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Subcontractor Payment Clause Comparison: Northeast States Versus Southeast States

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Abstract

The objective of this study was to identify the contingent payment language that subcontractors could take advantage of when executing contracts in the Northeast and the Southeast United States. Data for this study was collected from court cases and statutes to analyze court interpretation of the language contained in contracts. The prime beneficiaries of this study were subcontractors who learned the specific contingency language that affected their potential payments from a contractor not paid by an owner and the varying impact of that language in each state. The results of the study indicated that some states followed a pay-when-paid interpretation, others pay-if-paid and still others enacted statutes that deemed such clauses unenforceable as a matter of public policy. States considered in the study included Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Alabama, Georgia, Florida, North Carolina, South Carolina and Tennessee. While the vast majority of southeast states do not enforce pay-if-paid clauses, more mixed results are found in the northeast.

Key Words: Pay when paid, Pay if paid, Subcontractor, Construction contracts, Contingency clause, Contingent payment

Introduction

A comparative study of the common law and legislation controlling contingent payment language in contracts can benefit subcontractors conducting business in these states. An understanding of consequences subcontractors assumes when entering into agreements with contingency language may vary between the states and needs to be understood by the subcontractor. A typical pay-when-paid and pay-if-paid clause in construction subcontracts makes the subcontractor's payment contingent upon the payment of the general contractor (hereinafter contractor) by the owner. Some clauses link the timing of the subcontractor's payment to the time owner makes payment. These are called pay-when-paid clauses. Pay-if-paid clauses specify that the owner must pay the contractor in order for the subcontractor to ever receive payment.

The party carrying the burden of risk in these situations has been the subject of numerous papers and court cases. State and Federal Courts and Legislatures have struggled with this issue. The issue with these clauses is whether the contractor has a legal obligation to pay the subcontractor within a reasonable time even though they were not paid, or is payment by owner a condition precedent to payment to the subcontractor.

As a majority of the states in the nation move toward protecting subcontractors rights to payment for their work product, most states have positioned away from enforcing contingency payment clauses. The objective of this study was to identify the pay-when-paid and pay-if-paid language in construction contracts that best protected payments to subcontractor from contractor for work performed in the Northeast and the Southeast. The prime beneficiaries of this study were subcontractors doing business in these states who need to be aware of the clauses affecting payment for work properly performed within the scope of the contract. Subcontractors could use the language suggested in this study to draft more favorable contractual terms from their perspective.

An analysis of the relevant case law and legislation in the Northeast states of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont along with a summary of the Southeast states holdings was performed to suggest a contract language that can best assure payment to the subcontractor when the owner does not pay the contractor. The case law researched in each state contained construction contract contingency clauses.

Background

Published Papers

Several papers have addressed this issue in some of the states reviewed in this study, but have not collectively compared and contrasted Northeast and Southeast states for the benefit of the subcontractor. Dr. Siddiqi and Ms. May provided insight and analysis of the Florida majority view and the Georgia minority view in deciding these contract clauses (May & Siddiqi, 2006).

Another paper studied three cases that form the controlling view in Florida (Kirksey & Brown, 1991). The contractors in the three cases, Peacock Construction Co., Inc. v. Modern Air Conditioning, Inc., DEC Electric, Inc. v. Raphael Construction Corp. and OBS Co., Inc. v. Pace Construction Corp., obtained different results. In DEC Electric, Inc. v. Raphael Construction Corp., the Court found unambiguous language and upheld the nonpayment to the subcontractor (DEC Elec., Inc. v. Raphael Construction Corp.).

A similar paper by Mr. Kirksey argued that contingent-payment subcontract agreements are presumptively unconscionable (Kirksey, 1992). While it is unlikely that all states will enact legislation such as North Carolina, equitable factors should be considered in the administration of subcontract payment language (Kirksey, 1992). Mr. Hollander suggested some solutions to the harsh realities of these provisions (Hollander, 2002). Some solutions suggested were legislation to prohibit such clauses and subcontractors seeking more public work in the future where more statutory protections are available.

The present authors' previously published paper analyzing the Southeast States statutes and case law are summarized in the Case Law and Statutes section below. (Franco & Siddiqi, 2015).

