

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* BARNET L. LIBERMAN

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Appeal No. 2006-0449  
Application 10/232,644

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ON BRIEF

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Before KIMLIN, PAK and WARREN, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

*Decision on Appeal*

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 1, 3 through 13 and 15 through 24, all of the claims in the application.

Claims 1 and 3 illustrates appellant's invention of a method of freezing meat in a marinade, and is representative of the claims on appeal:

1. A method of freezing meat in a marinade, said method comprising placing said meat and a marinade in a bag which can be vacuum sealed, vacuum sealing said meat and said marinade in said bag without allowing any substantial time for marination, preparing a brine solution containing between 0.05% and 1.0% by weight of cruciferous oil, and freezing said meat by immersing the vacuum sealed bag in said brine solution at a temperature between -22 and -43.6°F, whereby,

said meat can be properly marinated in the same amount of time as fresh meat placed in said marinade.

3. A method as in claim 1 wherein said meat is frozen without allowing any substantial time for marination after vacuum sealing.

The references relied on by the examiner are:

Liberman (Liberman '034)	4,480,034	Jun. 20, 1989
Liberman et al. (Liberman '352)	5,857,352	Jan. 12, 1999
Katayama et al. (Katayama)	5,965,191	Oct. 12, 1999

The examiner has rejected appealed claims 1, 3 through 13 and 15 through 24 under 35 U.S.C. § 103(a) as being unpatentable over Katayama in view of Liberman '352 and '034 (answer, pages 3-5).

Appellant presents argument with respect to claims 1, 3, 13 and 15 (brief, pages 4, 7 and 9). Thus, we decide this appeal based on appealed claims 1, 3, 13 and 15. 37 CFR § 41.37(c)(1)(vii) (September 13, 2004).

We affirm.

Rather than reiterate the respective positions advanced by the examiner and appellant, we refer to the answer and to the brief and reply brief for a complete exposition thereof.

#### *Opinion*

We have carefully reviewed the record on this appeal and based thereon find ourselves in agreement with the supported position advanced by the examiner that, *prima facie*, the claimed method of freezing meat in a marinade encompassed by appealed claims 1, 3, 13 and 15 would have been obvious over the combined teachings of Katayama, Liberman '034 and Liberman '352 to one of ordinary skill in this art at the time the claimed invention was made. Accordingly, since a *prima facie* case of obviousness has been established by the examiner, we again evaluate all of the evidence of obviousness and nonobviousness based on the record as a whole, giving due consideration to the weight of appellant's arguments in the brief and reply brief. *See generally, In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

In order to review the examiner's application of prior art to appealed claims 1, 3, 13 and 15, we first interpret these claims by giving the terms thereof the broadest reasonable interpretation in their ordinary usage in context as they would be understood by one of ordinary

skill in the art in light of the written description in the specification unless another meaning is intended by appellant as established in the written description of the specification, and without reading into the claims any limitation or particular embodiment disclosed in the specification. *See, e.g., In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004); *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). The plain language of independent claim 1 specifies a method comprising at least the steps of combining any “meat” and any “marinade” in a bag and then vacuum sealing the “bag without allowing any substantial time for marination,” at an unspecified later time, immersing the vacuum sealed bad in a brine solution containing between 0.05% and 1.0% by weight of any cruciferous oil, and freezing said meat in the vacuum sealed bag in the brine solution at a temperature between –22 and –43.6°F, that is, –30.0 to –42.0°C, such that “said meat can be properly marinated in the same amount of time as fresh meat placed in said marinade.” Thus, in the context of the language of this claim, the “time for marination” is the “same amount of time” that any “fresh” “said meat” “placed in” any “said marinade” “can be properly marinated” in the estimation of any chef or consumer, and therefore, the bag with the combined meat and marinade must be vacuum sealed “without allowing any substantial time for” “properly” marinating the meat with the marinade.

The plain language of independent claim 13 specifies a method comprising at least the method steps specified in appealed claim 1, but does not include the “properly marinated in the same amount of time” clause, and adds the additional steps of “thawing said meat and said marinade” and then “marinating said meat in said marinade prior to cooking.” Thus, claim 13 does not limit the “time for marination” in any respect.

Each of independent claims 1 and 13 simply requires combining any “meat” and any “marinade” in a bag and then vacuum sealing the “bag without allowing any substantial time for marination,” followed at any later time by the step of immersing the vacuum sealed bad in a specified brine solution, and thus, does *not* limit marination time of the meat subsequent to sealing the bag and prior to freezing the bag.

