

Nova Species

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I. Introduction

In modern law it is generally accepted that one of the requirements for acquisition of ownership by specification (*specificatio*) is that a new species (*nova species*) must be created. I would like to start my examination of what is meant by a *nova species* by presenting an abbreviated version of the facts and decision in the most recent case in Scotland on the issue, *Kinloch Damph Ltd. v. Nordvik Salmon Farms Ltd.*¹

Pursuers sold one and a quarter million smolt (young salmon in embryonic state) to the defenders on credit with reservation of ownership. The defenders placed the smolt in seawater in cages and fed and husbanded them, with the result that they developed from smolts into salmon thirty times their original size. When the defenders went into receivership, the outstanding balance of the price was still over £700,000. The pursuers preferred to rely on their proprietary claim by virtue of their reservation of ownership, which was worth more than the undisputed monetary claim.²

The defenders argued *inter alia* that by virtue of their efforts and material in the form of husbandry and feed, the smolts had ceased to exist as such and that a *nova species*, the mature salmon, irreducible to their constituent parts, had come into existence. Although they accepted the expert opinion that smolt and salmon are of the same biological species, *salmo salar*,³ they argued that the physiological changes which smolts undergo in becoming mature salmon (namely, changes affecting the gill and kidney which allow the fish to adapt to changing salinity conditions) were sufficient to support the conclusion that an adult salmon is a *nova species* in the legal sense. In support they cited Bell's *Principles* to the effect that, if the separate existence of the

¹ 1999 Outer House Cases LEXIS (June 30, 1999).

² *Id.* at paras. 1–2.

³ On *salmo salar* see J. W. Jones, *The Salmon* (London, 1959), 153–56.

materials of which a new product is made is destroyed, the property is with the workman.⁴

The pursuers denied that a *nova species* had been created and insisted that the original goods were still in existence. The fish they sold had grown to maturity, but they were still the same entities and of the same species *salmo salar*. The fish were older, more mature, larger, and more valuable, but they were still the same creatures. There was no destruction of the original materials, no process of manufacture or creation, but rather the growth of a living creature. The growth and physiological change that the smolts had undergone in developing into salmon was a natural process, which they could have undergone in the wild without human intervention. They found it instructive that the Roman and institutional writers did not formulate a test for applying specification but rather used illustrations, and in doing so did not refer to the growth of living creatures, although animals were important in their everyday life. Therefore they urged the court not to extend the doctrine to animate creatures. They also referred to the fact that the emphasis placed on increase in value and market considerations by Lord Mayfield in *Armour v. Thyssen Edelstahlwerke A.G.*⁵ did not find favor on appeal to the Inner House of the Court of Session.⁶

Lord Macfadyen rejected the idea that a *nova species* had been created on which the doctrine of specification could operate. The main dispute was whether the doctrine of specification could be applied to the natural growth (albeit aided by human nourishment and husbandry) of a living creature. He conceded that there is a sense in which the smolts could be said no longer to exist and that the process of their development into mature salmon was irreversible. However, he concluded that the proper scope of the doctrine was in relation to inanimate objects or substances created by human effort, out of materials which are used up and cease to exist in the process of creation. No authority, he said, deals with the growth of living creatures, and the writings

⁴ *Kinloch Damph*, paras. 21–25, 36, 38–40. G. J. Bell, *Principles of the Law of Scotland*, 10th ed. (Edinburgh, 1899), 504 (§ 1298(1)): "The rules are: — That if the materials, as a separate existence, be destroyed *in bona fide*, the property is with the workman; That if still capable of restoration to their original shape, the property is held to be with the owner of the materials"

⁵ 1986 S.L.T. 452, 458H (Outer House).

⁶ *Kinloch Damph*, paras. 43–44. See *Armour v. Thyssen Edelstahlwerke A.G.*, 1989 S.L.T. 182, 188K, 190J (Inner House, Second Division), *rev'd on other grounds*, 1990 S.L.T. 891, 1991 S.C.L.R. 139 (House of Lords).

contain no references to specification of growing animals. In light of the greater importance of animals in daily life in former times, the absence of such references was a strong indication that the doctrine had no such application. He therefore concluded that a fish farmer who feeds and husbands large numbers of *salmo salar* while they develop from smolts into salmon does not create a new thing separate and distinct from smolt, i.e., does not create a *nova species*, ownership of which vests in the caretaker. As objects of ownership, the mature salmon in the defenders' cage are the same as the smolts which the pursuers supplied.⁷

II. Roman Law

In order to assess whether the judge was correct in deciding that no *nova species* had come into existence, one has to go back to the roots of the legal concept of specification, the concept that a person who makes a species from material belonging to another becomes the owner of the final product.⁸ Although the concept is derived from Roman law, the label *specificatio* is a neologism coined by medieval writers from the phrase *speciem facere*: to produce a species.⁹ Another interesting fact is that the phrase *nova species* is encountered only once in the Roman texts.¹⁰ For the rest, the terms *aliquam species*,¹¹ *suam speciem pristinam non continet*,¹² *species mutata*,¹³ and *aliud sit materia, aliud navis*¹⁴ are used. One can further assume that all the Roman jurists agreed on the factual circumstances that distinguished *speciem facere* from the accession of an accessory to a principal thing (e.g., *adiunctio*) and the mere mixing of solids and the fusion of fluids. The Sabinians and Proculians only disagreed on whether the owner of the materials or the maker of the *species* became the owner of the final product. The Sabinians decided that *matter*

⁷ Kinloch *Damph*, para. 47.

⁸ For modern literature on specification, see B. C. Stoop, "Non Solet Locatio Dominium Mutare: Some Remarks on *Specificatio* in Classical Roman Law," 66 *T. v. R.* 3 (1998); G. Dolezalek, "Plädoyer für Einschränkung des § 950 BGB (Verarbeitung)," 195 *Archiv für die civilistische Praxis* 392, 394–96 (1995); D. J. Osler, "*Specificatio* in Scots Law," in R. Evans-Jones (ed.), *The Civil Law Tradition in Scotland*, (Edinburgh, 1995), 100–27.

