University of Pennsylvania Law Review

And American Law Register

FOUNDED 1852

Published Monthly, November to June, by the University of Pennsylvania Law School, at 34th and Chestnut Streets, Philadelphia, Pa.

VOL. 76 APRIL, 1928 No. 6

THE VERTICAL EXTENT OF OWNERSHIP IN LAND

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I. THE PROBLEM

The advent of the aeronaut has created the possibility of a number of unprecedented factual situations to confront our courts. The law has inherited, in its sonorous latinisms and quaint medieval conceptions, a storehouse in which imagination, quick to envision the unexpected outgrowings of society from its legal garments, and delighting in the incongruities between doctrines and facts, may revel without stint. *"Cuius est solum, eius est usque ad coelum,"* pronounced Cino da Pistoia at the beginning of the fourteenth century. The thought of multitudinous trespasses, *quare clausum fregit,* prompts a novel,[1] several more technical books, and innumerable magazine articles. Some view the matter with sly delight, others with frothing and unreasoning anger, still others with impatience mingled with consuming interest. How far above the earth does the ownership of the holder of the fee extend?

The problem brought to light in this somewhat spectacular fashion was not necessarily, in other aspects, a new one. Man has been extending his domain vertically on both sides of the

[1] Herbert Quick, "Virginia of the Air Lanes".

surface of this planet ever since he became a builder or a digger, and the law has had to reckon with this vertical extension of power in many ways.

Elsewhere it has been contended that the machinery of the law has, for a long time, included as a part a concept of land as three-dimensional space—not the soil and rocks and vegetation which we see about us, but a geometric concept with which we explain phenomena—geometric space.[2] Without here discussing the problem, it will be assumed that the real land, in the eyes of the law, is so constituted.

The problem to which an answer is now sought is a different one. The difference must be realized in order to understand much that has been said by courts, legislatures, and legal writers. We find that the most frequently given definitions of the term *land* in analytical discussions are so phrased as to mark out the ownership rights and their extent rather than to describe the concept.[3] When we inquire as to the extent to which the law recognizes ownership, these usages of the term afford excellent criteria, but they do not touch on the question of the nature of land.

A list of different views which have been advanced as to the extent of land ownership vertically follows; it is not logically complete nor exclusive of the possibility of other views, but it seems to represent the main trends of thought on this subject. It is only fair to remark that this is an inquiry into the field of positive law, and is not a question in jurisprudence, as would be that of the nature of land.

1. According to one view, the *land* which can be owned is the material solid part of the earth. It is the soil, the rocks, the minerals, and all that is naturally present in the crust of the earth. This is a view which is at the same time natural and naïve. By implication, it excludes the land-space occupied by the material solid from the realm of things which may be owned.

A man cannot own air in its free state; the rule is universal. A man may have an easement for light, or an easement for free

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[2] Article entitled *The Jural Nature of Land*, to appear in the current volume of ILL. L. REV.

[3] For example, *cf.* SALMOND, JURISPRUDENCE (7th ed. 1924) § 155.

access of air, or a right against the pollution of his air, but the air itself he cannot own. Apparently it is then necessary to limit ownership, under this view, by the surface; any rights possessed by the owner involving acts or situations above the surface, while evidence of the jural recognition of the land-space, are not rights of ownership, and are incidental to, and follow, ownership of the solid matter.[4]

This view of the nature of land-ownership was in the minds of the framers of the California Civil Code when they defined *land* as the solid material of the earth.[5] It also is the view which has colored and affected the decisions of many judges, although, as we shall see, the results of those decisions are often explicable on other grounds as well.

2. Adopting the same view so far as to hold ownership to apply to the material solid from the surface downward *ad inferos,* another view would include the space above. This is part of the true land-space, apparently, since it cannot consistently be supposed to be the free air. This is a welding of a material solid to a geometric solid, the welding occurring at the surface, to form the subject of ownership. This is the view suggested, though not adopted, by Salmond:

> "Considered in its legal aspect, an immovable, that is to say, a piece of land, includes the following elements:
>
> "(a) A determinate portion of the earth's surface.

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[4] Hazeltine (HAZELTINE, LAW OF THE AIR [1911] 56, 57) points out that there are some who would deny the landowner any rights at all in the superjacent space, basing their argument on the communal nature of air. This view he considers "quite untenable"; as can be easily demonstrated. After reference to the cases, no one can doubt that what Dean Wigmore calls "appurtenant rights" in this space exist, even if not proprietary in nature.

[5] § 659 of the California Civil Code reads: "Land is the solid material of the earth, whatever may be the ingredients of which it is composed, whether soil, rock, or other substance". § 829 reads: "The owner of land in fee has the right to the surface and to everything permanently situated beneath or above it".

These sections are from Field's draft of the New York Civil Code, and are §§ 164 and 266 of that draft. They appear as §§ 257 and 358 of TIT. 1 of S. D. REV. CODE (1919), and as §§ 5250 and 5351 of N. D. COMP. LAWS ANN. (1913); but they do not seem to have influenced decisions in these two states. The natural implication of these two sections is to require tangibility of whatever is "permanently situated beneath or above" the surface to make it subject to ownership.

"(b) The ground beneath the surface down to the centre of the world. All the pieces of land in England meet together in one terminable point at the earth's centre.

"(c) Possibly the column of space above the surface *ad infinitum.*" [6]

As clear evidence of what he meant when he spoke of land "considered in its legal aspect," Salmond adds these two additional elements:

"(d) All objects which are on or under the surface in its natural state; for example, minerals and natural vegetation. All these are part of the land, even though they are in no way physically attached to it. Stones lying loose upon the surface are in the same category as the stone in a quarry.

"(e) Lastly, all objects placed by human agency on or under the surface, with the intention of permanent annexation. . . ." [7]

It is apparent that Salmond is here enumerating those things which are subject to ownership and at the same time are placed by the law in the category of immovables, including them all under the term *land;* and that he is not attempting to formulate any concept of the jural nature of land.

It is difficult to see why minerals had to be mentioned separately, when the second element included "the ground beneath the surface down to the centre of the world." It would seem that this would include minerals. Perhaps here Salmond has not himself altogether escaped some of the implications of a view later to be set out—that the land-space itself is subject to ownership both above and below the surface.

3. Under a third concept, ownership is limited to the surface; and to this ownership are attached certain "appurtenant rights" in subjacent and superjacent space. This is the view stated by Dean Wigmore, as follows:

"*Land-Surface and Appurtenances.* The property-right in realty includes the surface-area of the land. It also in-

[6] SALMOND, *loc. cit. supra* note 3.
[7] *Ibid.*

cludes such appurtenant elements as serve to make the land safe for habitation and completely available for economic use as a fixed headquarters of individual activity.

"The following elements are thus included:

"Superjacent Space. The space superjacent to the land is included, without limit as to distance upwards. The right also protects the superjacent space from the intrusion of such substances as may, by impairing the health of the owner, thus violate his right of Corporal Integrity, or by impairing the use of his bodily sense, thus violate his rights of Sensory Comfort. . . .