Case Law and Statutes – Northeast

Connecticut

Connecticut courts haven't yet decided whether these clauses are a condition precedent to any payment obligation arising on behalf of the contractor or whether it is merely a timing mechanism. However, the Connecticut Supreme Court in Blakeslee Arpaia Chapman, Inc. v. E.I. Constructors, Inc., didn't decide the enforceability of a pay-when-paid clause but stated that there were numerous arguments advanced for not supporting the clause. (Blakeslee v. E.I. Constructors). The subcontract in this case provided that "payment of the approved portion of the Subcontractor's monthly estimate shall be conditioned upon receipt by the Contractor of his payment from the Owner." (Blakeslee v. E.I. Constructors).

The Connecticut Appellate Court recently enforced a contract similar to a contingent payment agreement. In Suntech of Connecticut, Inc. v. Lawrence Brunoli, Inc., 143 Conn. App. 581 (2013), a subcontractor sued a general contractor and lost as the court found the contract provided that the "general contractor had no obligation to pay the claim...unless the department first paid the general contractor" (Suntech of Connecticut, Inc. v. Lawrence Brunoli, Inc.).

Maine

In Maine, construction contracts typically contain a clause stating payment by the owner to the contractor is a condition precedent to payment of the subcontractor. The Maine Prompt Payment Act governs payment to general contractors, subcontractors, suppliers and design professionals (10 M.R.S.A. sec. 1111). The Act controls the timing of owner and prime contractor payment obligations. Although the courts in Maine have not specifically addressed the issue, it is likely that they would enforce such a clause between an owner and a contractor if it were clearly written.

Maine's Prompt Payment Act language is similar to a pay when paid clause. (10 M.R.S.A. sec. 1113). The Act reads "a contractor is required to pay a subcontractor within seven days of receipt of the progress payment from the owner. (10 M.R.S.A. sec. 1113). Other Courts have treated the clause as merely providing a reasonable amount of time for payment after the contractor's receipt of payment from the owner. (Framingham Heavy Equip. Co. v. John T. Callahan & Sons, Inc.).

Massachusetts

Massachusetts courts have acknowledged that such clauses may be valid. (Canam Steel Corp. v. Bowdoin Constr. Corp.). Pay-if-paid clauses could be enforced and stated that a clause tying payment to a subcontractor to receipt of payment by the contractor from the owner is valid if that contingency is clearly stated. (Canam Steel Corp. v. Bowdoin Constr. Corp.). The subcontract contained a clause which read "Receipt of payment by the Contractor shall be a condition precedent to any payment to the Subcontractor hereunder." (Canam Steel Corp. v. Bowdoin Constr. Corp.). The court found such language did not sufficiently create a condition precedent to payment because it was indirect.

The Court in the A. J. Wolfe Company case considered language that payments were to be made "...within 10 days after payment of such monthly progress payments...has been received by Baltimore." (A. J. Wolfe Co. v. Baltimore Contractors, Inc.). The court interpreted that portion of the contract as merely setting the time of payment and not a condition precedent. In Framingham, the Court stated that for the creation of a condition precedent the contract must clearly state "that payment

to the subcontractor is to be directly contingent upon the receipt by the general contractor of payment by the owner." (Framingham Heavy Equip. Co. v. John T. Callahan & Sons, Inc.).

New Hampshire

Pay-if-paid clauses that clearly state payment to a subcontractor is to be made only if the general contractor has been paid are likely enforceable. Courts require specific language such as "if", "on the condition that", "subject to" or "provided" to find that a contract contains a condition precedent. (Holden Eng. and Surveying Inc. v. Pembroke Rd. Realty Trust) Here, there was no such language which would have alerted a party that a condition precedent may exist. In that case the court stated that conditions precedent were not favored and would not be construed as such unless required by the plain language of the agreement. (Holden Eng. and Surveying Inc. v. Pembroke Rd. Realty Trust).

The New Hampshire Supreme Court decision that is most closely related to the pay-if-paid concept is Seaward Constr. Co. v. City of Rochester. So long as the unpaid contractor can show a good faith effort to secure payment from the owner, then it also may be entitled to rely on the pay-if-paid clause to deny payment to the subcontractor.