⁹ See Osler (note 8), 100; T. Mayer-Maly, "Spezifikation: Leitfälle, Begriffsbildung, Rechtsinstitut," 73 *ZSS (rom. Abt.)* 120, 128 (1956).

¹⁰ *D.41.1.7.7* (Gaius 2 *rerum cott.*) *in fine*.

¹¹ *D.41.1.12.1* (Callistratus 2 *inst.*).

¹² *D.6.1.5.1* (Ulpian 16 *ed.*).

¹³ *D.41.1.24* (Paul 14 *Sab.*).

¹⁴ *D.13.7.18.3* (Paul 29 *ed.*).

always trumped *form* and allowed the owner of the materials to raise an action for production in order to eventually institute the *rei vindicatio* for the final product.¹⁵ By contrast the Proculians favored *form* and allocated ownership of the final product to the maker. Therefore all the examples, whether used by the Sabinians or the Proculians, could be used as the basis for deciding the content and scope of the requirement of *nova species*.

Roman processes which gave rise to the application of the rules of specification are confined to five industrial processes:¹⁶ first, *agricultural processes*, like producing must or wine from grapes,¹⁷ mead by mixing honey and wine,¹⁸ olive oil from olives,¹⁹ and corn by threshing ears of corn;²⁰ second, *smithing processes*, as where masses of raw gold, silver, steel, or other metals are shaped into vases, drinking vessels, goblets, plates, dishes, or statues, and vice versa;²¹ third, *tailoring*, as where garments and other kinds of bodily covering are made from wool;²² fourth, *carpentry*, as where ships or items of furniture such as benches and cupboards are made from cypresses,²³ and fifth, *apothecary processes*, like the production of ointments, eye-salves,²⁴ and perfumes. One can assume that the products of all these processes would constitute a *nova species* or at least *aliqua species* for the rules of specification to apply. None of these processes deal with

¹⁵ D.10.4.12.3 (Paul 26 ed.).

¹⁶ See generally Mayer-Maly (note 9), 154.

¹⁷ D.10.4.12.3 (Paul 26 ed.): *si quis ex uvis meis mustum fecerit*.

¹⁸ D.6.1.5.1 (Ulpian 16 ed.): *si ex melle meo, vino tuo factum sit mulsum*.

¹⁹ D.10.4.12.3 (Paul 26 ed.): *vel ex olivis oleum*.

²⁰ D.41.1.7.7 (Gaius 2 *rerum cott.*): *vel ex uvis aut olivis aut spicis tuis vinum vel oleum vel frumentum*.

²¹ D.10.4.9.3 (Ulpian 24 ed.): *veluti si ex scypho massa facta sit; D.30.44.2 (Ulpian 22 Sab.): si pocula quis legavit et massa facta est vel contra; D.h.t.44.3: si lancem legavit et massam fecit, mox poculum; D.32.49.5 (Ulpian 22 Sab.): aurum . . . legatum sit et postea sit conflatum; D.32.88.3 (Paul 5 leg. Iul. Pap.): massa autem legata scyphi ex ea facti; D.41.1.12.1 (Callistratus 2 inst.): si aere meo et argento tuo conflato aliqua species facta sit; D.41.1.24 (Paul 14 Sab.): veluti si meo aere statuam aut argento scyphum fecisses*.

²² D.30.44.2 (Ulpian 22 Sab.): *item si lana legetur et vestimentum ex ea fiat; D.32.88 pr. (Paul 5 leg. Iul. Pap.): lana legata vestem, quae ex ea facta sit; D.41.1.7.7 (Gaius 2 rerum cott.): vel ex lana tua vestimentum*.

²³ D.13.7.18.3 (Paul 29 ed.): *navem ex ea materia factum; D.32.88.1 (Paul 5 leg. Iul. Pap.): et materia legata navis armariumve ex ea factum; D.41.1.7.7 (Gaius 2 rerum cott.): vel ex tabulis tuis navem aut armarium aut subsellia fecero*.

²⁴ See A. Vinnius, *Institutionum Imperialium Commentarius*, 2nd ed. (Amsterdam, 1655), at *Institutes* 2.1.25, § 2, on the meaning of *em-plastrum* and *collyrium*.

living creatures or rely primarily on natural growth rather than human endeavor to effect a significant change in the substance of the materials used.

For a *nova species* to be created, the former substance must be significantly changed. In order to quantify the extent of change required for a *nova species* to emerge, I examined the verbs used to indicate such change. In most examples the neutral verb *facere* and its derivations are used, as in *fecerit vestimenta*²⁵ and *factum sit mulsum*.²⁶ In a few instances the stronger verbs *transferre* and *transfigurare* are used, as in *aliud corpus sit translata*²⁷ and *ornamentum dissolutum aut transfiguratum*.²⁸ In the texts dealing with the legacy of a usufruct, it is implied that a *nova species* would have been created if the final product had a new name.²⁹

The decisions of the individual jurists have of course been influenced by the philosophical theories of their times.³⁰ We are told that the Sabinians were influenced by the idea of the Stoics that matter is the essence of an object, and that therefore the Sabinians awarded the final product to the owner of the materi-

²⁵ *D.10.4.12.3* (Paul 26 *ed.*).

²⁶ *D.6.1.5.1* (Ulpian 16 *ed.*). Other instances of *facere*: *D.7.4.10.5* (Ulpian 17 *Sab.*); *D.13.7.18.3* (Paul 29 *ed.*); *D.30.44.2* (Ulpian 22 *Sab.*); *D.32.88 pr.-3* (Paul 5 *leg. Iul. Pap.*); *D.41.1.24* (Paul 14 *Sab.*). This verb is fairly neutral and does not really give an indication of the extent of change required to make the final product a new thing.

