654 (1.2) Biden had a headache on 20th May 2022.

655 A preliminary *double-aboutness* analysis in terms of *double-reference* semantic paraphrase:
656 given that it is true, in this sentential context, ‘Biden’ refers to Biden as a whole *and at the*
657 *same time* points to his specific *head* part (talking about his *head* part as well as Biden as a
658 whole person); the sentential predicate *further comments* on Biden as a whole in view of this
659 specific-part referent. [He is the same as the collection of the people who had a headache on
660 20th May 2022 regarding (or relative to) the general attribute of having a headache on that
661 date.]

662 (1.3) Biden is the US President.

663 A preliminary *double-aboutness* analysis in terms of *double-reference* semantic paraphrase: in
664 this sentential context, ‘Biden’ refers to Biden as a whole *and at the same time* points to his
665 specific *US-Presidency* part (talking specifically about his previous *US-Presidency* part as well
666 as Biden as a whole person); the sentential predicate *further comments* on Biden as a whole in
667 view of this specific-part referent. [He is the same as the collection of the people who assume
668 the US Presidency [or the collection of the US Presidents (or relative to) the general attribute
669 of being the US Presidency]

670 (1.4) Biden today is not the same as Biden yesterday.

671 A preliminary *double-aboutness* analysis in terms of *double-reference* semantic paraphrase: in
672 this sentential context, ‘Biden’ refers to Biden as a whole *and at the same time* points to his
673 current specific *today* part (talking specifically about Biden’s current *today* part as well as
674 Biden as a whole person); the sentential predicate *further comments* on Biden as a whole in
675 view of this specific-part referent.

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678 are not focused on in such a *semantic* examination. Third, to the foregoing extent, we can legitimately talk about what a
679 linguistic expression (instead of its speaker, in Strawson’s fasion – see *Strawson 1950*) can refer to or express. Fourth, it is
680 important to note that the basic employment of language *per se* and thus the foregoing presuppositions *per se* amount
681 neither to committing itself to the Context Principle (CP) to the effect that it is only in the context of a sentence that words
682 have any meaning nor to dismissing a non-propositional referential model of (direct) reference: (1) they do not amount
683 to the former to the extent that the referential meaning of the subject expression as addressed in the basic employment
684 of language is established prior to the sentential predicate being given; the sentential-predicate-related predication is a
685 *further comment* on the subject-expression-related predication that is intrinsically made through the specific-part refer-
686 ence, although the basic employment of language gives a *sentential* context; (2) they do not amount to the latter to the
687 extent that the semantic-whole reference as one dimension of the double reference made in the basic employment of
688 language is essentially non-propositional rigid reference (either directly or indirectly, sensitive to the nature and status of
689 distinct types of referring terms), though it is intrinsically related to the specific-part reference in the double reference of
690 the basic employment of language.

¹³ A separate writing by this author presents a double-reference-related account of predication, labeled ‘subjective-
perspective’ account, which gives a detailed explanation of how the semantic-whole referent in view of the specific-part
referent (in *perspective focus*) is *further commented* on via the sentential predicate. With consideration of the major
purpose here, I will not elaborate the predication part of such preliminary *double-aboutness* analyses in this writing. Nev-
ertheless, a brief explanation of it will be given in the third pre-theoretic observations on the *double-aboutness* character
below in terms of the *double-reference* analysis below.

691 In so saying, we are not using the same name to refer to four different persons but the same
692 one person, Joe Biden. So we can simply say:

693 (1) Biden was born on 20th November 1942, had a headache on 20th May 2022, is the US
694 President, and (today) is not the same as Biden yesterday.

695 The second sample group of sentences, which go with descriptive referring names as
696 their subject names are given as follows:

697 (2.1) The brown cat [the class collection of brown cats] is [identical to] the cat [the class
698 collection of cats] regarding (being relative to) some attribute that they share].

699 A preliminary *double-aboutness* analysis in terms of *double-reference* semantic paraphrase: in
700 this sentential context, the referring term 'the brown cat' refers to the collection of brown cats
701 as a whole *and at the same time* points to those individual brown-cat members' collectively
702 shared and individually possessed specific attribute of being a cat (talking specifically about
703 the jointly shared specific attribute of being a cat as well as the whole collection of brown cats);
704 the sentential predicate *further comments* on the collection of brown cats as a whole in view
705 of this specific part.