New Jersey

The New Jersey U.S. District Court ruled that these clauses are binding and valid defenses to claims for payment. The court in Fixture Specialists, Inc. v. Global Construction, LLC ruled, in its approval of the provision, that they do not violate New Jersey's anti waiver of lien statute and that a surety may use such a provision in its defense of a payment bond claim. The subcontract in that case created a condition precedent with the language that the "subcontractor agrees that contractor shall never be obligated to pay subcontractor under any circumstances unless and until funds are in hand received by the contractor in full and that this is a condition precedent to any obligation of contractor and shall not be construed as a time of payment clause." (Fixture Specialists, Inc. v. Global Construction, LLC).

In an unpublished decision, the New Jersey Appellate Court held that a pay-if-paid clause was valid as it unambiguously shifted the risk of non-payment to the subcontractor and clearly stated that if the owner refused to pay for the subcontractor's work, the contractor was not obligated to pay the subcontractor until the dispute was resolved and the owner made payment. (O.A. Peterson Constr. Inc. v. Englewood Hosp. & Med. Ctr.).

In Seal Tite Corp. v. Ehret, Inc., the U.S. District Court for the District of New Jersey held that a paywhen-paid contract clause only defers or delays payment from a contractor to a subcontractor and does not remove the obligation of the contractor to pay the subcontractor even though payment by owner has not yet been made. (Seal Tite Corp. v. Ehret, Inc.). The court held that a contract must have express language which clearly demonstrates the intention of the parties to shift the risk of nonpayment from the contractor to the owner. (Seal Tite Corp. v. Ehret, Inc.). Non-payment by the owner did not excuse the contractor from paying the subcontractor for its work.

New York

Pay-if-paid clauses are generally unenforceable in New York. (West-Fair Electric Construction v. Aetna Casualty & Surety Co). The New York Supreme Court held that pay-if-paid clauses are unenforceable and against public policy because they violate the lien law. (West-Fair Electric Construction v. Aetna Casualty & Surety Co). The Court held that the contractual allocation of the risk of owner nonpayment must be consistent with the public policy that permits laborers and suppliers who improve real property to file mechanics liens. The Lien Law provides that a contract clause that waives the right to file or enforce a valid lien is void and unenforceable. (N.Y. Lien Law sec. 34). Courts have found that pay when paid clauses do not violate the Lien Law if they simply establish a reasonable time for payment. (West-Fair Electric Construction v. Aetna Casualty & Surety Co).

New York's prompt payment statute establishes a time for payment in private construction contracts. The statute, which went into effect in 2003, requires contractors to pay subcontractors and suppliers within seven days after the contractor receives payment from owner. (N.Y. Gen. Bus. Law sec. 756-a). As a result, contractors now bear the risk of an owner's nonpayment. The contractor must ultimately pay the subcontractor even if not paid by the owner.

Pennsylvania

Pennsylvania courts typically do not treat a pay-if-paid clause as a condition precedent to payment unless the language clearly indicates that the parties intended that outcome. (United Plate Glass Co., Div. of Chromalloy Corp. v. Metal Trims Industry, Inc.). In C.M. Eichenlaub Co. v. Fidelity & Deposit Co., language in the contract that the "Builder shall be under no obligation to make any payments to contractor for materials delivered or for work performed by contractor unless and until Builder is first paid for such materials and work by the owner," was sufficient to express the intent of the parties to unambiguously establish a condition precedent to payment. (C.M. Eichenlaub Co. v. Fidelity & Deposit Co.).

In Sloan v. Liberty Mutual Insurance, the contract contained two subparagraphs. The first provides in relevant part: "Final payment shall be made within thirty days after the last of the following to occur, the occurrence of all of which shall be conditions precedent to such final payment...." That paragraph then listed those conditions precedent, one of which is that "owner shall have accepted the work and made final payment thereunder to contractor." (Sloan & Co v. Liberty Mutual Ins. Co.). The language created a condition precedent. This language created ambiguity and thus created a paid-when-paid clause merely setting a time for payment.

The Prompt Pay Act or contingency pay bill precludes contractors from relying on contingent payment clauses in certain construction contracts to deny payment to subcontractors for work performed in accordance with the contract. The new law governs the enforceability of such contract provisions.