²⁷ *D.10.4.9.3* (Ulpian 24 *ed.*): *in aliud corpus res sit translata veluti si ex scypho massa facta sit: . . . nam mutata forma prope interemit substantiam rei.*

²⁸ *D.7.4.10.6* (Ulpian 17 *Sab.*): *proinde et ornamentum dissolutum aut transfiguratum extinguit usum fructum.* See also *D.h.t.10.7: si autem [navis] dissoluta sit, licet isdem tabulis nulla praeterea adiecta restaurata sit, usum fructum extinctum*; *D.32.49.5* (Ulpian 22 *Sab.*): *aurum . . . sit . . . conflatum, materia tamen maneat*; *D.41.1.12.1* (Callistratus 2 *inst.*): *si aere meo et argento tuo conflato aliqua species facta sit*; *D.41.1.24* (Paul 14 *Sab.*): *si materia manente species dumtaxat forte mutata sit.*

²⁹ The view that there is a new species whenever there is a change of name may well have been derived from the texts on legacies dealing with objects left in a legacy, objects which have in the meantime changed their form. Thus if a mass of metal is left as a usufruct and utensils (vessels or dishes) are made, the usufruct expires. *D.7.4.10.5* (Ulpian 17 *Sab.*): *si massae usus fructus legetur et ex ea vasa sint facta vel contra, Cassius apud Urseium scribit interire usum fructum: quam sententiam puto veram.* *D.h.t.10.7:* ship dismantled and rebuilt. See also D. G. van der Keessel, *Dictata ad Justiniani Institutionum*, ed. B. Beinart, et al. (Amsterdam, 1965) (citing *D.41.1.26 pr.*, Paul 14 *Sab.*), 1:162: *Vinum autem quod inde feci est nova species, quae antea non exstitit, et novum nomen habet.*

³⁰ See H. G. Henckert, *Saakvorming as Wyse van Eiendomsverkriging*, thesis submitted for the degree of Master of Laws at the University of Stellenbosch (November, 1988), 15–17; Dolezalek (note 8), 394–405.

als: *quia sine material nulla species effici possit*.³¹ By contrast, the Proculians, influenced by Aristotle and the Peripatetics, who taught that form is more important than matter, awarded the final product to the maker or creator of the form: *quia quod factum est, antea nullius fuerat*.³² Philosophy also definitely influenced the other requirement for specification, namely, that the final product must not be reducible to its original state or condition. Thus, although a new form, identity, or species was created, some products were in essence reversible, like metals that could be melted down, and perhaps also a ship or garment constructed of prepared planks or cloth were considered reducible to whatever condition they were in before.

The extent to which the original materials or thing must be changed to become a new thing was also influenced by the Proculian rationale for awarding the final product to the maker, a rationale that eventually became the predominant view and was also accepted and restricted by Justinian. As to the rationale itself, three theories have been propounded.³³ The first is the occupation theory, according to which the old object perished once it had been changed into another species. The new product is thus a *res nullius* susceptible of being acquired in ownership by occupation. One difficulty with this theory is that the maker never consciously takes possession with the intention of becoming owner, and that in long fabricating processes the maker may not be the first on the scene to occupy the final product. The other difficulty is that the texts speak only of virtual or quasi destruction and not total destruction of the substance: *nam mutata forma prope interemit substantiam rei*.³⁴ The other theory is that the maker acquires the final product by some form of accession, with the new form being the principal thing to which the original material accedes. Since the workmanship consisting of the toil, labor, and skill employed by the creator of the new thing plays an important role in this theory, it has in later times been dubbed the "workmanship" or "labor" theory and ultimately as the "reward" theory, with the workman being rewarded with ownership of the final product for the time and skill put into creating the

³¹ *D.41.1.7.7* (Gaius 2 *rerum cott.*).

³² *Id.*

³³ See generally H. Coing, *Europäische Privatrecht* (Munich, 1985), vol. 1, § 55, II, 2; Dolezalek (note 8), 405–10; Henckert (note 30), 10–15.

³⁴ *D.10.4.9.3* (Ulpien 24 *ed.*): *veluti si ex scypho massa facta sit: quamquam enim massam exhibeat, ad exhibendum tenebitur, nam mutata forma prope interemit substantiam rei.*

final product.³⁵ The main criticism of this theory is that there is no general principle in Roman law that a person who has expended time and labor on the property of someone else is awarded with the ownership of the thing. Thus the dyeing of wool,³⁶ the refining of metal, and the repair or improvement of another's property were not considered specification since no new species had been formed. This is supported by those jurists who held the opinion that, despite the toil and labor involved in the threshing of ears of corn, the corn that is produced is not a new species but only the revelation of a pre-existing species.³⁷ The most convincing theory remains that of Wieacker,³⁸ who suggested that the rules of specification were, in the final analysis, developed to give recognition to the practical difficulty of claiming an object which has changed so much in form that it is no longer traceable by means of a *rei vindicatio*. The main reason why the Proculians awarded the final product to the maker was therefore the practical difficulty of the owner in identifying his or her materials, absent the English doctrine of tracing. According to Wieacker's theory, the old thing need not have perished but only changed to such an extent that it was no longer identifiable for the purposes of *rei vindicatio*.

III. Roman-Dutch Law

Unlike the Roman texts, the Roman-Dutch authorities contain express references to the requirement of a *nova species* in their definitions of specification. Thus Grotius in his *Inleidinge* states that a person who in good faith gives a new *ghedaente* (namely, a new form, figure, shape, or appearance) to the matter (*stoffe*) of another's ownership acquires ownership thereof.³⁹ Huber speaks

³⁵ The strongest support for this theory is found in *D.7.4.10.7* (Ulpian 17 *Sab.*), where a person who had dismantled a ship and then rebuilt it was rewarded with the ownership of the ship by virtue of the doctrine of specification. See also *D.50.16.13.1* (Ulpian 7 *ed.*): *Res "abesse" videntur (ut Sabinus ait et Pedius probat) etiam hae, quarum corpus manet, forma mutata est: et ideo si corruptae redditae sint vel transfiguratae, videri abesse, quoniam plerumque plus est in manus pretio, quam in re.*

³⁶ *D.41.1.26.2* (Paul 14 *Sab.*).

³⁷ *D.41.1.7.7* (Gaius 2 *rerum cott.*).

³⁸ F. Wieacker, "Spezifikation: Schulprobleme und Sachprobleme," in W. Kunkel and H. J. Wolff (edd.), *Festschrift für Ernst Rabel* (Tübingen, 1954), 2:263–92.