706 (2.2) The brown cat [the class collection of brown cats] is not [identical to] the cat [the
707 class collection of cats] regarding (being relative to) some distinct attribute which is
708 possessed by any brown cats but not by all cats.

709 A preliminary *double-aboutness* analysis in terms of *double-reference* semantic paraphrase: in
710 this sentential context, the referring term 'the brown cat' refers to the collection of brown cats
711 as a whole *and at the same time* points to those individual brown-cat members' collectively
712 shared and individually possessed specific attribute of having brown color (talking specifically
713 about the jointly shared specific attribute of having brown color as well as the whole collection
714 of brown cats), which is possessed by any brown cats but not by all members of the cat col-
715 lection; the sentential predicate *further comments* on the collection of brown cats as a whole
716 in view of this specific part: the class collection of brown cats is not [identical to] the class
717 collection of cats regarding (being relative to) some distinct attribute which is possessed by
718 any brown cats but not by all cats.

719 In so saying, we are not using the same name to refer to two different collections of things
720 but the same one collection, that of brown cats. So we can simply say:

721 (2) The brown cat is identical to the cat regarding some shared attribute and is not identical
722 to the cat regarding some distinct attribute that is possessed by any brown cats but not
723 by all cats.

724 Now I address and highlight several pre-theoretic but reflective observations of the *double-*
725 *aboutness* character of consciousness in *semantic-ascent* terms of the *double-reference*
726 character of the basic employment of language (i.e. saying something about an object) as
727 illustrated by the above two paradigm cases.

728 First, in people's linguistic practice, people use the proper name '(Joe) Biden' to des-
729 ignate Joe Biden as a whole [with his various attributes and in his various relations
730 (to some other objects)¹⁴] so that we can talk *about him* (rather than someone else)
731 while pointing respectively to certain attributes (in perspective focuses) and make vari-
732 ous *further comments* that can be directly or indirectly paraphrased into distinct types of
733

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735 ¹⁴ It is presupposed, instead of being further explained, that 'Biden' here designates Joe Biden via various relevant *prag-*
736 *matic* contributing elements to the communication link between the use of the name and Joe Biden as the current USA
President.



737 *identity-predication* statements on him. In this way, the name ‘Biden’ designates the same
 738 object (in this actual world, instead of another (possible) world, Joe Biden, who himself is
 739 an object as a whole that unifies his various (diachronic and synchronic) specific (attribute)
 740 parts into one collection. No matter which specific part of Biden is focused on in a given
 741 sentential context (as one specific-part referent), the same object (Biden with all his rich
 742 attributes) as the semantic-whole referent is talked about or thought about.

743 Second, in each of these declarative sentences or statements, when the object *as a whole*
 744 (the semantic-whole referent) that is said of or designated (say, Biden as a whole person), a
 745 certain specific part of it, or a certain specific-part referent, is *also at the same time referred*
 746 *or pointed to*,¹⁵ whose identity is to be sensitive to the focus as shown or revealed in the
 747 given sentential context, which is taken to be possessed by Biden, and which is up to some
 748 further comment via a certain linguistic predicate expression in the sentence. In other
 749 words, there are two levels of what is *about* here: first, about Biden as a whole; second,
 750 about some specific part in perspective focus. Given that, in people’s basic employment
 751 of language (something being said of an object), what is *referred to* is essentially what
 752 a sentential context is *about*, the addressed *basic* linguistic fact thus has its fundamental
 753 *double-reference* character.

754 Third, the specific-part referent has its dual status: on the one hand, as explained above,
 755 it is part of what is said *about* in the sentential context and thus it has its *reference* status; on
 756 the other hand, in the given sentential context, it is pointed to in focus and thus specified
 757 as a certain specific part of the designated referent whole and as *part of what is said about*
 758 the semantic-whole referent, although, generally speaking, the sentential predicate further
 759 says something or further comments¹⁶ on the object as a whole in view of this specific-
 760 part referent that is *referentially and logically prior to* what the sentential predicate literally
 761 expresses. In this sense, and to this extent, the predication in the basic employment of
 762 language right starts at the specific-part reference, although, generally speaking, the latter
 763 (or the predicative content of the subject referring name via its specific-part reference) does
 764 not exhaust the former in the following sense: the predication in the basic employment of
 765 language (in most cases) does not stop at what the (explicit or implicit) descriptive or
 766 predicative content of the subject referring name in the sentential context gives; rather, it
 767 is further completed and complemented by what the sentential predicate expresses (via its
 768 *further comment* on the designated object as a whole in view of the specific-part referent).