Rhode Island

Pursuant to the Restatement (Second) of Contracts sec. 227, pay-when-paid clauses are acceptable. Also, Rhode Island courts frequently turn to the Restatement (Second) of Contracts to fill gaps in state law. (Gibson v. City of Cranston).

In Rotelli v. Catanzaro, the disbursement agreement stated that plaintiff was entitled to payment "within seven business days after defendant has been fully paid." The word "after" typically indicates "that a promise is not to be performed except upon a condition or the happening of a stated event." (Rotelli v. Catanzaro). The court found that language to be explicit enough to create a condition precedent. (Rotelli v. Catanzaro).

In Northern Site Contractors v. SBER Royal Mill, LLC, the Rhode Island Superior Court held that the pay-when-paid clauses in a subcontractor's contract were against public policy and unenforceable. The court reasoned that the pay-when-paid clause would bar the taking of any steps for the subcontract to enforce is mechanics lien. (Northern Site Contractors v. SBER Royal Mill, LLC). *Vermont*

The Vermont Prompt Payment of Construction Invoices Act bars enforcement of a pay-if-paid clause. (Vt. Stat. Ann. Tit. 9 sec 4001-4009). The Act provides that "performance by a subcontractor in accordance with the provisions of its contract shall entitle it to payments from the party with which it contracts." (Vt. Stat. Ann. Tit. 9 Sec 4003(a)).

Under the Vermont Prompt Payment of Construction Invoices Act if a contractor has accurately disclosed to a subcontractor, before a subcontract is entered, the due date for receipt of payments from the owner, the contractor may delay payment to the subcontractor until seven days after receipt of payment from the owner. (Vt. Stat. Ann. Tit. 9 sec. 4003(a)). Although, the case law has not addressed the question, in light of the Act's requirement it is likely that a court would require the contractor to pay a subcontractor within a reasonable time.

Case Law and Statutes- Southeast

The present authors' previously published paper analyzing the Southeast States statutes and case law are summarized herein and used for a comparison with the Northeast. (Franco & Siddiqi, 2015). For a more complete analysis of the Southeast and the list of cases and statutes referenced, please review the previously published work.

The Courts in Alabama, Florida and Tennessee will likely rule in favor of the subcontractor where any ambiguity exists in the language of the clause. The contractor will have to pay the subcontractor who has performed its scope of work in a timely manner. In North Carolina and South Carolina the legislature created statutes eliminating the pay-if-paid clause unless specifically assumed by the subcontractor. Georgia has a different approach in holding in favor of the contractor where ambiguity exists and thereby not compelling payment to subcontractor until after contractor has been paid by owner.

Research Methodology

Each state's case law and statutes were analyzed to determine the prevailing view. The List of Cases and List of Acts and Statutes at the end of this paper should be referenced for the reviewed content. The individual state findings were then collectively compared. Statutes pertaining to the enforceability of these clauses were also reviewed. The contingency language in the contract clause which determines if and when the subcontractor should be paid by the general contractor not yet paid by owner was analyzed. The results of the study indicated that some states enacted statutes that deemed contingency clauses unenforceable as a matter of public policy, while others offered no protection to

the subcontractor. While most states will likely not enforce contingency clauses with ambiguous language, subcontractors who explicitly assumed the risk who likely have no recourse.

Results & Inferences

All cases concerning the issues covered in this paper are not captured since the vast majority of disputes are settled between the parties through the alternative dispute resolution process such as arbitration or mediation. The focus here is what a court in a particular jurisdiction would likely decide based on the language of the agreement. In the states of Connecticut, Maine, Massachusetts, New York and Vermont, pay-if-paid clauses are likely unenforceable. In Connecticut, New Hampshire, New Jersey, Pennsylvania and Rhode Island, pay-if-paid clauses will be enforced with clearly contingent language. Absent clear and unambiguous language stating the condition precedent of payment by owner to contractor before payment to subcontractor, payment contingency clauses will be interpreted as timing mechanisms. The states in the Northeast generally held that pay-when-paid and pay-if-paid clauses were unenforceable. The states resolved any ambiguity in favor of the subcontractor. Massachusetts, New York and Vermont have by statute removed the issue from contracts by dictating such language unenforceable as a matter of public policy.