Claims 3 and 15 further limit claims 1 and 13, on which they respectively depend, by requiring that the “meat is frozen without allowing any substantial time for marination after vacuum sealing.” The subject phrase taken with the requirement to vacuum seal the “bag

without allowing any substantial time for marination” in independent claims 1 and 13, results in controlling marination time before sealing the bag and before freezing the bag after it is sealed.

The dispositive issues in this appeal involve the interpretation of certain claim language. We find no definition of “meat” and “fresh meat” which specifies its state of preparation at the time it is combined with “a marinade” in the written description in the specification other than the disclosure that “[a]s used herein the term ‘meat’ is intended to include . . . any . . . type of animal product commonly referred to as meat or fish” (page 6, ll. 2-18). Thus, we interpret these terms as encompassing any manner of “meat” or “fresh meat,” that is, unfrozen meat, in such a state of preparation that any person would apply a marinade thereto prior to cooking.

We find no definition of the terms “marinade” and “marination” in the written description in the specification, and appellant so acknowledges with respect to the former (brief, page 2). However, appellant argues that “it may be inferred that the marinade is acidic from the background section, where it is stated that ‘The meat must not be exposed to highly acidic sauces such as those including vinegar or lemon juice for too long, or the marinade will dissolve the meat,’” citing specification page 2, ll. 12-14, and points out that the specification Examples “utilize balsamic vinegar” (brief, pages 2-3). In arguments with respect to the teachings of Katayama, appellant states that “[w]hile sake and seasonings could be considered a marinade, mere salt and alkaline cannot be considered a marinade” (brief, page 5), and contends that the reference at col. 8, ll. 13-42, lists ingredients that “include species which are sometimes used in marinades” but “like the salt solution and the alkaline solution with which the fish flesh is treated to reduce purge, do not in themselves constitute a marinade,” arguing that “[t]he acidic marinating solution of the present invention is not contemplated by Katayama” (reply brief, page 4). In arguments with respect to the examiner’s position, appellant states that “Appellant’s use of the term . . . relates to soaking in an acid solution, such as lemon juice or vinegar,” pointing to “the word ‘marinade’ . . . defined by the American heritage dictionary [*sic*] as ‘A pickling liquid of vinegar *or* wine and oil, with various species and oils, in which meat and fish are soaked before cooking,” and submits that “Appellant clearly contemplates an acidic solution” (reply brief, page 3; italics emphasis original).

We are not persuaded by appellant that there is basis in the claim language, in the written description in the specification or elsewhere in the record on which to read the limitation “acidic

marinating solution” into the claim terms “marinade” and “marination.” Appellant does not provide in the written description a specific definition for this term in this respect, as he acknowledges, and indeed, admits that “sake and seasonings [of Katayama] could be considered a marinade.” In this respect, we notice that there is no express definition of the term “marinade” limiting the ingredients thereof with respect to any “meat,” “fresh meat, or “animal product” in cookbooks and other sources of culinary information, and indeed, the ingredients are selected based on the imparted flavor(s) desired by the chef and the consumer. We note that appellant has not relied on any such references in support of his position. *See In re Ahlert*, 424 F.2d 1088, 1091-92, 165 USPQ 418, 420-21 (CCPA 1970) (notice may be taken “of facts beyond the record which, while not generally notorious, are capable of such instant and unquestionable demonstration as to defy dispute”). We further determine that common dictionary definitions do not aid appellant’s position. We have been unable to locate the edition of the *American Heritage Dictionary* containing the definition cited by appellant. Indeed, the definition of “marinade” we find in this line of authority is essentially “[a] liquid mixture, usually of vinegar or wine and oil with various species and herbs, in which meat, fowl, fish or vegetables are soaked before cooking.”<sup>1</sup> We are of the opinion that this dictionary definition does not make clear that marinades with vinegar would be commonly considered mutually exclusive from those with wine and oil, or require that any marinade must be so acidic that it melts the “meat” if it contains vinegar or other organic acid.

Thus, on this record, we interpret the claim term “marinade” to encompass *any* manner of “marinade” that would be used by any person on a particular “meat” that has been otherwise prepared for cooking in any manner, and inclusive of the sake containing marinades that appellant admits to be disclosed by Katayama.