³⁹ H. de Groot [Grotius], *Inleidinge tot de Hollandsche Rechts-Geleerdheid* [Introduction to Dutch Jurisprudence], ed. F. Dovring, et al. (Leiden, 1952), at 2.8.2. See also W. Schorer, *Aantekeningen over de Inleidinge tot de Hollandsche Rechts-Geleerdheid van Hugo de Groot* [Notes

about a *nieuw-maexsel* or new-made article;⁴⁰ Vinnius uses the phrase *speciei novae ex aliena materia formatio*;⁴¹ Johannes Voet, the phrase *novae speciei confectio*;⁴² and van Leeuwen, *qua quis ex aliena materia novam speciem confert*.⁴³ Some use stronger verbs than *facere*, indicating a manufacturing process: Vinnius (*transformare* and *formare*),⁴⁴ and Voet (*conferre*).⁴⁵

Most Roman-Dutch writers repeat some or all of the Roman examples of *novae species*.⁴⁶ The most extensive list is found in van Leeuwen's *Censura Forensis*, where he quotes the examples of wine, olive oil, or corn being produced from another's grapes, olives, or ears of corn, mead from another's wine and honey, ointment or perfume from another's medicinal products (*medicamenta*), clothing from another's wool, and ships, cupboards, or benches from another's wood (*tabulae*).⁴⁷ This is supplemented by

on the Introduction to Dutch Jurisprudence of Hugo Grotius], 2nd ed. (Middelburg, 1797), 150–52 (at Grotius, *Inleidinge* 2.8.2) (an English translation of Schorer is appended in A. F. S. Maasdorp (tr.), *The Introduction to Dutch Jurisprudence of Hugo Grotius*, 3rd ed. (Capetown, 1903)); W. de Vos and G. G. Visagie (edd.), *Scheltinga se "Dictata" oor Hugo de Groot se "Inleiding tot de Hollandsche Rechtsgeleerdheid"* [Scheltinga's "Dictata" on Hugo Grotius' Introduction to Dutch Jurisprudence] (Johannesburg, 1986), 130–31 (at Grotius, *Inleidinge* 2.8.2); van der Keessel (note 29), 161 (*qui ex aliena materia rudi novam facit speciem*) (citing J. F. Böckelmann, *Compendium Institutionem Justiniani*); D. G. van der Keessel, *Praelectiones Iuris Hodierni ad Hugonis Grotii Introductionem ad Iurisprudentiam Hollandicam*, ed. P. van Warmelo, et al. (Amsterdam, 1961), 2:146 (at Grotius, *Inleidinge* 2.8.2) (*quod species nova, quae facta est*).

⁴⁰ U. Huber, *The Jurisprudence of My Time [Heedensdaegse Rechtsgeleertheit]*, tr. P. Gane (Durban, 1939), 1:134 (at 2.7.1, 2).

⁴¹ Vinnius (note 24), at *Institutes* 2.1.25, introduction.

⁴² J. Voet, *Commentarius ad Pandectas*, 4th ed. (The Hague, 1724), 2:731.

⁴³ S. van Leeuwen, *Censura Forensis, Theoretico-Practica* (Leiden, 1662), 131.

⁴⁴ Vinnius (note 24), at *Institutes* 2.1.25, introduction, uses "transformare": *Qui rem alienam in aliam speciem transformavimus*. In § 5 he cites D. Connanus as using the verb *formare* in explaining how the forming of a new ship is guided by the shape of its keel.

⁴⁵ Voet (note 42), 731 (at D.41.1, § 21): *specificatio seu novae speciei confectio*.

⁴⁶ See, e.g., Schorer (note 39), 150–52 (at Grotius, *Inleidinge* 2.8.2); van der Keessel (note 29), 161–63; Huber (note 40), 134 (at 2.7.3–5); Vinnius (note 24), at *Institutes* 2.1.25; Voet (note 42), 731–33 (at D.41.1, §§ 21, 23); S. van Leeuwen, *Commentaries on Roman-Dutch Law*, ed. C. W. Decker (London, 1881), 1:180–81.

⁴⁷ Van Leeuwen (note 43), 131:

ut, si quis ex alienis uvivis, olivivis, aut spicivis, vinum, oleum, aut frumentum fecerit, ex alieno auro, argento, vel aere vas aliquod fecerit,

the examples of gold and silver cups or statues being fashioned from another's raw gold or silver.⁴⁸ Some new examples are added: the brewing of beer from another's malt and corn,⁴⁹ the making of flour from another's corn,⁵⁰ and the painting of a picture on another's canvas.⁵¹

Vinnius' work on Justinian's *Institutes* contains examples of final products that are not sufficiently new or different to qualify as *novae species*. The examples are wool being dyed purple, two fluids of the same kind being mixed, grapes being dried, olives being pickled,⁵² and also surprisingly cheese or butter made of another's milk and an intoxicating drink made of fruit or mixing of fruits.⁵³

The Roman-Dutch authorities are divided on the question whether the threshing of corn from the ears of corn results in the creation of a new species. Although they accept that corn could not be reversed to ears of corn, most writers prefer to follow Gaius that the threshing of ears of corn does not produce a new species but only reveals the species (the corn) that was already there.⁵⁴

vel ex alieno vino et melle mulsum, ex alienis medicamentis emplastrum vel collyrium, ex aliena lana vestimentum, vel ex alienis tabulis navem, vel armarium vel subsellia fecerit.

⁴⁸ See, e.g., Grotius (note 39), at 2.8.3; Schorer (note 39), 151 (at Grotius, *Inleidinge* 2.8.2); van der Keessel (note 29), 161–63.

⁴⁹ Grotius (note 39), at 2.8.3; van Leeuwen (note 46), 180.

⁵⁰ Van der Keessel (note 29), 163.

⁵¹ Grotius (note 39), at 2.8.3. Cf. Scheltinga (note 39), 131 (at Grotius, *Inleidinge* 2.8.3), and van der Keessel (note 39), 146 (at Grotius, *Inleidinge* 2.8.3), who disagreed with Grotius and concluded that painting on a canvas falls under *adiunctio* and not under specification.

⁵² Vinnius (note 24), at *Institutes* 2.1.25, §§ 1, 4, and 5; but cf. Voet (note 42), 731–32 (at *D.41.1*, § 21).