The majority of states reviewed in the Southeast found that pay-when-paid and pay-if-paid clauses were unenforceable, in the absence of clear and unambiguous language stating the condition precedent. The majority view resolved any ambiguity in favor of the subcontractor. The minority view, followed in Georgia, resolved ambiguity in favor of the contractor. North Carolina and South Carolina have by statute removed the issue from contracts by dictating such language unenforceable as a matter of public policy

Each jurisdiction's interpretation of similar language was analyzed. The majority view resolved any ambiguity in favor of the subcontractor. The minority view, followed in Georgia, resolved ambiguity in favor of the contractor. North Carolina and South Carolina have by statute removed the issue from contracts by dictating such language unenforceable as a matter of public policy.

Table 1 further clarifies the states likely positions regarding these contingency provisions.

Table 1 State Comparison of Probable Clause Enforcement

States where pay-if-paid clauses likely unenforceable	States where pay-if-paid clauses likely enforceable
CONNECTICUT- Blakeslee v. E.I. Constructors	RHODE ISLAND - Rotelli v. Catanzaro
MASSACHUSETTS- Canam Steel Corp. v. Bowdoin	NEW HAMPSHIRE- Holden Eng. and Surveying Inc. v.
Constr. Corp., Framingham. v. Callahan	Pembroke Rd. Realty Trust
NEW YORK- West-Fair Electric Construction v. Aetna	NEW JERSEY- Fixture Specialists, Inc. v. Global
	Construction, LLC
VERMONT- Vermont Prompt Payment of Construction Invoices Act	PENNSYLVANIA- United Plate Glass Co., Div. of
	Chromalloy Corp. v. Metal Trims Industry, Inc., Sloan &
	Co v. Liberty Mutual Ins. Co.
MAINE- Maine Prompt Payment Act	GEORGIA- St. Paul Fire & Marine Ins. Co. v. GA
	Interstate. Elec.
ALABAMA- Federal Ins. Co. v. I. Kruger	GEORGIA- D.I. Corbett Elec. v. Venture Const. Co
FLORIDA- Peacock Const. Co. v. Modern Air	GEORGIA- Ass. Mechanical Corp. v. Martin K. Eby
Conditioning	Const. Co.
NORTH CAROLINA- N.C. Gen. Stat. sec. 22C-2	GEORGIA- Vratsinas Const. Co. v. Triad Drywall
SOUTH CAROLINA- S.C. Code Ann. Sec. 29-6-230	
TENNESSEE- Koch v. Construction Technology	

Conclusion

The study's goal was to provide subcontractors guidance on contingent payment clauses in contracts. The study examined the decisions and language from court cases and statutes to ultimately provide the subcontractor with knowledge as to the effect certain language has in each of the states considered in this study.

The majority of states in the Northeast and Southeast held that these clauses were unenforceable, in the absence of clear and unambiguous language stating the contingency. The majority view resolved any ambiguity in favor of the subcontractor. The minority view, followed in Georgia, resolved any ambiguity in favor of the contractor. Similarly, Rhode Island, New Hampshire, New Jersey and Pennsylvania may likely enforce a pay-if-paid clause. States such as Massachusetts, New York, North Carolina, South Carolina and Vermont have by statute removed the issue from contracts by dictating such language unenforceable as a matter of public policy.

The regions studied in this paper were selected to provide insight as to the differences among states in regions separated by some distance yet bound by commerce along the same eastern corridor. The authors have seen a very limited number of publications that collectively compare all these states' handling of this contract clause in contracts. Contractors' rights in Georgia are not the same as their rights to payment in North Carolina or Vermont. A subcontractor would benefit from this study as it will provide them with a more informed understanding of interpretation of laws pertaining to payment clause provision of contracts in these regions.

Future research in this area can be performed to include other regions to gain a better understanding of the nationwide trend in this area of law. It is highly unlikely that every state will enact legislation removing ambiguity in interpreting contingent payment contract language, such as Massachusetts, New York, North Carolina, South Carolina and Vermont. The American Institute of Architects (AIA) and other organizations might consider further addressing the issue in a future convention to provide clearer language that could minimize unintended consequences and litigation.

References

List of Cases

Associated Mechanical Corp. v. Martin K. Eby Construction Co., 67 F.Supp.2d 375 (M.D. Ga. 1999).