769 Fourth, the speaker can change his/her focus from one aspect of an object, which the
 770 subject expression designates, to another aspect of it which she already knows (whether
 771 or not he/she then would fully know the object regarding all its aspects); he/she can make,
 772 say, the statements (1.1)–(1.4) on different occasions for distinct purposes and with distinct
 773 perspective focuses. What makes such a focus shift possible lies in this (though seemingly
 774 trivia): the speaker presupposes and believes that the same object possesses those specific-
 775 part aspects, whether or not she purposely focuses on a certain aspect, among others, in
 776 his/her current statement.¹⁷

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778 ¹⁵ Or more than one specific attribute part. For the sake of simplicity of discussion, I focus on the one-part case.

779 ¹⁶ Although the word ‘comment’ might bring about an impression of being *theoretically-loaded*, one consideration for
 780 using the word here is that it seems to be *user-friendly* in capturing what really happens in the addressed people’s basic
 781 employment of language in this connection.

782 ¹⁷ This linguistic observation shows that we actually render the object richer (or *thicker* in metaphoric terms) than what the
 above second linguistic observation shows us (i.e., explicitly addressing only one aspect or certain finite aspects in focus)
 and thus further strengthens the point of the first linguistic observation.

783 Fifth, it is a sound pre-theoretic understanding (upon some folk reflection) that a per-
 784 son can successfully designate an object as a whole through a kind of communication link
 785 between that object and his/her current use of the referring name of the object, with his/her
 786 understanding that it is an object with its multiple attributes, even though he/she does not
 787 actually know (or psychologically imagine) exactly what (all of) its attributes are.

788 The preceding pre-theoretic observations are made without further giving a systematic
 789 theoretic elaboration via a theory of reference. The subsequent discussion is based on the
 790 foregoing observations, to which (it is hoped) the reader can agree with minimal reflection
 791 without relying on any systematic theoretic account of the double-reference character of
 792 people's basic employment of language.

793

794

795 **3.3. A Dual-Track Characterization of Relative Identity**

796 In the preceding two sub-sections of this section, I respectively give a further explana-
 797 tion: < 1 > the shared *relative-identity* core of the two types of real-life *relative-identity*
 798 involved predication statements, via a theoretic account of *identity* simplex and *identity*
 799 complex, and < 2 > the *double-reference* phenomenon of people's basic employment of
 800 language that constitutes the due starting point for rea-life identity-predication statements
 801 and brings about the dual-track feature of relative-identity predication. With this further
 802 explanation, in this sub-section, I give an enhanced dual-track characterization of relative
 803 identity (sameness and difference), using the previous sample statements in section 2 for
 804 illustration.

805 Case (A)

806 (A.1) Biden is identical with (the same as) Trump regarding (being relative to) their shared
 807 attribute of being a USA President.

808

809

Paraphrase into its dual-track presentation of relative-identity predication:

810 Biden, via (being initially relative to) his specific-attribute aspect of being a USA President,
 811 is the same [being a USA President] as (identical with) Trump regarding (being further rela-
 812 tive to) their shared general attribute of being a USA President that is manifested by Biden's
 813 specific-part attribute of being a human.

814 *Its symbolized dual-track presentation:*

815

816

$$\alpha_{[f]} =_{[F]} \beta$$

817 where α and β are (singular) terms either as an individual < individual-object-identifying >
 818 constant [like 'Biden', 'Smith', ...] < referring an individual object > or a definite descrip-
 819 tion $\iota x \varphi$ which refers to a unique object with x being an individual variable, f is a term as
 820 a particular-attribute-identifying constant (referring to some specific-attribute aspect of α),
 821 F is a term as a universal-attribute-identifying constant < referring to a *general* or universal
 822 attribute > .¹⁸