"The space subjacent to the land is included without limit as to distance downwards. The right in this aspect protects merely against an intrusion into the lower soil or a removal of it. But an act which causes the surface to fall is a violation of the main rights. . . ." [8]

This "surface-area" of Dean Wigmore is probably a two-dimensional geometric concept. It is not likely that the "land-surface" is to be construed to include the soil of the surface. That would mean that we would again be making the subject of ownership rights a three-dimensional material solid, comparable to the one already described above, but with a boundary, indefinitely located, a few feet below the surface. There would seem to be no practical utility in treating land as a material solid, and then distinguishing it from an entirely similar, often much more valuable, solid of identical composition beneath, subordinate or "appurtenant" only because of its position. The surface might be an exposed bed of iron ore, not fit for agriculture, beneath which there might be a bed of clay covering a second bed of ore. Where could we draw a line and say, here ceases land—here begins minerals? Yet this is probably what has been in the mind of courts at times.

It seems much more probable that Dean Wigmore's idea is that of a two-dimensional geometric concept, a surface; not an Euclidian plane, since it follows the contour of the earth's crust,

[8] WIGMORE, SELECT CASES ON TORTS (1912), appendix *A Summary of the Principles of Torts* at 878.

but a surface without thickness.[9] *Land* is that upon which metes and bounds are laid out.

We hope that it is not a complete misunderstanding of the view of Dean Wigmore to say that, according to it, the bundle of rights accompanying ownership involves and includes:

(a) Principally, the right of ownership, the content of which is related to a two-dimensional geometric concept, land-surface.

(b) Secondarily, rights not of ownership, the contents of which relate to the rest of the land-space, which may be considered, since it is divided at the surface, as two geometric solids.

(c) Rights relating, in content, to the things which are considered annexed to the land-surface.[10] These annexed solids include all those that would be termed *land* under the first view given above. They would include as well so-called fixtures, buildings and other man-made structures. Minerals, *fructus naturales,* and houses are *eiusdem generis* under this explanation; all are chattels which have become realized, or subjected to the laws of real property because of a factual relationship.

These annexed solids are undoubtedly the subject of ownership, although the fact may not become apparent until they are separated and become personalty. This ownership, however, is incidental to and acquired by ownership of the surface, since it is only exceptionally of separate importance before the physical severance of the solids; as where coal *in situ* is owned separately from the surface. The emphasis is always on the surface; injury to land, in the strict sense, is injury to the surface under this view. The ownership of the solids beneath the surface results from the presumption created by the maxim already discussed.[11]

[9] TAYLOR, PITT PRESS EUCLID i-ii, p. 3: "That which has position, length, and breadth but not thickness is called surface . . . The word surface in ordinary language conveys the idea of extension in two directions; for instance, we speak of the surface of the earth, the surface of the sea, the surface of a sheet of paper. Although in some cases the idea of the thickness or the depth of the thing spoken of may be present in the speaker's mind, yet as a rule no stress is laid on depth or thickness. When we speak of a geometrical surface, we put aside the idea of depth and thickness altogether".

[10] Annexation is a factual relationship recognized by the law to exist between two things.

[11] An interesting attitude toward such a view is indicated by Demolombe: "En général, cette expression: le sol, comprend le dessus et le dessous réunis

It may be that Dean Wigmore's view and that suggested by Salmond are essentially the same. Salmond notes as his first element, "A determinate portion of the earth's surface." He does not indicate that the rights of ownership apply peculiarly to this element, as does Dean Wigmore; in fact, he discusses whether there may be ownership in air-space. For this reason, we have considered Salmond to have listed this element only as one of several subject to ownership.

There can be no doubt that the law places great emphasis on the surface. Nothing could be more logical. The original appropriation of land was nothing more than appropriation of the exclusive use to a tillable surface.[12] The word *land* in law meant at first only arable land. A chief justice of the State of Pennsylvania once stated the reasons why the law should attach so many presumptions to the surface, and why it is such a focus for rights of ownership in land:

> "In the earlier days of the Common Law, the attention of buyers and sellers, and, therefore, the attention of the courts, was fixed upon the surface. He who owned the surface owned all that grew upon it and all that was buried beneath it. His title extended upward to the clouds and downward to the earth's center. The value of his estate lay, however, in the arable qualities of the surface, and, with rare exceptions, the income derived from it was the result of agriculture. The comparatively recent development of the sciences of geology and mineralogy, and the multiplication of mechanical devices for penetrating the earth's crust have greatly changed the uses and the values of lands. . . ." [13]

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et considérés comme une seule chose, comme un seul bien. Le dessus et le dessous sont, en effet, le éléments constitutifs du sol lui-même; le sol ne se pourrait pas même concevoir séparé, d'une manière absolue, du dessus et du dessous; car il ne serait alors qu'une espèce de surface géometrique sans aucune épaisseur; il ne serait qu'une abstraction! Lors donc que l'on parle du sol, on y comprend toujours le dessus et le dessous, comme éléments constitutifs et comme parties integrantes du sol lui-même": DEMOLOMBE, TRAITÉ DE LA DISTINCTION DES BIENS 561. Planiol remarks: "Le propriété foncière ne se reduit pas à une simple surface sans epaisseur": PLANIOL, TRAITÉ ÉLÉMENTAIRE § 2391, p. 745.

[12] *Cf.* SIDGWICK, ELEMENTS OF POLITICS (1891) 62 *et seq.*

[13] Paxson, C. J., in Chartiers Block Coal Co. v. Mellon, 152 Pa. 286, 25 Atl. 597 (1893).

It remains to be seen what effect these changed uses and values have had on the rules of law.

4. A fourth view is that the land-space is subject to ownership both above and below the surface. Here the surface assumes no individual uniqueness, except insofar as the physical limitations of man locate most of his acts there.

This geometric solid, this cubical space, must be distinguished carefully from the physical matter which exists within it, much of which is, of course, subject to ownership as a distinct thing. Presumably there is matter, however tenuous, occupying this to the limits of the stratosphere. Furthermore, it must be remembered that such a geometric solid is a concept, and may or may not square with reality. It must be distinguished, also, from the hypothetical ether, as those who have discussed trespass by radio waves may not have done, unless they have considered the ether as a form of matter in itself subject to ownership.

According to this view, the rights which make up ownership relate in their content to the space above and below the surface as a unit. The effect of easements and other overshadowing rights in others, which often arise out of the limitations imposed by nature, may sometimes give color to a belief that ownership has a different effect below and above the surface than directly at the surface.

We must notice that there are differences in detail among those who apparently lean toward this fourth view. These differences arise over the extent of the space which is subject to ownership. These differences may also exist as to the air-space among those who adopt the second view given above. The problem has two aspects.