A.J. Wolfe Co. v. Baltimore Contractors, Inc., 255 Mass. App. Ct. 943, 613 N.E. 2d 121 (1969).

Blakeslee Arpaia Chapman, Inc. v. E.I. Constructors, Inc., 239 Conn. 708, 687 A.2d 506 (1997).

Canam Steel Corp. v. Bowdoin Constr. Corp., 34 Mass. App. Ct. 943, 613 N.E.2d 121 (1993).

C.M. Eichenlaub Co. v. Fidelity & Deposit Co., 437 A.2d 965 (Pa. Super. Ct. 1981).

Fixture Specialists, Inc. v. Global Construction, LLC, 2009 WL 904031 (D.N.J. Mar. 30, 2009).

Framingham Heavy Equip. Co. v. John T. Callahan & Sons, Inc., 61 Mass. App. Ct. 171, 807 N.E.2d 851 (2004).

Gibson v. City of Cranston, 37 F.3d 713,736 (1st Cir. 1994).

Holden Eng. and Surveying Inc. v. Pembroke Rd. Realty Trust, 628 A.2d 260, 263 (N.H. 1993).

New York. Schuler-Haas Electric Corp. v. Aetna Casualty & Surety Co., 49 A.D.2d 60, 371 N.Y.S.2d 207 (4th Dep't 1975) aff'd 40 N.Y.2d 883, 357 N.E.2d 1003, 389 N.Y.S.2d 348 (1976). Northern Site Contractors v. SBER Royal Mill, LLC, (June 30, 2009).

O.A. Peterson Constr. Inc. v. Englewood Hosp. & Med. Ctr., 2010 WL 2696758 (N.J. Super. App. Div. 2010).

Restatement (Second) of Contracts sec. 227 (1981).

Rotelli v. Catanzaro, 686 A.2d 91, 94 (R.I. 1996).

Seal Tite Corp. v. Ehret, Inc., 589 F. Supp. 701 (D.N.J. 1984).

Seaward Constr. Co. v. City of Rochester, 118 N.H. 128 (1978).

Suntech of Connecticut, Inc. v. Lawrence Brunoli, Inc., 143 Conn. App. 581 (2013) .

United Plate Glass Co., Div. of Chromalloy Corp. v. Metal Trims Industry, Inc., 106 Pa. Commw., 22, 525 A.2d 468, 470-471 (1987).

West-Fair Electric Construction v. Aetna Casualty & Surety Co., 87 N.Y.2d 148, 661 N.E.2d 967, 638 N.Y.S.2d 394 (1995).

List of Acts and Statutes

Maine Prompt Payment Act 10 M.R.S.A. sec. 1111 and sec. 1113 (1997 & Supp. 2004).

N.C. Gen. Stat. sec. 22C-2.

N.Y. Gen. Bus. Law sec. 756-a (McKinney 2014).

N.Y. Lien Law sec. 34 (McKinney 2011).

Vermont Prompt Payment of Construction Invoices Act, Vt. Stat. Ann. Tit. 9 sec 4001-4009.

Vt. Stat. Ann. Tit. 9 Sec 4003(a), (b), 4002(c).

Works Cited

Franco, J.A. & Siddiqi, K. (2015). Pay-When-Paid/Pay-If-Paid Contract Clause Comparisons Among South Eastern United States, 51st ASC Annual International Conference Proceedings.

Hollander, H. J. (2002). "Pay-when-paid" Construction Contract Requirement: Bane of the Subcontractor's Existence. *Florida Bar Journal*, 76 (6), 101-103.

- Kirksey, G. B. (1992). "Minimum Decencies"- A Proposed Resolution of the "Pay-When-Paid"/"Pay-If-Paid" Dichotomy. *Construction Lawyer*, 12 (1), 1-47.
- Kirksey, G. B. & Brown, S. L. (1991). The "Pay-When-Paid"/ "Pay-If-Paid" Dichotomy and the Florida Trilogy-Bright Line or Murky Fog? *Construction Lawyer*, 11 (4), 8-12.
- May, A. L. & Siddiqi, K. (2002). Contingent-Payment Provision Puzzle-Safeguarding Against an Unintended Outcome. *Journal of Architectural Engineering*, 12 (4), 158-162.