823

824

824 ¹⁸ In this and subsequent symbolizations via a predicate logic account, primitive vocabulary of its syntax is standard with
 825 the exception of *definite description* symbol $\iota*$; it is an expansion on the standard ι operator that is semantically defined
 826 in a modified way: the semantics for the symbol ' $\iota*$ ' is different from but an enhanced expansion of the standard one
 827 for ' ι ' (signifying the uniqueness of the single one object as the referent of a *definite* description) so as to have it (in the
 828 predicate logic) more adequately capture how *definite* descriptions (descriptive noun phrases with unique referents) are
 used in our linguistic practice (in natural languages): a definite description as a noun phrase denotes either <1>? an
 unique object or <?pag <2> a unique set of objects that meet(s) the description of the noun phrase.

829 (A.1)* Biden is not identical with Trump regarding (relative to) the attribute of being a
 830 former USA Senator that is possessed by Biden but not possessed by Trump.
 831 [Or: they are different from each other regarding (being relative to) Biden's specific
 832 attribute of being a former USA Senator which is not possessed by Trump.]

833 *Paraphrase into its dual-track presentation of relative-identity predication:*

834 Biden, via (being initially relative to) his specific-attribute aspect of being a former USA Sena-
 835 tor, is not the same [being a USA Senator] as (identical with) Trump regarding (being further
 836 relative to) the general attribute of being a USA Senator.

837 *Its symbolized dual-track presentation:*

$$838 \alpha_{[g]} \neq_{[G]} \beta$$

840 where α and β are (singular) terms either as an individual < individual-object-identifying >
 841 constant [like 'Biden', 'Smith', ...] < referring an individual object > or a definite description
 842 $\iota * x \varphi$ which refers to a unique object with x being an individual variable, g ($g \neq f$, given f above)
 843 is a term as a particular-attribute-identifying constant (referring to some specific-attribute
 844 aspect of α), G ($G \neq F$, given F above) is a term as a universal-attribute-identifying constant
 845 < referring to a general or universal attribute > .

846 (A.2) The brown cat [the class collection of individual brown cats]¹⁹ is identical with the
 847 grey cat regarding (being relative to) their shared attribute of being a cat.

848 *Paraphrase into its dual-track presentation of relative-identity predication:*

849 The brown cat (the class collection of individual brown cats), via (being initially relative to) its
 850 individual brown cats' collectively shared and individually possessed specific-attribute aspect
 851 of being a cat, is the same [having cat-ness] as (identical with) the grey cat (the class collec-
 852 tion of individual grey cats) regarding (being further relative to their respective individual
 853 members' shared general attribute of being a cat.

854 *Its symbolized dual-track presentation:*

$$855 \alpha_{[f]} =_{[F]} \beta$$

857 where α and β are terms, each one as a definite description $\iota * x \varphi$ which refers to a < unique >
 858 subset < sort > with x being a sortal variable, f is a term as a particular-attribute-identifying
 859 constant (referring to some specific-attribute aspect of α), F is a term as a universal-attribute-
 860 identifying constant < referring to a general or universal attribute > .

861 (A.2)* The brown cat is not identical to the grey cat regarding (being relative to) the attribute
 862 of having brown color that is possessed by any member of the former but not by any
 863 member of the latter.

864 *Paraphrase into its dual-track presentation of relative-identity predication:*

865 The brown cat (the class collection of individual brown cats), via (being initially relative to) its
 866 individual brown cats' collectively shared and individually possessed specific-attribute aspect
 867 of having brown color, is not the same [having brown color] as (identical with) the grey cat
 868 (the class collection of individual grey cats) regarding (being further relative to) the general
 869 attribute of having brown color, which are shared by any individual brown cats but not by any
 870 individual brown cats.

871 *Its symbolized dual-track presentation:*

$$872 \alpha_{[g]} \neq_{[G]} \beta$$

874 ¹⁹ See footnote 9.



875 where α and β are terms, each one as a definite description $\iota * x \varphi$ which refers to a < unique >
 876 subset < sort > with x being a sortal variable, g ($g \neq f$, given f above) is a term as a particular-
 877 attribute-identifying constant (referring to some specific-attribute aspect of α), G ($G \neq F$,
 878 given F above) is a term as a universal-attribute-identifying constant < referring to a *general*
 879 or universal attribute > .