(a) Whenever ownership is held to extend to more than the surface, it is usually held to extend downward *ad inferos*.[14] It has been pointed out, following a geological hypothesis, which, it is well to note, is much less credited today than formerly, that,

[14] There is no problem of the extent of sovereignty and jurisdiction of the state here involved which needs solving before protection can be afforded to unlimited ownership rights, since "it is a universally recognized rule of the Law of Nations that the subsoil to an unbounded depth belongs to the State which owns the territory on the surface." 1 OPPENHEIM, INTERNATIONAL LAW (3d ed. (1920) § 173, p. 312.

if the center of the earth is a molten mass, and hence a fluid, ownership has no significance below the comparatively slight scratchings which we can make on the earth's crust.[15] It cannot be denied that the phrase *usque ad inferos* involves much of the apparently absurd and useless. Our deepest mines reach but a few miles under the surface, and it takes the imagination of a Jules Verne to picture man ever finding it possible to penetrate much deeper. Nevertheless, there is no need of setting a limit on the depth of what the law will recognize as a fit subject of ownership until some situation arises demanding such a solution. Occasionally we find a limit suggested, as in the German Civil Code; but even then the application is not altogether obvious.[16]

(b) The problem is different with regard to the space superjacent to the surface.[17] The advent of the airplane brought with it the necessity of adjusting our legal views to a changed world. An analysis of ownership in what was conveniently called superincumbent space resulted in four divergent views of what the law was, or, perhaps, what the law ought to be in the opinion of those advancing the views.[18]

We are not considering here the dispute as to the sovereignty of a nation over its superincumbent air-space which excited publicists a few years ago.[19] There appears to be little

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[15] *Cf.* article, *Aviation and the Law,* (1917) 21 LAW NOTES 170.

[16] See B. G. B., § 905.

[17] *Cf.* article, *supra* note 15, where the writer bluntly expresses his view in these words: "The 'up' theory has much less in it than the 'down' theory, and even the 'down' theory, as we have intimated, is mere theory".

[18] See, generally, for the last exposition of these views, HAZELTINE, LAW OF THE AIR 74-75 and 56-58; DAVIDS, LAW OF MOTOR VEHICLES (1911) 285 *et seq.*; LYCKLAMA, AIR SOVEREIGNTY (1910) 11-30.

[19] *Ibid.* There is an extensive literature on this subject. Three distinct views, each with its variants, received support from various publicists:

First, the air is free. This received its classic formulation in the resolution phrased by M. Paul Fauchille, and adopted by the Institute of International Law in 1906: "Art. 7. L'air est libre. Les États n'ont sur lui en temps de paix et en temps de guerre que les droits nécessaires, à leur conservation. Ces droits sont relatifs à la répression de l'espionnage, à la police douanière, à la police sanitaire et aux nécessités de la défense". 19 ANNUAIRE DE L'INSTITUT DE DROIT INTERNATIONAL (1902) 19; 21 ANNUAIRE (1906) 320. Fauchille himself, while firm in his advocacy of aerial liberty, would have recognized a 1500 meter "zone of protection": FAUCHILLE, REV. GEN. DE DROIT INT'L PUBLIC (1901) v. 8; 1 REV. JURIDIQUE INT'LE DE LA LOCOMOTION AÉRIENNE 135. Some publicists, such as Bluntchli, Nys, and D'Hooge would have recognized no such "zone theory": D'HOOGE, DROIT AÉRIEN (1912) pp. 1-10.

dissent since the World War to the proposition that a nation is sovereign to the heavens, so far as its power to repulse foreign planes is concerned. Presumably, if there was no sovereignty there could be no rights of private ownership, which, of course, are dependent in their existence on a sovereign to enforce them.

(1) The first view regarded ownership as extending no further upward than the surface of the earth and structures thereon. Holders of both the first and third views previously set out would of course be found here. Salmond, despite his

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Aerial liberty, but with such zones of sovereignty or protection, was advocated by Rolland, Bonfils, Von Holtzendorf (1000 metres) and Bonnefoy, among others, in addition to Fauchille: BONNEFOY, LE CODE DE L'AIR (1909); BONFILS, MANUEL, pp. 315-317.

The second main view may be best represented by the one advanced before the Institute of Internation Law by Westlake in opposition to Fauchille, namely, that the state is sovereign without limit of the airspace, but that this sovereignty is subject to a right or servitude of innocent passage: Meurer, Stockton, Hazeltine, and Hershey are typical supporters of this view: STOCKTON, OUTLINES OF INT. LAW (1914), § 164, pp. 357-9; HERSHEY, THE ESSENTIALS OF INTERNATIONAL LAW (1912), pp. 232-235; HAZELTINE, *op. cit. supra* note 4.

The third view was that of absolute state sovereignty. Early supporters of this view were Grunwald, and Lycklama. The tendency before the World War was toward either the second or third view. However, Lawrence, in 1910, believed that "the fundamental principle on which all rules must be based is not yet settled". LAWRENCE, PRINCIPLES OF INTERNATIONAL LAW (5th ed. 1910), § 73, pp. 146, 147. *Cf.*, also, Blewett Lee, *Sovereignty of the Air*, (1913) 7 AM. J. INT. LAW 470. During the World War, the nations apparently acted on the third view, that of absolute sovereignty: Rolland, *Les pratiques de la guerre aérrienne dans le conflit de 1914 et le droit des gens*, (1916) 23 REVUE GÉNÉRALE DE DROIT INTERNATIONAL PUBLIC 497; Bellot, *Sovereignty of the Air*, (1918) INT. L. NOTES, v. 3.

The Convention for the Regulation of Aerial Navigation, adopted in 1919 by the Peace Conference, contains this provision: "Art 1. The high contracting parties recognize that every Power has complete and exclusive sovereignty over the air space above its territory": 17 AM. J. INT. LAW, Doc. Supp. 195; also to be found in Brit. Treaty Series 1922, No. 2; Parl. Papers, 1920, Cd. 670; and Senate Doc. No. 91, 66 Cong., 1st Sess. This has met with general approval. *Cf.*, for example, OPPENHEIM INTERNATIONAL LAW pp. 354, See also discussion by Blewett Lee, *The International Flying Convention and the Freedom of the Air*, (1919) 33 HARV. L. REV. 23 and article, Spaight, *Aerial Law*, in Enc. Brit. (13th ed.). Wilson considers that this principle, absolute juridiction, is now universally admitted: WILSON, HANDBOOK OF INTERNATIONAL LAW, (2nd ed. 1927), § 33, pp. 77; § 48, pp. 116-120. He adduces the famous case of Missouri v. Holland, 252 U. S. 416 (1920), as an approval and application of the doctrine.

Art. 2 of the Convention provides: "Each contracting State undertakes in time of peace to accord freedom of innocent passage above its territory and territorial waters . . . to the other contracting States, provided that the conditions established in this Convention are observed". For those nations which have signed this Convention, this passage also affects the rights of private landowners, since they doubtless cannot object to a passage authorized by treaty.

suggestion of another view, apparently belongs in belief to this group.[20]

(2) For a second there was coined the descriptive term, zone theories. These, by the application of several different tests, limited the extent upward of what could be owned.[21] Pollock, for example, advanced the test of "effective possession." Just what effective possession is, is obscure. Yet this doctrine has

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Remarks by Justice Holmes in three cases before our United States Supreme Court indicate his view as to the extent of sovereignty: "In that capacity (as quasi-sovereign) the state has an interest independent of and behind the titles of its citizens in all the earth and air within its domain. It has the last word as to whether its mountains shall be stripped of their forests and its inhabitants shall breathe pure air:" Georgia v. Tenn. Copper Co., 206 U. S. 230, (1906). "It is recognized that the State as quasi-sovereign and representative of the interests of the public has a standing in court to protect the atmosphere, the water, and the forests within its territory": Hudson City Water Co. v. McCarter, 209 U. S. 349 (1908). Finally, Holmes clearly distinguishes between sovereignty and ownership: "To put the claim of the state upon title (to wild and migratory birds) is to lean upon a slender reed. Wild birds are not in the possession of anyone, and possession is the beginning of ownership. The whole foundation of the states's rights is the presence within their jurisdiction of birds that yesterday had not arrived, tomorrow maybe in another state, and in a week a thousand miles away. If we are to be accurate, we cannot put the case of the state upon higher ground than that the treaty deals with creatures that for the moment are within the state borders, that it must be carried out by officials of the United States within the same territory, and that but for the treaty the state would be free to regulate this subject itself": Missouri v. Holland, 252 U. S. 416 (1920).