Further in this respect, we determine that the term “marination” is used in the written

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<sup>1</sup> *The American Heritage Dictionary Of The English Language* 1070 (4th ed., Boston, Houghton Mifflin Company, 2000); *see also The American Heritage Dictionary, Second College Edition* 766 (Boston, Houghton Mifflin Company, 1982).

description in the specification in a manner which comports with its common meaning in context of “[t]o soak . . . in a marinade,”<sup>2</sup> and we find no basis anywhere in the record which establishes the extent, that is, time and temperature, to which any person would soak any “meat” in any “marinade,” which we determine to be a matter of imparting desired flavor(s).

Turning now to the phrase “without allowing any substantial time for marination” found in each of claims 1, 3, 13 and 15, although for different method steps (*see above* pp. 3-4). The term “substantially” is a term of degree, and thus, the written description in the specification must either provide a definition or general guidelines and examples sufficient as a standard to enable a person of ordinary skill in the art to determine the degree of “marination” time thus encompassed by the claim language, or this term will be given its ordinary meaning. *See Morris*, 127 F.3d at 1054-55, 44 USPQ2d at 1027; *York Prods., Inc. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572-73, 40 USPQ2d 1619, 1622-23 (Fed. Cir. 1996) (“In this case, the patent discloses no novel use of claim words. Ordinarily, therefore, ‘substantially’ means ‘considerable in . . . extent,’ *American Heritage Dictionary Second College Edition* 1213 (2d ed. 1982), or ‘largely but not wholly that which is specified,’ *Webster’s Ninth New Collegiate Dictionary* 1176 (9th ed. 1983).”); *Seattle Box Co., Inc. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 826, 221 USPQ 568, 573-74 (Fed. Cir. 1984) (“Definiteness problems arise when words of degree are used. That some claim language may not be precise, however, does not automatically render a claim invalid. When a word of degree is used . . . [it] must [be determined] whether the patent’s specification provides some standard for measuring that degree.”); *In re Mattison*, 509 F.2d 563, 564-65, 184 USPQ 484, 486 (CCPA 1975) (“substantially increase the efficiency of the compound as a copper extractant”); *cf. In re Marosi*, 710 F.2d 799, 802-03, 218 USPQ 289, 292 (Fed. Cir. 1983) (“essentially free of alkali metal”).

Appellant admits that the subject phrase “is not explicitly defined” in the specification, but argues that “Appellant’s first example (Figure 1) uses a 2 minute marination time from immersion in vinegar to freezing, which obtains significantly better results than the 25 minutes of the second example,” with respect to the time periods of claims 1 and 13 as well as of claims 3 and 15, in support of the contention that “[s]ince the example of two minutes from

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<sup>2</sup> *See generally, The American Heritage Dictionary Of The English Language* 1070; *The*

immersion to freezing may be taken to cover both time periods (marination prior to and after sealing, but before freezing), the time periods recited in claims 1 and 3 are on the order of a minute, and certainly no more than two minutes” (brief, page 3). We note here that appellant has reversed the specification Examples, identifying the “second test,” represented by the second Example Figure 2, as the “first example (Figure 1)” (*see* specification, pages 12-13).

We find that the methods encompassed by the specified steps of claims 1 and 13, as we interpreted these claims above, appear to correspond to the first specification Example in which the salmon “pieces were *marinated for 25 minutes in balsamic vinegar* and placed in snug aluminum cups,” and then frozen in brine, with the result that, “[a]s can be seen in the table of Figure 1, the thawed weight of the pieces of the samples frozen according to the invention was an average of 2% greater than the thawed weight of the samples frozen conventionally” (page 8, ll. 2-4, and page 12, ll. 3-11; emphasis supplied). It is explained that “[t]he difference can be attributed to cell damage and purge loss during conventional freezing,” and “[a]s such, any further marination of the conventionally frozen samples would involved [*sic*, involve] damaged cells in a marinade adulterated by purge” (page 12, ll. 11-13). We find no explanation why “snug aluminum cups” are used instead of “vacuum sealed bags.”