880 Case type (B):

881 (B.1) John is [is identical to and thus belongs to] a college instructor [the class collection
 882 of college instructors] regarding (relative to) the shared attribute of being a college
 883 instructor.

884 *Paraphrase into its dual-track presentation of relative-identity predication with its relative-*
 885 *identity simplex as the base layer of its relative-identity complex:* < 1 > (at its implicit base
 886 layer of *relative-identity* simplex) John, via (being initially relative to) his specific-attribute
 887 aspect of being a college instructor, is the same [being a college instructor] as (identical with)
 888 any individual members of the class collection of college instructors regarding (being further
 889 relative to) their shared general attribute of being a college instructor that is manifested by
 890 John's specific-part attribute of being a college instructor; and thus (< 1 > is based on or
 891 presupposed by) < 2 > (at its manifest layer of *class-membership* predication) John belongs
 892 to the class collection of individual college instructors.

893 *The symbolized dual-track presentation of its base layer of relative-identity simplex:*

$$\alpha_{[f]=[F]}\beta$$

894 where α and β are (singular) term either as an individual < individual-object-identifying >
 895 constant [like 'Biden', 'Smith', ...] < referring an individual object > or a definite descrip-
 896 tion $\iota * x \varphi$ which refers to a unique object with x being an individual variable, f is a term as
 897 a particular-attribute-identifying constant (referring to some specific-attribute aspect of α),
 898 F is a term as a universal-attribute-identifying constant < referring to a *general* or universal
 899 attribute > .

900 (B.1)* John is not [is not identical to and thus does not belong to] a college instructor [the
 901 class collection of college instructors] regarding (relative to) John's specific attribute
 902 of being graduated from Smith High School].

903 *Paraphrase into its dual-track presentation of relative-identity predication with its relative-*
 904 *identity simplex as the base layer of its relative-identity complex:* < 1 > (at its implicit base layer
 905 of *relative-identity* simplex) John, via (being initially relative to) his specific-attribute aspect of
 906 being graduated from Smith High School, is not the same [being graduated from Smith High
 907 School] as (not identical to) the class collection of college instructors regarding (being further
 908 relative to) the addressed general attribute of being graduated from Smith High School which
 909 is possessed by John (manifested by John's specific-part attribute of being graduated from
 910 Smith High School) but not by any member of the class collection of college instructors, and
 911 thus (< 1 > is based on or presupposed by) < 2 > (at its manifest layer of *class-membership*
 912 predication) John does not belong to the class collection of individual college instructors.

913 *The symbolized dual-track presentation of its base layer of relative-identity simplex:*

$$\alpha_{[g] \neq [G]}\beta$$

914 where α and β are (singular) terms either as an individual < individual-object-identifying >
 915 constant [like 'Biden', 'Smith', ...] < referring an individual object > or a definite descrip-
 916 tion $\iota * x \varphi$ which refers to a unique object with x being an individual variable, g ($g \neq f$, given f above)
 917 is a term as a particular-attribute-identifying constant (referring to some specific-attribute
 918 aspect of α), G ($G \neq F$, given F above) is a term as a universal-attribute-identifying constant
 919 < referring to a *general* or universal attribute > .
 920

921 (B.2) The brown cat [the class collection of brown cats] is [is identical to and thus belongs in]
 922 the cat [the class collection of cats] regarding (being relative to) their shared attribute
 923 of being a cat.

924 *Paraphrase into its dual-track presentation of relative-identity predication with its relative-*
 925 *identity simplex as the base layer of its relative-identity complex:*

926 < 1 > (at its implicit *base layer of relative-identity simplex*) The brown cat (the class collection
 927 of individual brown cats), via (being initially relative to) its individual brown cats' collectively
 928 shared and individually possessed specific-attribute aspect of being a cat, is the same [being
 929 a cat] as (identical to) the cat (the class collection of individual brown cats) regarding (being
 930 further relative to) their respective individual members' shared general attribute of being a cat,
 931 and thus (< 1 > is based on or presupposed by) < 2 > (at its manifest layer of *class-inclusion*
 932 predication) the sub-class collection of individual brown cats belongs to the class collection
 933 of individual cats.