[20] SALMOND, THE LAW OF TORTS (5th ed., 1920), § 52, p. 197: "It is submitted, however, that there can be no trespass without some physical contact with the land (including, of course, buildings, trees, and other things attached to the soil) and that a mere entry into the airspace above the land is not an actionable wrong unless it causes some harm, danger, or inconvenience to the occupier of the surface. When any such harm, danger, or inconvenience does exist, there is a cause of action in the nature of a nuisance". This, of course, is a denial only of proprietary rights, not of appurtenant rights.

Kuhn's view may be classified here: "The view here favored, by which the landowner's rights in the airspace are regarded as strictly appurtenant to the soil and to be accorded only when essential to the enjoyment of the latter, will tend to reconcile the interests of the landowner with the progress of the new art (aviation)". Kuhn, *The Beginnings of an Aerial Law* (1910) 4 AM. J. INT. LAW 109.

According to this view trespass would lie only when there was actual physical contact with the soil or structure on it. *Cf.* article, *Aviation and the Law, loc. cit. supra* note 15, where this view is upheld. A passage in Bonnefoy discussing article 552 of the *Code Napoléon,* is appropriate here: "En somme, l'article 552 ne vise que les constructions et plantations fixées au sol et s'élevant vers le ciel, mais non le domaine aérien lui-même qui constitue une res communis insusceptible de propriété privée. M. Julliot critique, et à bon droit cette opinion en faisant remarquer que c'est confondre l'espace géometrique qui est au-dessus de la propriété avec l'air qui y circule, le contenant et le contenu": BONNEFOY, LE CODE DE L'AIR, p. 124.

[21] *Cf.* DAVIDS, *loc. cit. supra* note 18.

been repeated unquestioningly by several writers.[22] Hazeltine criticizes its indefiniteness.[23] Others set the limit at the height of actual user, as determined by buildings or other structures, with the right of further appropriation, of course, reserved.[24] Still others speak of the "usable air column." [25] All of these limits were difficult both of definition and of application.

(3) The third type retained the idea of ownership indefinitely upward, but subjected the upper strata to a natural easement for aerial navigation.[26] Although nothing has as yet appeared which can possibly raise the question, it would seem logical to believe that such ownership would be limited by the stratosphere.

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[22] *Cf.* Rannells, *Aerial Navigation in the Law of Trespass,* (1919) 4 ST. LOUIS L. REV. 205; article on *Aviation,* etc., (1910) 71 CENT. L. J. 1.

Pollock's statement of the doctrine is to be found in the following passage: "It does not seem possible on the principles of the Common Law to assign any reason why an entry above the surface should not also be a trespass, unless indeed it can be said that the scope of possible trespass is limited by that of possible effective possession, which might be the most reasonable rule . . . Clearly it would be a trespass to sail over another man's land in a balloon (much more in a controllable aircraft) at a level with the height of ordinary buildings, and it might be a nuisance to keep a balloon hovering over the land even at a greater height". POLLOCK, THE LAW OF TORTS (12th ed. 1923), 351, 352.

[23] HAZELTINE, LAW OF THE AIR, 73: "One difficulty lies in the indefinite and ever varying height of the lower zone of possession and ownership. The zone of possession and ownership of one landowner would be very high, and the zone of his neighbor would be very low; and even in the case of the same landowner his zone of possession and ownership would vary with the height of his structures on the land, and might even be partly determined by the fact of his owning one or more air-vehicles with which to enforce his rights in that part of the airspace which is his." Valentine also rejects Pollock's "effective possession" test: Valentine, *The Air—A Realm of Law,* (1910) 22 JURID. REV. 95.

Miraglia applies the Ihering limitation of "Practical interest," and applies it to ownership in the column of air and landspace: MIRAGLIA, COMPARATIVE LEGAL PHILOSOPHY (1912), § 294, p. 476.

[24] HAZELTINE, LAW OF THE AIR, 57. Planiol holds this view.

[25] Comment (1922) 71 U. OF PA. L. REV. 88.

[26] Davids states this as follows: "The air domain of a proprietor may be utilized by him to any extent, but in so far as he has not appropriated it, it must be deemed to be subject of passage by aviators. The case is analogous to that of the highway upon which the public have a right of passage, while the fee remains in the owner of the abutting land". DAVIDS, *op. cit. supra* note 18, § 290, p. 292.

There is a variation of this view which would grant to the aviator a license rather than an easement. Chapin believes that "the doctrine of free passage—i. e., that aerial flight is not *per se* trespass—would seem in accord with sound policy," but that the aviator passes at his peril, being absolutely liable for actual damage. CHAPIN, HANDBOOK OF THE LAW OF TORTS (1917) § 75, p. 349.

Hazeltine inclines to this view.[27]

(4) The fourth type regarded all invasions of superincumbent space as trespasses or invasions of ownership.[28]

The problems arising from aerial navigation will be noticed somewhat more fully later.

Because of the lack of direct adjudications on the subject, and because of the variance of views held by different writers, we find suspended judgments on the question on the part of other writers. Thus, in a well-known English textbook, we find this passage:

> "Whether the maxim . . . is to be accepted literally as meaning that the ownership of land carries with it the possession of the column of air situate above it, or whether it is to be interpreted as meaning merely that a landowner is entitled to complain of any occupation by others of the space above him which materially interferes with his enjoyment of his land, seems doubtful." [29]

The variant views as to the extent of ownership vertically set out above are not academic in that they have never been tested by actual application. They are set out in the belief that all of them have at some time or another been used by courts in the solution of actual problems, or at least have been suggested by students of the law as the *modi operandi* by which courts have

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[27] HAZELTINE, LAW OF THE AIR 77. Yet Hazeltine appears to differentiate between upper and lower strata: ". . . this proprietary right (just stated to be unlimited) is subject to a general right of passage for balloonists and aviators; who must, however, keep themselves strictly within their right of passage and must do no act which shall amount either to a trespass or a nuisance in the lower, or to a nuisance in the upper, stratum of the airspace:" *ibid.*

[28] Terry apparently held this view, and in a passage expressing it we find a clear distinction made between air and the space it occupies: "The condition of the air, as distinguished from the space above the land—which latter is fully protected so that it seems that it would probably be a theoretical trespass to pass over a man's land in a balloon—is protected, I think, only as against influences tending to defile it," and this to a limited extent: TERRY, PRINCIPLES OF ANGLO-AMERICAN LAW (1884) § 388, p. 379.