We find that the methods encompassed by claims 3 and 15 appear to correspond to the second specification Example in which the salmon pieces were prepared similar to the first Example, including “placed in snug aluminum cups” not “vacuum sealed bags,” except that “*marination prior to freezing was reduced to two minutes in balsamic vinegar, i.e., substantially eliminated,*” and then frozen in brine, wherein “[a]fter freezing, the samples were *thawed out and marinated for an additional 20 minutes* subsequent to thawing” and apparently prior to cooking (page 8, ll. 5-8, and page 12, ll. 15-18; emphasis supplied). The results reported in specification Figure 2 are stated to show that “the thawed weight of the samples frozen according to the invention was . . . an average of 2% greater than the weight of the samples frozen conventionally” (page 12, ll. 20-22). It is disclosed that “the weight of both sets of samples was 2% greater than the corresponding weights” in the samples in the first Example, “[t]hat is, substantially eliminating the marination time prior to freezing reduces the weight loss and yields

a product which more closely resembles [*sic*, a] piece of fresh meat which has been marinated,” with “the conventionally frozen sample still suffers from cell damage and purge loss” (page 12, l. 22, to page 13, l. 4).

The use of “snug aluminum cups” instead of vacuum sealed bags notwithstanding, we determine that the evidence in the two specification Examples does not support appellant’s position with respect to the interpretation to be made of the subject phrases. Presuming, *arguendo*, that 22 to 25 minutes would be the total time generally selected by one of ordinary skill in the culinary arts to “properly” marinate the particular pieces of salmon with the particular balsamic vinegar *per se* marinade used in the tests, there is no showing in the specification Examples relevant to the phrases “without allowing any substantial time for marination” with respect to the respective claimed process steps defined with this limitation. Indeed, the sole evidence of less than the total marination time is two minutes, and this amount of time is disclosed to represent marination time “substantially eliminated,” and not “without allowing any substantial time for marination” as claimed.

Thus, the reported results represent a “substantially eliminated” limitation which is not claimed, and not the claimed “without allowing any substantial time for marination” limitations. Even if it is held that the reported results in the specification Examples in fact represent the claimed limitations, we find no evidence in the written description in the specification establishing that the range of marination time represented by the claimed limitation is in fact limited to 2 minutes of a marination range of 22 to 25 minutes, that is, 8-9% of the marination time generally selected by any person based on the “meat” and the “marinade,” none of which is specified in claims 1, 3, 13 and 15 as we have interpreted these terms above.

On this record, we find no definition for the language “without allowing any substantial time for marination” in the specification, including the Figures, and there is no basis in the claim language or the written description in the specification to read the evidence in the specification Examples into the claims as limitations on “meat,” “marinade” and “any substantial time for marination.” See *Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186, 48 USPQ2d 1001, 1005 (Fed. Cir. 1998); *Morris*, 127 F.3d at 1054-55, 44 USPQ2d at 1027; *In re Paulsen*, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994); *In re Van Geuns*,

988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993); *Zletz*, 893 F.2d at 321-22, 13 USPQ2d at 1322.

Accordingly, on this record, we interpret the phrase “any substantial time for marination” to have a reasonable, ordinary meaning in context of the subject claim language of claims 1, 3, 13 and 15 of a range of from little or no marination time to less time than required for “meat” to be “properly” marinated in a “marinade” to “largely but not wholly” “properly” marinated by any person based on the common dictionary definition in context of the term “substantially.”<sup>3</sup> *See York Prods.*, 99 F.3d at 1572-73, 40 USPQ2d at 1622-23.

Considering now the ground of rejection of claims 1, 3, 13 and 15, as we have interpreted these claims above, over the combined teachings of Katayama, Liberman ‘034 and Liberman ‘352, we agree with the examiner’s position that Katayama would have taught a method for freezing fish, prepared in reference Example 1, combined with a sake containing marinade in a vacuum sealed bag without allowing any substantial time for marination before vacuum sealing the bag and then before freezing the bag, as set forth in reference Example 2 (answer, pages 3-7, 9 and 10). Indeed, Katayama would have taught one of ordinary skill in the culinary arts to combine the prepared fish and the sake containing marinade for five minutes, cut the marinade contacted fish into pieces, vacuum package the pieces, and freeze the package, which after a period is thawed and the fish cooked (e.g., col. 17, l. 44, to col. 18, l. 49). As the examiner finds, the Liberman references would have reasonably suggested to one of ordinary skill in the culinary arts that vacuum packaged fish can be frozen in a brine comprising 0.05% and 1.0% by weight of cruciferous oil at a temperature between –22 and –43.6°F, as specified in claims 1 and 13 (answer, pages 4-5 and 8). Indeed, Liberman ‘352 acknowledges that it was known in the fisheries industry “that the addition of cruciferous oils to conventional brines” is advantageous in a range of –22 and –43.6°F, and that different kinds of fish in plastic bags can be frozen in such