934 *The symbolized dual-track presentation of its base layer of relative-identity simplex:*

$$\alpha_{[f]=[F]}\beta$$

936 where α and β are terms, each one as a definite description $\iota *x\varphi$ which refers to a < unique >
 937 subset < sort > with x being a sortal variable, f is a term as a particular-attribute-identifying
 938 constant (referring to some specific-attribute aspect of α), F is a term as a universal-attribute-
 939 identifying constant < referring to a *general* or universal attribute > .

940 (B.2)* The brown cat [the class collection of individual brown cats] is not [is not identical to
 941 and thus does not belong in] the cat [the class collection of individual cats] regarding
 942 (being relative to) the general attribute of having brown color which is possessed by
 943 any members of the former but not by any members of the latter.

944 *Paraphrase into its dual-track presentation of relative-identity predication with its relative-*
 945 *identity simplex as the base layer of its relative-identity complex:*

946 < 1 > (at its implicit *base layer of relative-identity simplex*) The brown cat (the class col-
 947 lection of individual brown cats), via (being initially relative to) its individual brown cats'
 948 collectively shared and individually possessed specific-attribute aspect of having brown color,
 949 is not the same [having brown color] as (identical to) the cat (the class collection of individual
 950 cats) regarding (being further relative to) their respective individual members' shared general
 951 attribute of having brown color, and thus (< 1 > is based on or presupposed by) < 2 > (at
 952 its manifest layer of *class-inclusion* predication) the sub-class collection of individual brown
 953 cats does not belong to the class collection of individual cats regarding (being relative to) the
 954 general attribute of having brown color which is possessed by any members of the former but
 955 not by any [all] members of the latter (because some of individual cats are not white).

956 *The symbolized dual-track presentation of its base layer of relative-identity simplex:*

$$\alpha_{[g]\neq[G]}\beta$$

958 where α and β are terms, each one as a definite description $\iota *x\varphi$ which refers to a < unique >
 959 subset < sort > with x being a sortal variable, g ($g \neq f$, given f above) is a term as a particular-
 960 attribute-identifying constant (referring to some specific-attribute aspect of α), G ($G \neq F$,
 961 given F above) is a term as a universal-attribute-identifying constant < referring to a *general*
 962 or universal attribute > .

963 * * *

964 In sum, this essay has given a holistic re-examination of the semantic content and syn-
 965 tactic structure of the concept of relative identity through suggesting and explaining a
 966 dual-track-enhanced characterization of relative identity. This article has suggested and

967 explained an expanded and enhanced dual-track characterization of relative identity. It is
 968 expanded because its due coverage is not narrowly restricted to the *equal-status* case of
 969 *identity* statements (the *symmetric* case for *identity* simplex) but also includes the *category-*
 970 *assimilating* case (the *asymmetric* case for *identity* complex) both of which are unified by
 971 the shared semantic core content of relative identity. It is enhanced because it is intended
 972 to give a more refined characterization of relative identity for the sake of enhancing our
 973 understanding of the structure and content of real-life relative-identity statements in peo-
 974 ple's basic employment of language in view of the relation between thought, language, and
 975 the world. It captures the characteristic *dual-track* feature of real-life relative identity: given
 976 an *identity* statement (either type), the subject referring term designates its semantic-whole
 977 referent while at the same time pointing to a certain specific aspect of it (thus being *ver-*
 978 *tically* relative to this specific-part referent), and then the designated subject referent is
 979 treated as being identical to (or with) another object regarding (being *horizontally* relative
 980 to) their shared general attribute. Based on the enhanced characterization of relative iden-
 981 tity, this paper has examined two distinct types of *identity-predication* statements, one of
 982 which are not covered by the standard notion of relative identity: though with distinct syn-
 983 tactic structures, they are unified by the shared semantic core content of relative identity.
 984 The explanatory potency of the dual-track-enhanced characterization of relative identity is
 985 also examined: among others, it presents a distinct *relative-identity-capturing* perspective
 986 in looking at the deep semantic-syntactic structure of (a variety of) the general subject-
 987 predicate statements which demonstrate people's basic employment of language. The paper
 988 also gives a modern-logic presentation of the dual-track-enhanced relative identity in dis-
 989 tinct types of *identity* statements, which can be incorporated into the syntax and semantics
 990 of an expanded predicate logic account.

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