Another expression of the same view is to be found in Reeves: "I can restrain my neighbor from swinging his shutters out over my roof; and he who, without my permission, digs into my soil a thousand feet below the surface, or stretches a telegraph or telephone wire over it, or flies in an airship thousands of feet above it, is guilty of trespass": 1 REEVES, REAL PROPERTY (1909) 113, § 97.

[29] CLERK AND LINDSELL, LAW OF TORTS (7th ed. 1921) 333.

reached certain decisions. Our problem is to discover, if possible, which view is the one of most general application, and which possesses the greatest utility in dealing with legal problems. It therefore becomes necessary to examine the decisions of the courts with a view to discovering upon what grounds they must be explained. This is done with no expectation of discovering uniformity, or of forcing all the cases into a single category.[30]

II. Ownership

Before pursuing our inquiry into the extent of ownership in the land-space, it is, of course, desirable to know what ownership is. This question is not so easily answered as one might presume. In general, we find two different types of definition: first, ownership is a particular relation between a person and a thing (or a right); second, ownership is an identifiable right or complex of rights.

1. The most inclusive definition of the first type is probably that of Salmond. Ownership, to him, "in its most comprehen-

[30] A difficulty might be injected into the discussion by reference to restrictions which are sometimes placed by statute on the height of buildings in cities. Thus, Paris has prohibited building above the height of the Eiffel tower: Baudry-Lacontinerie, §338. Art. 552 of the French Civil Code, regarding ownership of land, expressly states that the use of it is subject to police regulations. *Cf.* also Planiol, Traité Élémentaire, §§ 2333,2334, p. 725.

Numerous legislative enactments of a similar nature have come up to the appellate courts of this country for adjudication, and have been generally upheld. See, for example, the following cases: Att'y-Gen. v. Williams, 174 Mass. 476, 55 N. E. 77 (1899); Parker v. Commissioners, 178 Mass. 199, 59 N. E. 634 (1901); Williams v. Parker, 158 U. S. 491 (1903); People *ex rel.* Kemp v. D'Oench, 111 N. Y. 359, 18 N. E. 862 (1888); Cockran v. Preston, 107 Md. 220, 70 Atl. 113 (1908); Welsh v. Swasey, 193 Mass. 364, 79 N. E. 743 (1907). *Cf.*, also Berry, Restrictions on the Use of Real Property (1915) §§ 57, 58, pp. 87 to 89. The basis for such legislation, in order to avoid constitutional inhibitions, must be "the safety, comfort, and convenience of the people and the benefit of property owners generally" (to use the words of the Massachusetts court in Att'y-Gen. v. Williams, *supra*).

It would seem plausible, at first, to assume that such a prohibition takes away ownership, if it previously existed, in the space above the limit of user set by statute. This does not necessarily follow. Restrictions on types of buildings permitted in given areas are the essence of zoning ordinances, and similarly effect user; yet they are not regarded as changing the status of the owner. The height of permitted construction may be raised at any time in the same manner it was established. Other acts of user, such as flying kites from the roof, may exist. The situation is thus not analogous to the taking of a tract of land for a park, or other divesting of ownership; all that is done is a particular restriction on user, without prohibition of all user, or without taking away the owner's remedies, if any, against invason of his superjacent space.

sive signification, denotes the relation between a person and any right that is vested in him. That which a man owns is in all cases a right that is vested in him." [31] In the same way, Salmond speaks of the "possession of a right." [32] This usage causes Salmond to consider any discussion of the ownership of things as involving, by necessity, a logical elipsis.[33] Salmond's usage seems to be opposed to that of the profession generally; and Professor Cook, in criticizing this view, has pointed out that no such logical necessity in reality exists, if the nature of *personæ* be properly understood. A man "does not own the rights; he has them; because he has them, he 'owns' in very truth the material object concerned." [34]

Ownership may also be regarded as a relation between the owner and the thing owned. Thus Markby, though elsewhere defining ownership as a right, at one place speaks of it as being the relation between a person and a thing.[35] It is possible to view ownership as a factual relationship between a *persona* and the concept of a thing, and thus furnish an example of what Professor Kocourek would call "infra-jural relations." [36] Professor Kocourek's definition of ownership adopts this view: "Ownership is the infra-jural relation of the dominus of a jural relation to a jural thing which can be economically enjoyed." [37]

2. The more usual definition of ownership treats it, in form at least, as a right or a complex of rights. The Romans considered it as composed of or including a number of *iura: ius disponendi, ius utendi, ius abutendi, ius fruendi,* etc. Austin defines it as a "right indefinite in point of user, unrestricted in point of

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[31] SALMOND, JURISPRUDENCE § 86, p. 277.

[32] "We shall see that the possession of a right (*possessio juris, Rechsbesitz*) is the *de facto* relation of continuing exercise and enjoyment, as opposed to the *de jure* relation of ownership". *Ibid.*

[33] "We speak of owning, acquiring, or transferring, not rights in land or chattels, but the land and chattels themselves. That is to say, we identify by way of metonymy the right with the material thing which is its object. This figure of speech is no less convenient than familiar": *ibid.* § 87, p. 278.

[34] Cook, *Hohfeld's Contributions to the Science of Law,* (1921) 28 YALE L. J. 721, at p. 729.

[35] MARKBY, ELEMENTS OF LAW (4th ed. 1889) § 324, p. 160.

[36] KOCOUREK, JURAL RELATIONS (1927) 307.

[37] *Ibid.* c. 18, on *Things,* § 7.

disposition, and unlimited in point of duration, over a determinate thing." [38] Holland remarks that it is very difficult to define it, and adopts Austin's definition as perhaps the best.[39] Amos also expresses agreement with Austin, and formulates a parallel definition.[40]

It must be noted that, while these definitions take the form of rights, they involve the idea of relation more than of right in the technical sense. An indefinite right of user involves no necessary constraint on the liberty of others. The act of user on the part of the owner is not, therefore, the exercise of a right, in the sense of a jural relation, but is the exercise of a liberty. In a very true sense the right of user involves the idea of a factual relation between the owner and the thing. This may be made clearer by another passage in Austin: "The right of property or dominion (in so far as the right of user is concerned) may be resolved into two elements: first, the power of using indefinitely the subject of the right (thing); secondly, a power of excluding others (a power which is also indefinite) from using the same subject." [41] The first element, being a liberty only, suggests the infra-jural relation; the second element, at least with respect to material things, is nothing more nor less than the right to the possession (which is, in essence, an unpolarized claim to be in the infra-jural relation of possession). Thus these definitions are not entirely dissimilar to those first discussed.

Salmond himself defines that right, the ownership of which, according to his view, is treated as the ownership of the thing, as "a right to the entirety of the lawful uses of that object," which

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[38] 2 AUSTIN, LECTURES ON JURISPRUDENCE (3d ed. 1869) 817.

[39] HOLLAND, JURISPRUDENCE (9th ed. 1900) 195.