⁵³ Vinnius (note 24), at *Institutes* 2.1.25, § 5, quoted below note 56. See also Osler (note 8), 105, on the *Commentarii Iuris Civilis* of Franciscus Connanus (1508–51):

Connanus' examples are unfortunately disconcerting for the modern reader, whose natural expectation is that raw materials will generally represent only a small proportion of the value of the manufactured object: unlike Connanus, we would tend to think of the wine as being of considerably more value than the grapes from which it is pressed; for us, then, wine would serve as a prime example of the manufacturer acquiring ownership.

⁵⁴ See van der Keessel (note 29), 161, relying on Gaius in *D.41.1.7.7*, which according to him gives a more detailed explanation and restricts *Institutes* 2.1.25.

Vinnius extends this example to all leguminous plants⁵⁵ such as lupins, lentils, peas, chickpeas, and beans.⁵⁶ Vinnius draws a clear distinction between ears of corn on the one hand and grapes and olives on the other. Ears of corn are not the material from which corn is produced: corn remains of the same species and retains the same name. By contrast wine and olive oil are created from grapes and olives: they have different names and have been converted into different species.⁵⁷ Voet strongly disagrees with this view. He argues that on this reasoning one could contend that both wine and oil could be said to be contained in the grapes and olives in their completed form. No more does wine become such by the pressing of grapes, than grain becomes such by the rubbing and shaking of ears of corn. By no means is wine merely revealed by breaking, through pressure, the skins which hold the juice of the wine, no more so than grain is revealed by breaking open, through rubbing, the husks which hold enwrapped the grains of ears.⁵⁸

With regard to the theories underlying specification, Roman-Dutch authors support either the occupation theory or the accession theory. Van der Keessel in his *Dictata* on Justinian's *Institutes*⁵⁹ tries to discover the true basis for acquisition by specification. He points out that many interpreters agree with Justinian that it is some kind of accession, for they consider that the raw matter accedes to the form given to the *res* by the *specificans*.⁶⁰ But van der Keessel cannot accept this because the form

⁵⁵ Vinnius (note 24), at *Institutes* 2.1.25, § 5. These plants have seeds in pods. *The Concise Oxford Dictionary of Current English*, 9th ed. (Oxford, 1995), s.v. Leguminous.

⁵⁶ Vinnius extends it further: *et poterant quoque in alium usum converti, uvae siccari, oleae servari ad condituram etc. Et alioqui dicendum esset, nec caseum aut butyrum ex lacte alieno factum, nec siceram ex pomis alienis expressam facientis fieri.* Vinnius (note 24), at *Institutes* 2.1.25, § 5.

⁵⁷ *Id.*

⁵⁸ P. Gane (ed.), *The Selective Voet* (Durban, 1957), 6:204 (to D.41.1.7.7 (Gaius 2 *rerum cott.*)).

Should you say with Vinnius . . . that it would have been possible for the wine or oil not to be pressed from the grapes or olives, but for the grapes to be dried and the olives to be pickled, that has nothing to do with the case. The ears too can be given without threshing as fodder to draught animals, and thus equal reasoning still applies to both ears and grapes.

⁵⁹ For what follows, see van der Keessel (note 29), 161–62.

⁶⁰ See Böckelmann (quoted in van der Keessel, note 29, 161), who classifies specification as an *accessio artificialis species* and then continues: *quo casu materia cedit formae et res fit specificantis, nisi ad priorem rudem materiam possit reduci.*

cannot exist without the matter. The form is not anyone's *res*, to which the *res* of another can accede. Therefore the better opinion is that specification is an example of a *res nullius* falling to the occupier. The grapes from which wine is produced do not remain but are clearly extinguished. Therefore their ownership also vanishes. The wine that was made from the grapes is a *nova species* which did not exist before and has a new name.⁶¹ That a *res nullius* is that which is taken possession of by the *specificans* is clear from *D.41.1.7.7* (Gaius 2 *rerum cott.*), where it is said that the basis for the Proculian view is that the *res* that was produced had not existed before. To this must be added *D.41.2.3.21* (Paul 54 *ed.*), where the words *vel quae ipsi, ut in rerum natura essent, fecimus* clearly refer to specification and intimates a new species which did not exist in nature up to then.⁶² It must therefore be observed, says van der Keessel, that that *res* is possessed by a title *pro suo*, the same title by which one possesses a *res* acquired by occupation. This is also the reason why *animus sibi habendi* is necessary in all cases of occupation. Moreover, says van der Keessel, it causes confusion to classify specification as a form of industrial accession. He concedes that if a *nova species* could be reduced to its raw materials, one could indeed speak of industrial accession, for in such a case the *nova species* accedes to the matter. Thus, when a vase or rings are fashioned from your gold or silver, accession would apply and you would acquire the vase or rings: you acquire the *nova species* on the strength and power of your matter. He therefore concludes that form could accede to matter, but not matter to form.

The same idea is expressed by Vinnius in his commentary on Justinian's *Institutes*.⁶³ Vinnius says that it is absurd (*perperam*) to consider specification a form of acquisition by accession. He argues, like van der Keessel, that when something is made from another's *res*, the *nova species* is not created on the strength and power of the *res*, or against our will or in our ignorance, but by our effort. Moreover, it is absurd to say that the matter accedes to the form, because the form presupposes the matter and not vice versa. Therefore, says Vinnius, this mode of acquisition should be regarded rather as some form of occupation: that which is produced becomes the property of the maker, because it belonged

⁶¹ Quoting *D.41.1.26 pr.* (Paul 14 *Sab.*).