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<sup>3</sup> It is apparent that the scope of the claimed invention intended by appellant is not reflected by the language of claims 1, 3, 13 and 15 as we have interpreted these claims above. It is well settled that applicant’s mere intent as to the scope of the claimed invention does not so limit the scope of a claim which is otherwise definite, when construed in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Cormany*, 476 F.2d 998, 1000-02, 177 USPQ 450, 451-53 (CCPA 1973).

brine between  $-37$  and  $-42^{\circ}\text{F}$  (e.g., col. 1, l. 27, to col. 2, l. 38). We find that Liberman '034<sup>4</sup> would have taught one of ordinary skill in the culinary arts that it is optimal to freeze vital body fluids in plastic bags in cruciferous oil containing brines at  $-22$  and  $-43.6^{\circ}\text{F}$ .

We find in the combined teachings of these references substantial evidence in support of the examiner's conclusion that it would have been obvious to one of ordinary skill in the culinary arts to use the known brine cooling methods for freezing fish sealed in a bag taught by Liberman '352, which cooling method is also described in Liberman '034, to freeze the marinated fish in the vacuum sealed bag disclosed by Katayama in the reasonable expectation of obtaining the same or similar advantages taught by the Liberman references (answer, e.g., pages 5 and 8). *See In re Dow Chem. Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531-32 (Fed. Cir. 1988) ("The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that [the claimed process] should be carried out and would have a reasonable likelihood of success viewed in light of the prior art. [Citations omitted] Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure."); *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881-82 (CCPA 1981)("The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art."); *In re Siebentritt*, 372 F.2d 566, 567-68, 152 USPQ 618, 619 (CCPA 1967) (express suggestion to interchange methods which achieve the same or similar results is not necessary to establish obviousness); *see also In re O'Farrell*, 853 F.2d 894, 903-04, 7 USPQ2d 1673, 1680-81 (Fed. Cir. 1988) ("Obviousness does not require absolute predictability of success. . . . There is always at least a possibility of unexpected results, that would then provide an objective basis for showing that the invention, although apparently obvious, was in law nonobvious. [Citations omitted.] For obviousness under § 103, all that is required is a reasonable expectation of success. [Citations omitted.]").

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<sup>4</sup> The examiner and appellant consider Liberman '352 to refer to Liberman '034 (e.g., answer, pages 4-5). The reference referred to is in fact to United States Patent 4,840,035 to Liberman,

We are not convinced otherwise by appellant's arguments in the brief and reply brief. We considered appellant's arguments with respect to claim interpretation above, noting that appellant admits that the sake containing solution applied by Katayama is a marinade for the fish to which it is applied. We find no argument advanced by appellant which establishes that the amount of time from combining such marinade with the fish for five minutes and then cutting the fish into pieces and vacuum packaging the same falls outside of the limitation "any substantial time for marination" with respect to claims 1 and 13, and the further amount of time to freezing subsequent to vacuum sealing the package falls outside of the limitation "any substantial time for marination" for the additional step specified in claims 3 and 15, as we have interpreted these claims above, and the criticality of these claimed time ranges vis-à-vis the teachings of Katayama. *In re Woodruff*, 919 F.2d 1575, 1577-78, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990) ("The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. [Citations omitted.] These cases have consistently held that in such a situation, the applicant must show that the particular range is *critical*, generally by showing that the claimed range achieves unexpected results relative to the prior art range. [Citations omitted.]"); *In re Aller*, 220 F.2d 454, 456-58, 105 USPQ 233, 235-37 (CCPA 1955). ("[W]here general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). Furthermore, we are of the view that the teachings in the Liberman references would have led one of ordinary skill in the culinary arts to use the cruciferous oil containing brines as the freezing step in the method of Katayama even if there may be little additional advantage to do so, in view of such advantages and the reorganization of the use of the brines in the fisheries industry, as well as the fact that one of ordinary skill in the culinary arts would routinely substitute one known method for freezing fish for another known method for freezing fish.

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of obviousness found in the combined teachings of Katayama and Liberman '352 and '034 with appellant's countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claims 1,

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issued on the same date as the '034 patent.

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3 through 13 and 15 through 24 would have been obvious as a matter of law under 35 U.S.C. § 103(a).

The examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (2005).



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