[40] "Two great leading divisions of Rts of Ownership . . . between them comprehend all conceivable Rights of Ownership: Dominium, or Absolute Ownership, in which the Mode of User, Duration of the Right, and facilities of Alienation are unlimited or indefinite": AMOS, SCIENCE OF JURISPRUDENCE (1872) 149.

The less considered definitions of the ordinary textbook are of this same general form. Thus: "ownership chiefly imports the right of exclusive enjoyment": WILLIAMS, REAL PROPERTY (24th ed. 1926) 2.

Compare also the definitions of Planiol and Baudry-Lacontinerie: PLANIOL, TRAITE ELEMENTAIRE § 2329, p. 723; BAUDRY-LACONTINERIE, DES BIENS § 199, pp. 149, 150.

[41] 2 AUSTIN, LECTURES ON JURISPRUDENCE, Lect. XLIX, p. 836.

emphasizes the same elements.[42] Gareis gives a similar definition.[43]

According to Terry, dominion, or full ownership, "is made up . . . of the right to possess and the right to use"—an analysis very similar to that of Austin quoted above.[44] After stating that the "right of property" is a complex right,[45] Terry examines one by one the various other rights so often included in the complex, as the right of alienation, the right to waste, and the right to take fruits.[46] His analysis indicates that such "rights" are also liberties, although the distinction was never made by him; and that they are not essential elements of ownership.

The question remains whether it is possible to define ownership in terms of true rights or jural relations. The idea of ownership as a complex of rights has, as we have seen, been a common one.[47] This complex, of course, is capable of being cut down by the alienation of an indefinite number of the rights which compose it.[48] What, then, is its mark of distinction, its badge of uniqueness? Terry speaks of the "indeterminate residuum of rights" after the splitting off of a determinate group.[49] Markby has stated that "an owner might be described as the person whose rights over a thing are only limited by the rights which have been detached from it."[50] Salmond also contributes to this view.[51]

[42] SALMOND, JURISPRUDENCE § 87, p. 280.

[43] GAREIS, SCIENCE OF LAW (1911), § 20, p. 139: "The essence of ownership is legal control over a thing in the totality of its connections. This idea is as extensive as the possibility of use".

[44] TERRY, PRINCIPLES § 281.

[45] *Ibid.*, § 345.

[46] *Ibid.*, § 349, p. 343; § 384, p. 377; § 383, p. 376.

[47] *Cf.* Professor Cook's remarks: "To say that *A* owns a piece of land is really to assert that he is vested by law with a complex—exceedingly complex, be it noted—aggregate of legal rights, privileges, powers, and immunities—all relating, of course, to the land in question": Cook, *Hohfeld's Contributions*, (1921) 28 YALE L. J. 721, at 729.

[48] "There seems to be no conceivable way or combination of ways of using a thing which cannot be broken off from the general right of use and erected into a separate right": TERRY, PRINCIPLES, § 390, p. 380. Terry terms them "fragments of the dominion".

[49] TERRY, PRINCIPLES, § 387, p. 378.

[50] MARKBY, ELEMENTS OF LAW, §318, p. 156.

[51] "He, then, is the owner of a material object who owns a right to the general or residuary uses of it after the deduction of all special and limited

It is evident that this residuary right is not merely the last one retained. This is demonstrated by the ability of the owner to sell land retaining a profit of mining. It must be a right of a peculiar nature.

A remark of Gareis is suggestive: "These rights of another may be so extensive that there may remain to the owner only an ultimate right of reversion, or *ius recadentiæ*." [52] It is submitted that this *ius recadentiæ* can best be defined as the right to the ultimate possession, although such right may be postponed until after the death of the *dominus*.[53] This definition can apply only to the ownership of things susceptible of possession, and it may be that professional usage includes as things which may be owned some which by their nature are not subject to possession.[54] We are not here concerned with that problem. Neither by adopting such a definition of the right of ownership do we intend to deny the existence of the infra-jural relation of ownership. The two concepts, while distinct, are always concomitant with each other when material things are involved. For our next purpose, discovering the tests by which we can ascertain the extent of ownership, we may emphasize the right.

Although ownership is here defined as a single right, it is not meant to negative the usual existence of a number of associated rights. The right to the ultimate possession is probably an un-

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rights of use vested by way of encumbrance in other persons": SALMOND, JURISPRUDENCE, § 87, p. 280.

[52] GAREIS, SCIENCE OF LAW, § 20, p. 139.

[53] Professor Kocourek recognizes a similar right of ownership: KOCOUREK, JURAL RELATIONS, c. 18, §8.

[54] Holland considers the right to possess "inherent in ownership" unless expressly severed: HOLLAND, JURISPRUDENCE 208. Holmes is in agreement. "But what are the rights of ownership? They are substantially the same as those incident to possession. . . . The great body of questions which have made the subject of property so large and important are questions of conveyancing, not necessarily or generally dependent on ownership as distinguished from possession": HOLMES, THE COMMON LAW (1881), 246. *Cf.* WILLIAMS, REAL PROPERTY, p. 2: "The right to maintain or recover possession of a thing as against all others may, we think, be said to be the essential part of ownership". If this is so, every encumbrance on land can be regarded, to that extent, as a postponement of the right to the possession.

That the idea of ownership as distinct from the right of possession of land and chattels, in both the Roman and Common Law, was a gradual growth from the idea of the right to possession, is clearly pointed out in an interesting article: Thayer, *Possession and Ownership*, (1907) 23 L. Q. REV. 175, 314.

polarized claim against the world in general, together with polarized claims against all having more immediate or narrower possessory rights. In itself it possesses the nucleus of a very extensive complex of rights, and usually we find with it a number of associated rights.[55] Such would be the appurtenant rights in the superjacent space if Dean Wigmore's view of the extent of vertical ownership proved to be the correct one. The definition is intended chiefly to provide the most nearly infallible means of identification.[56]

The idea of ownership of land presents a difficulty which needs disposition here. Since the Statute of *Quia Emptores* the strict legal theory in England has been that there can be no owner of land except the Crown,[57] and the fee simple of the tenant is merely an incumbrance on the ownership of the Crown.[58] However, this distinction between the fee simple of land and the complete ownership of it, is, as Salmond says, "a matter of form rather than of substance."[59] In the United States and elsewhere, what is called a fee simple is usually equivalent to com-

[55] As an illustration of this association of rights, the interesting discussion by Holmes of easements "inhering in a thing" points out that easements "have become an incident of land by an unconcious and unreasoned assumption that a piece of land can have rights". Thus, once an easement is acquired, it follows the possession of the dominant tenement into the hands of a disseisor: HOLMES, THE COMMON LAW 381-409. *Cf.* 2 AUSTIN, LECTURES IN JURISPRUDENCE (4th ed. 1879), 846, 847; Sims, *A Study of the Rights Incident to Realty*, (1921) 7 VA. L. REV. 327; (1922) 8 *ibid.* 317. This is an instance of a right which arises because of the recognition by the law in another connection of the infrajural relation of possession. It is thus elliptical, as Holmes pointed out, to speak of the easement as "belonging to the land".

[56] A distinction should be noted here between *ownership* and *property*. *Property* is undoubtedly a broader term, in whichever of several senses it is used.