⁶² See also van der Keessel (note 39), 146 (at Grotius, *Inleidinge* 2.8.1): *Iurisconsulti Romani rationem acquisitionis ex eo repetunt, quod species nova, quae facta est, antea in rerum natura non fuerit.*

⁶³ For what follows see Vinnius (note 24), at *Institutes* 2.1.25, introduction – § 1.

to no one before, and thus belongs to the *occupans* who made it for himself. He cites Nerva and Proculus as authorities for this view.⁶⁴ Insofar as the opinion of Sabinus has been accepted (that is, his opinion on the case where the *nova species* could be reduced to its former state), he concedes that accession could be applicable, but prefers to regard it as a case where no new acquisition has taken place.⁶⁵

The strongest support for the accession/labor theory is implicit in the treatment of specification as a form of industrial accession, a treatment adopted by quite a number of Roman-Dutch authors.⁶⁶ Van Leeuwen explains that an "artificial" accession occurs when something is added to our things not by their own nature but by human labor and skill.⁶⁷ Further support for the accession/labor theory can be found in the argument used by Grotius (in the *Inleidinge*) and others that the form (*ghedaente*) does more for the essence of the final product than the matter from which it has been made.⁶⁸ Consequently when the form is altered the object itself becomes something different from what it was before. In the relevant passage Grotius clearly shows that he does not regard the matter as having perished, but only that it

⁶⁴ This view is also supported by van Leeuwen (note 43), 131 (approving the taking of ownership where the materials are either consumed or are entirely changed in nature). The fact that Vinnius (note 24), at *Institutes* 2.1.25, § 1, refers to *D.41.2.3.21* (Paul 54 *ed.*), is proof that he must have had occupation in mind. See further Voet (note 42), 732 (at *D.41.1*, § 21), who argues that the previous material will only perish or disappear if the final product cannot be reduced to its former condition, and then specification takes place; the result is the same whether the maker is in good or bad faith: *neque bona vel mala fides specificatoris efficere possit, ut magis aut minus res ipsa prior videatur superesse. Id.*

⁶⁵ Van Leeuwen (note 43), 131, correctly questions whether these instances of reducibility are truly illustrations of specification:

Semper inspiciatur utrum res extincta fuerit, nec ne; nam si manente materia, forma tantum externa mutetur, atque id quod factum est ad priorem et rudem materiam reduci possit, ratio naturalis non patitur, ut dicamus ipsam rem dominii sui naturam mutasse; sed potius vires et conditionem materiae, ut potentioris existentiae, sequi [D.41.1.24 (Paul 14 Sab.); D.32.78.4 (Paul 2 Vit.)] neque haec prop. loquendo specificatio dici potest.

⁶⁶ Voet (note 42), 731–32 (at *D.41.1*, § 21); van Leeuwen (note 43), 131.

⁶⁷ Van Leeuwen (note 43), 131: *Accessio artificialis est, qua rebus nostris, non tam ex sui natura, quam ex humano labore, et industria aliquid accedit.*

⁶⁸ Van Leeuwen (note 46), 181: "[I]nasmuch as . . . the form does more to the essence of the thing than the material, he who has made the new substance is entitled to the property therein . . ."

has been altered to such an extent that it has been converted into something else.⁶⁹ This is also borne out by a passage in Grotius' *De Iure Belli ac Pacis*, where he presents the natural law view that the new final product should become the common property of the owner of the material and the maker. Here he states that the form is only part of the substance and not the whole, and then quotes Ulpian as saying that, by the change of form, the substance was almost (and not totally) destroyed.⁷⁰ Further support for the accession/labor theory is found in the acknowledgment of Grotius and Schorer that the painter becomes the owner of a painting painted on another's canvas.⁷¹ Schorer reasons that in the case of painting there is in some sense a specification, that is, the creation of a new species, for the form is the essence of the thing and gives the thing its identity.⁷² None of the authors would, however, go so far as Böckelmann and declare that the matter accedes to the form and becomes the property of the *specificans*.⁷³

IV. Scottish Institutional Writers

Most of the Scottish institutional writers require a new species or something similar for specification. Thus Stair, Erskine, and Bell describe specification as the producing (making or forming) of a new species (or subject) from materials belonging to another.⁷⁴ Bankton states that specification occurs "where one makes a

⁶⁹ Grotius (note 39), 2.8.2. This is supported by the footnotes of Simon van Groenewegen van der Made (whose notes are appended to editions of the *Inleidinge* after 1644), who refers to the definition of "abesse" in *D.50.16.13.1* (Ulpian 7 *ed.*), where Sabinus and Pedius are quoted as saying that things are regarded as missing even if their substance remains but their form has changed. Groenewegen also refers to *D.34.2.6.1* (Marcellus *resp.*). For these notes, see Maasdorp (note 39), 70 n.2.

⁷⁰ H. Grotius, *De Iure Belli ac Pacis*, tr. F. W. Kelsey (New York, 1964), vol. 2, at 2.8.19.2: "The form in fact is a part of the substance, not the whole substance; and this was perceived by Ulpian, when he said that the substance was almost destroyed by changing the form."

⁷¹ Grotius (note 39), 2.8.3.

⁷² Schorer, in Maasdorp (note 39), 418 (at Grotius, *Inleidinge* 2.8.3): "[I]n the case of the painting there is in some sense a *specificatio* — that is, a creation of a new *species*, for the form is of the essence of the thing, or gives the thing its being, as Grotius points out"

⁷³ Quoted above, note 60.

⁷⁴ J. Dalrymple [Viscount Stair], *The Institutions of the Law of Scotland*, ed. D. M. Walker (Edinburgh, 1981), 313 (at 2.1.41); J. Erskine, *An Institute of the Law of Scotland*, ed. J. B. Nicolson (Edinburgh, 1871), 1:264 (at 2.1.16); J. Erskine, *Principles of the Law of Scotland*, 21st ed. (Edinburgh, 1911), 123–24 (at 2.1.8–9); Bell (note 4), 504 (§ 1298(1)).

species or piece of workmanship out of another's materials."⁷⁵ Stronger words than the mere making of a new thing are used. Stair talks of *producing* a new thing, and Bell of rude materials having been *manufactured* into a different species.⁷⁶ Some writers refer to the workmanship⁷⁷ involved in the production, and some call the *specificans* by the grand name of "artificer" or, less grand, "workman."⁷⁸ Bell requires a change to be produced on the substance.⁷⁹

Most institutional writers repeat some of the Roman examples of new species. Stair for instance mentions the examples of a cup or other artifact made of metal, wine produced from grapes, cloth from another's wool, and a ship from another's timber.⁸⁰ New examples are also added, namely, malt produced from another's bear,⁸¹ malt or meal produced from grain,⁸² flour produced from corn,⁸³ bullion made into a cup or tankard,⁸⁴ and a statue fashioned from wood.⁸⁵ Besides the Roman example of the dying of cloth, the malting of barley⁸⁶ is mentioned as an example of a process that does not change the species of the material into a new species.

⁷⁵ A. McDouall [Lord Bankton], *An Institute of the Laws of Scotland* (Edinburgh, 1751; reprinted 1993), 1:507 (at 2.1.2.13) (quoting *Institutes* 2.1.25).

⁷⁶ Stair (note 74), 313 (at 2.1.41); G. J. Bell, *Commentaries on the Law of Scotland*, 7th ed. (Edinburgh, 1870; reprinted 1990), 1:297.

⁷⁷ Stair (note 74), 313 (at 2.1.41).

⁷⁸ See Bankton (note 75), 507 (at 2.1.2.13–14) (artificer, workman); Bell (note 4), 504 (§ 1298(1)) (workman).

⁷⁹ Bell (note 4), 504 (§ 1298(1)).

⁸⁰ Stair (note 74), 313 (at 2.1.41). G. MacKenzie, *The Institutions of the Law of Scotland*, 7th ed. (Edinburgh, 1730), at 2.1.7, mentions the examples of the ship, the cup, the wine, and the oil. Erskine, *Institute* (note 74), 264 (at 2.1.16) and *Principles* (note 74), 123 (at 2.1.8) mentions the examples of plate made of bullion and grapes turned into wine. In *Principles* (note 74), 124 (at 2.1.9), he refers to a new species produced by the mixing of different substances.

⁸¹ Stair (note 74), 313 (at 2.1.41). *The Scottish National Dictionary*, ed. W. Grant (Edinburgh, 1941), vol. 1, s.v. Bear: "A kind of barley hardier than the ordinary kind but of inferior quality. Ordinary barley has two rows of grain on the head, bear four. . . . It is also called BIG or BIGG."

⁸² Bankton (note 75), 518, discussing English law but stating that the law of Scotland is the same.

⁸³ Bell (note 4), 504 (§ 1298(1)).

⁸⁴ Bankton (note 75), 518, discussing English law but stating that the law of Scotland is the same.

⁸⁵ Bankton (note 75), 507 (at 2.1.2.13).

⁸⁶ The malting of barley was a far easier process than the malting of bear, the older and hardier type of barley. See *Scottish National Dictionary* (note 81), s.v. Bear.

With regard to the theories that form the basis for specification, the institutional writers provide strong support for the accession/labor theory.⁸⁷ Bankton, Erskine, and Bell classify specification under the head of industrial accession.⁸⁸ Bankton states that industrial accession occurs "when any thing accrues to a person on account of workmanship or industry, employed by him upon it, so that the matter becomes accessory to the workmanship."⁸⁹ Erskine in his *Principles* explains that where the final product cannot be reduced to the matter from which it was made, there is no room for the legal fiction that the former subject is still existing, and "therefore the workmanship draws after it the ownership of the materials."⁹⁰ Bell states that "industrial accession is produced by the art or industry of man."⁹¹ Stair explicitly accepts that when the final product is not reducible to its former condition, the materials cede to the workmanship. This happens, he continues, not only when the materials are consumed, but even when they remain and cannot be reduced to their first nature.⁹² This clearly shows that he does not consider the final product to be a *res nullius*, open for occupation. None of the institutional writers, except perhaps Bell, refers to the occupation theory either expressly or implicitly. Bell's statement that, if the materials as a separate existence be destroyed, the property is with the workman,⁹³ can perhaps be construed as implicit support for the traditional occupation theory.

⁸⁷ The accession theory is also supported by various modern Scottish decisions, e.g., *Wylie and Lochhead v. Mitchell*, 8 M. 552 (1870), where Lord President Inglis, at 556, describes specification as "the production of a new subject of property by art and industry, where the materials belong to one party, and the skilled labour is supplied by the other," and at 557, where he classifies specification as a kind of industrial accession.

⁸⁸ Bankton (note 75), 507 (at 2.1.2.12); Erskine, *Institute* (note 74), 264 (at 2.1.16) and *Principles* (note 74), 123 (at 2.1.8); Bell (note 4), 503–4 (§ 1298).

⁸⁹ Bankton (note 75), 507 (at 2.1.2.12).

⁹⁰ Erskine, *Principles* (note 74), 123 (at 2.1.8). Note that in *Institute* (note 74), 264 (at 2.1.16), Erskine also refers to the mentioned legal fiction (*fictio iuris*), but did not proceed to draw such a clear conclusion from the fiction.

⁹¹ Bell, (note 4), 503 (§ 1298).

⁹² Stair (note 74), 313 (at 2.1.41). Stair's reference to Connanus, who allots the final product on the basis of the relative value of the workmanship and the materials used, is also a clear indication that Stair might implicitly have considered that the extent of workmanship involved in producing the new species does also play a role in determining whether a new species has been created.

⁹³ Bell (note 4), 504 (§ 1298(1)).

V. Examples of *Novae Species* in Modern
Scots and South African Law

Scots case law contains quite a number of illustrations of *novae species*. In *D. & G. Black v. Incorporation of Bakers, Glasgow*,⁹⁴ the Lord President of the Court of Session recognized that a miller who ground a quantity of wheat into firsts-grade corn, seconds, thirds, and bran, had created four separate subjects of property of a complete and immutable kind.⁹⁵ In *Oliver and Boyd v. The Marr Typefoundry Co.*,⁹⁶ the Outer House of the Court of Session apparently decided that a new species was created where a quantity of metal type made for printing was melted down and converted into new type.⁹⁷ In *International Banking Corporation v. Ferguson, Shaw, and Sons*,⁹⁸ refined cottonseed oil was mixed with suet (hard fat of kidneys and loins of oxen or sheep) to produce a new product, namely, a lard compound (rendered and clarified for use in cooking and pharmacy). In *M'Laren Sons & Co. v. Mann, Byars & Co.*,⁹⁹ the sheriff court decided that by converting cloth into workmen's garments the clothing company had destroyed the separate existence of the cloth and created a new species. In *McDonald v. Provan (of Scotland Street) Ltd.*,¹⁰⁰ the court was willing to assume that a new species was created when the front part of a stolen vehicle, including half the chassis, the engine, and the gears, was welded to the rear portion of another vehicle to produce a built-up car. Specification was rejected in this case because the court decided that the two components of the built-up car were separable and because the requirement of *bona fides* had not been complied with. In *Armour v. Thyssen Edelstahlwerke AG*,¹⁰¹ Lord Mayfield in a decision of the Outer House of the Court of Session expressed the view that there had been specification where stainless steel strip coils had been cut into shorter lengths for the purpose of making sinks, and there was evidence that they could not be recovered in their original form. He seems to have been influenced by the fact that the steel

⁹⁴ 6 M. 136 (1867).