[57] Since no strict-type legal relations, involving constraint, can exist between the sovereign and its subjects, the ownership of land by the State is to be termed such only by analogy. *Cf.* 2 AUSTIN, *op. cit. supra* note 55, Lect. XLIX, at 830. The ownership of land, because of its social indispensability, is hedged about with limitations much more so than that of chattels. Eminent domain and escheat are examples; and the police power of the State is an inexhaustible source of others. These limitations must not be regarded as affecting the essence of ownership.

[58] *Cf.* WILLIAMS, REAL PROPERTY 6, 7; SALMOND, JURISPRUDENCE § 154, p. 447; TERRY, PRINCIPLES § 45, p. 33; 2 BL. COMM. 105.

[59] SALMOND, JURISPRUDENCE, § 154, p. 448; WILLIAMS, *op. cit. supra* note 58. "It possesses, indeed all the incidents of absolute ownership except the form".

plete ownership, and our tenure of land is all allodial.[60] We shall consequently overlook this somewhat technical distinction, and regard the fee simple tenant as an owner in the same sense as the owner of a chattel.

III. Tests for Extent of Ownership

If the right of ownership be defined as the right to the ultimate possession, it is evident that ownership does not exist where possession is not recognized although the nature of the thing would permit it. Also, when possession of a thing is recognized and protected by the law, it would seem that ownership must of necessity also exist. An exception to this latter proposition seems to occur where the positive law of a state, as in Soviet Russia, expressly abolishes "private property," but permits possession on the basis of "rights of enjoyment." This somewhat anomalous situation may be regarded in two ways: first, the right to the ultimate possession is still recognized, but is inseparable from the right to the immediate possession; second, the right to the ultimate possession has a meaning only when there can be an ultimate as distinguished from a present possession, and hence does not now exist in Russia. Since the express intent is to abolish private ownership, and the first solution would be somewhat inartistic in its retention of an unnecessary concept, the second view seems the preferable one.[61]

In determining the vertical extent of ownership in the land-space, the cases of most value will be those which treat of acts which have been or are to be performed either above or below the surface, and which refer to the land-space. Such cases will show whether the acts, when performed by another than the owner, are breaches of the duties imposed by the owner's claims. A difficulty arises from the fact that there is no form of action in the Common Law in use today which may be brought by an

[60] Terry, *loc. cit. supra* note 58. Per Woodward, J., in Pierson v. Armstrong, 1 Iowa 282 (1855), "We, in general, own our land in simple absoluteness, and need not talk of allodium or free and common socage".

[61] The State does not become the owner, and the possessor a tenant, since, as has been previously remarked (*supra* note 57), real ownership by the State is an inherent impossibility.

owner simply because of his ownership. The two propositions with regard to possession offer a partial solution of the impasse. If the act which has been performed above or below the surface is held to violate a possession, we may assume that a present right to the possession, and hence an ultimate right to the possession (or ownership) is recognized by the law in that which is invaded by the act above or below the surface. The opposite deduction can be drawn from an opposite holding.

This solution requires a fundamental assumption—that the law can conceive of possession of space. *Detention* and *prehension* are ideas which are applied to the factual evidences of possession, and a first reaction rejects them as applicable to the relation of a human being to space above. This difficulty is one which confronted the courts in several of the decisions later to be considered here.

We find this passage in Savigny: "By the possession of a thing, we always conceive the condition in which not only one's own dealing with the thing is physically possible, but every other person's dealing with it is capable of being excluded." [62] The idea of exclusion of others is as easily applied to land-space as to land-matter. Can one "deal" with space? Since all objective human acts require space for their performance, those usually admitted as evidence of possession of land are as applicable to space as to a quantum of matter. In fact, their only relation to land-matter is in the spatial element of their definition. Except for the act of delivery of seisin in medieval law, possession of land never involved a prehension, or its similar ideas, in a lay sense; a juridical extension of ideas applicable to chattels is the source of confusion. There need be no logical difficulty in the application of the concept of possession as a factual relation to land-space.

Reference to the formal distinctions between actions is received with less and less favor as procedural strictness is relaxed; but in this discussion some consideration must be given to the technical nature of certain forms of action at law and suits in equity.

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[62] SAVIGNY, POSSESSION (6th ed. 1848) bk. 1, §1.

1. Trespass on the case for nuisance involves no violation of an ownership or possessory right; the act affects other claims of the landowner or possessor, such as those to his corporal integrity, to his undisturbed use of the surface of the land, to what Dean Wigmore calls his "sensory comfort," and the like.[63] The nature of case for nuisance is best understood by comparing it to trespass *quare clausum fregit.* In trespass the claim of the owner is for the non-violation of his undisturbed possession.[64] A breach of the duty correlative to this claim by the trespasser imports damage; every trespass (or act, the negative of which forms the content of this claim), no matter how small, imports damage in strict common-law jurisdictions.[65] The maxim, *de minimis non curat lex,* has no application here. Nominal damages at least can be recovered, at least in states which have not abolished such a recovery. On the other hand, case for nuisance requires the proof of actual damage; the act complained of is not in violation of any duty unless such damage results. Lord Justice Vaughan Williams differentiated them as follows:

> "An action of nuisance is different from an action of trespass. An action of trespass is the action which was

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[63] That there may be an actionable nuisance though the defendant own no land (no servient tenement) apparently was settled in the case of Lyons and sons v. Wilkins, [1899] 1 Ch. 255.

[64] "Trespass is the wrongful disturbance of another person's possession of land or goods": POLLOCK, TORTS 348. *Cf.* WILLIAMS, REAL PROPERTY 57n. However, one entitled to have the possession at the time of the trespass can bring the action: Ryan v. Clark, 14 Q. B. 65 (1849); Ward v. Taylor, 1 Pa. 238 (1845); Hersey v. Chapin, 162 Mass. 176, 38 N. E. 442 (1894); Fitch v. Boston & P. R. Co., 59 Conn. 414, 20 Atl. 345 (1890); JAGGARD, HANDBOOK OF THE LAW OF TORTS (1895) § 212, pp. 663, 664; UNDERHILL, TORTS (10th ed. 1922) art. 127, p. 273. But he must have ousted the actual possessor and be in possession before he can succeed in the action: Chicago & W. I. R. Co. v. Slee, 33 Ill. App. 420 (1889); Potter v. Lambrie, 142 Pa. 535, 21 Atl. 888 (1891); Wood v. Michigan Air Line R. Co., 90 Mich. 334, 51 N. W. 265 (1892); JAGGARD, TORTS, *loc. cit.;* UNDERHILL, TORTS, *loc. cit.;* Ryan v. Clark, 14 Q. B. 65 (1849); Butcher v. Butcher, 7 B. & C. 399 (1827). Such entry relates back to the time of the trespass: Anderson v. Radcliffe, El. Bl. & El. 806 (Eng. 1858); Ocean Accident & Guarantee Corp. v. Ilford Gas Co., [1905] 2 K. B. 493; UNDERHILL, TORTS, *loc. cit.*

For the possessory remedies of German Law, *cf.* B. G. B. §§ 861, 862. For an historical discussion, see Deiser, *The Development of Principle in Trespass,* (1917) 27 YALE L. J. 220.