⁹⁵ *Id.* at 141.

⁹⁶ 1901 S.L.T. 170 (Outer House).

⁹⁷ It is not altogether clear whether Lord Stormonth Darling had specification in mind. He decided that the shape of the article was greatly changed and its identity completely destroyed, but doubted very much whether the defenders could consider the conversion of the type as terminating their possession and consequently their obligation to restore.

⁹⁸ 1910 Sess. Cas. 182.

⁹⁹ [1935] 51 Scottish Law Review 57 (Sheriff Court).

¹⁰⁰ 1960 S.L.T. 231, 231-32 (Outer House).

¹⁰¹ 1986 S.L.T. 452 (Outer House).

trade would recognize that the steel was in a different form and thus in a manufacturing or commercial sense a new species. On appeal both Lord Wylie¹⁰² and Lord McDonald¹⁰³ criticized this view. Lord McDonald concluded: "I do not consider that market forces can create a new species for the purpose of specificatio."¹⁰⁴

South African case law has up to now been very reluctant to recognize that *novae species* have been created. In my opinion the facts, in a few reported cases, can be construed in such a manner. These are where a table was welded from scrap metal (for the top) and iron (for the legs);¹⁰⁵ where a built-up motor vehicle was structured from components of two wrecks and other materials;¹⁰⁶ and where a garden shed was completely dismantled and built up into a much larger shed.¹⁰⁷ Only one case tentatively accepted the creation of a *nova species*, namely, where new tape holders were supplied with a new "dress" consisting of a distinctive label, containers, and an insert bearing the trade mark and pictorial matter.¹⁰⁸ This case has, however, been criticized as blurring the line between specification and copyright.¹⁰⁹

¹⁰² 1989 S.L.T. at 191L–192A.

¹⁰³ 1989 S.L.T. at 190J

¹⁰⁴ *Id.*

¹⁰⁵ *S. v. Riekert*, 1977 (3) SALR 181 (T).

¹⁰⁶ These are the facts of *Khan v. Minister of Law and Order*, 1991 (3) SALR 439 (T), where the court incorrectly held that this was a case of accession of movables.

¹⁰⁷ These facts are adapted from *Aldine Timber Co. v. Hlatwayo*, 1932 T.P.D. 337. But see *Barry, J.*, at 341:

It seems to me that the circumstances in this case show that the work done on the old material was not in the nature of specification, because no new species has been created and the original article has not ceased to exist as such. The illustrations given of turning grapes into wine and corn into bread, show clearly what specification means, and I think there can be no doubt that on the facts of this case the material does not fall under that category.

But here the new material had not been added to the old material for the purpose of enlarging the shed. The old shed had first been demolished and thereafter the old material had skillfully been used with the new material to construct a brand new shed. The creative skills employed to fashion the final product were not sufficiently taken into account by the court.

¹⁰⁸ *Frank & Hirsch (Pty) Ltd. v. A. Roopanand Brothers (Pty) Ltd.*, 1991 (3) SALR 240, 246B–C (D).

¹⁰⁹ See the discussion of the case by C. Visser, "Termination of Copyright by Accession and Specification," *Tydskrif vir Hedendaagse Romeins-Hollandse Reg* 54 (1991): 813–818.

VI. Conclusion

So when will the substance of the material be sufficiently changed that one can conclude that a new species has been created? Is it when the old species has perished; when the final product has a new identity; when the final product has a new name; when the new product is worth considerably more than the old product; or when the old species has been converted into a new commercial species? The difficulty with inanimate objects is that they are not as clearly divided into various species as are plants and animals. We no longer fully comprehend, let alone follow, the Aristotelian hierarchy of existences based on the distinction of matter and form, and have to rely on precedent and common sense in determining whether a new species has been created. And in trying to reach a conclusion, it seems reasonable and fair to accept that both Scots and South African law provide sufficient authority for the accession/labor theory that a court should consider the amount of workmanship and skill involved in the creation of the final product. If this is done, it seems reasonable to classify two South African cases as instances where a new species had been created: where a garden shed had been dismantled and a much bigger shed had been constructed from the old and with newly bought materials, and where a built-up BMW motor vehicle had been constructed from materials recovered from two wrecked BMWs. The South African courts considered these as cases of accession and refused to consider specification on the ground that the final products were still a shed and a BMW.¹¹⁰

Let us now return to *Kinloch Damph* and the smolt turned into salmon. Although I agree with the court that the husbanding of smolt in that case did not result in a *nova species* being created, the court has in my opinion gone too far in stating almost categorically that natural processes of growth can never result in specification. There might well be some cases where human intervention in the natural growth of plants or living creatures may be considered specification. An example that springs to mind is where a Japanese horticulturist converts a thousand saplings into bonsai trees by scientifically retarding their growth. Another example is where the normal development of chrysalides is skillfully directed to bring into being a rare species of butterfly. A final example is from a decision of the Dutch High Court (*Hoge Raad*) in 1994 in the case of a chicken farm.¹¹¹ The chicken farmer bought a large quantity of eggs from a supplier and the latter

¹¹⁰ *Aldine Timber* (note 107) and *Khan* (note 106), respectively.

¹¹¹ HR 24 March 1994, NJ 158.

reserved ownership of the eggs until full payment. In order to breed the eggs artificially, the eggs had to be placed in hatching machines for a period of three weeks, the position of the eggs in the machines had to be regularly changed, and the temperature and humidity of the premises had to be carefully regulated. This process hatched thousands of chickens for sale. On the bankruptcy of the farmer, the court had to decide whether the reservation of ownership still affected the eggs that were transformed into chickens. The court decided that this was not the case, since the eggs had undergone such a transformation that the reservation could no longer apply to them.