[65] Entick v. Carrington, 19 How. St. Tr. 1029 (Eng. 1765). Pollock, speaking of the rule in this case, remarks, "'Property' here as constantly in our books, really means possession or a right to possession": POLLOCK, TORTS 350.

> brought where the body of the land of a person had been invaded. An action of nuisance is the action which was brought where there was no invasion of the property of somebody else, but where the wrong of the defendant consisted in so using his own land as to injure his neighbor's." [66]

The difference is significant for our purposes because a recovery in nuisance for an act committed physically above or below the surface means no more than that what Dean Wigmore would call an *appurtenant* right of the landowner has been violated; while a recovery in trespass means that the court has considered that there is something above or below the surface the possession of which may be violated, unless in some way the act is considered to be a violation of the possession of the surface.[67]

2. In cases of a continuing nuisance, or a permanent nuisance, where damages attainable by the action at law would not be adequate, a suit in equity may be brought. The line of demarcation here is not so easily drawn, since what is known as a continuing trespass may be treated as a nuisance for purposes of this suit or similar suits. In such cases the reasoning of the court is our best guide as to what is actually decided by the decree.

3. A third remedy at law which has significance for us is the action of ejectment. Shorn of its historical fictions, the gist of the action is the violation of a duty correlative to the claim of the landowner or possessor to have the possession of a thing,

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[66] In Kine v. Jolly, [1905] 1 Ch. 480. A breaking into or upon land is the whole gist of the action: Cubitt v. Porter, 8 B. & C. 257 (1828).

[67] *Cf.* the following passage from Wigmore: "The right which protects this Interest (in Realty) is a right to exclude other persons from the Thing; in particular, that the thing shall not be, at the hands of the obligor,

a. impaired in its materials.

b. intruded upon in its space . . . (entering a house without any conceivable impairment of it): WIGMORE, *Summary of the Principles of Torts*, in 2 SELECT CASES IN TORTS 857, 858. A little later he adds (p. 858), "Whether an intrusion into the airspace above land is a trespass, depends on the scope of the Interest as governed by the principle of §102 (*supra*). Impairment of affluent elements (air, water, electricity, etc.) would be regarded as a trespass on the case". It is interesting to note Dean Wigmore's phrase, "intruded upon in its space", in connection with his view as to the nature of land.

Hazeltine remarks concerning the case of Pickering v. Rudd, 4 Camp. 219 (Eng. 1815): "Now I take it that Lord Ellenborough has here touched upon the test as to whether or not the column of air is in the ownership of the one owning the land below it—that test being, namely whether or not an action of trespass will lie for interference with the column of air in the space above the land": HAZELTINE, LAW OF THE AIR 65.

which thing must usually be in the category of so-called *corporeal hereditaments.* Here the immediate claim is to be restored to the possession.[68] The difference from trespass is summed up in the word *ouster*—a rather difficult legal term.[69] To maintain ejectment, there must be an ouster of the plaintiff from a possession to which he is entitled.[70] Another requirement usually added to the bringing of the action is that the possession can be delivered to the plaintiff by the sheriff under the writ of *habere facias possessionem* which accompanies the judgment.[71] A judgment in ejectment brought for an ouster either above or below the surface is even stronger evidence than trespass of the existence of a right to possession of the land-space and, presumably, ownership of it;[72] unless, again, such an ouster of possession

[68] The plaintiff must show a right of possession or right of entry in himself: Payne v. Treadwell, 5 Cal. 310 (1855); McMasters v. Torsen, 5 Idaho 536, 51 Pac. 100 (1897); Jones v. Lofton, 16 Fla. 189 (1877); Barco v. Fennell, 24 Fla. 378, 5 So. 9 (1888); Farley v. Craig, 15 N. J. Law 191 (1836); Lawrence v. Hunter, 9 Watts 64 (Pa. 1839); Cincinnati v. White, 6 Pet. 431 (U. S. 1832); Love v. Simms, 9 Wheat. 515 (U. S. 1824); Kirk v. Hamilton, 102 U. S. 68 (1880).

[69] *Cf.* WIGMORE, *op. cit. supra* note 8, at 859.

[70] The defendant must be in possession at time action is brought: Garner v. Marshall, 9 Cal. 268 (1858); Jones v. Lofton, 16 Fla. 189 (1877); Scisson v. McLaws, 12 Ga. 166 (1852); Reed v. Tylor, 56 Ill. 288 (1870); Ellicott v. Mosier, 7 N. Y. 201 (1852); McIntire v. Wing, 113 Pa. 67, 4 Atl. 197 (1886); and many other cases.

[71] Tenn., etc. R. Co. v. East Alabama Ry. Co. 75 Ala. 516 (1883); Beatty v. Gregory, 17 Iowa 109 (1864); Farley v. Craig, 15 N. J. L. 191 (1836); Child v. Chappel, 9 N. Y. 246 (1853); Hancock v. McAvoy, 151 Pa. 460, 25 Atl. 47 (1892).

[72] Some difficulty in applying the action of ejectment to intrusions, especially below the surface, arises from a modification of the original requirements of the actions. In the early case of Wilson v. Mackreth, 3 Burr. 1824 (Eng. 1766), it was held that trespass lies in favor of any one with an exclusive right, as of turbary. Following this case, in Comyn v. Kyneto, 2 Cro. Jac. 150 (Eng. 1602), ejectment was allowed for a coal mine and a boyllery of salt, although the coal mine was only a profit, of which there could be no possession. This was reaffirmed in Port v. Turton, 2 Wils. K. B. 169, 95 Eng. Rep. 748 (Eng. 1763), where the basis was stated to be that a mine is an interest in land. In Alabama State Land Co. v. Thompson, 104 Ala. 570, 16 So. 440 (1894), ejectment was allowed without discussion for "minerals reserved" in a deed. This was followed by Moragne v. Doe dem. Moragne, 143 Ala. 459, 39 So. 161 (1904), where it was held that ejectment will lie to recover a *mineral interest* in lands.

The rule of these and similar cases has been interpreted to be that ejectment may lie for a so-called *incorporeal hereditament,* if capable of physical delivery. Thus the grant of a right to quarry and remove stone from land for a specific purpose is sufficient foundation for an action of ejectment: Reynolds v. Cook, 83 Va. 817, 3 S. E. 710 (1887): *accord,* Integral Min. Co. v. Altoona Min. Co., 75 Fed. 379 (C. C. A. 9th, 1896). *Cf.* 9 R. C. L. 831. There is

can be construed to be an ouster of possession of the surface.[73]

For purposes of convenience, our inquiry can be divided, first, with reference to acts to be performed above the surface; and second, with reference to acts to be performed below the surface, noting also the points of similarity in result, if any exist.

IV. Extent of Ownership in Superjacent Space

We have noted four possible views regarding the space above the earth; but three of them adopt the same general point of view, with minor variations, so that there are two principal attitudes to be taken: first, it is a subject of ownership; second, it is not subject to ownership, and invasions of it are only actionable when they are breaches of duties otherwise owed the landowner.

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great confusion among the various jurisdictions at this point. The courts speak of "entering into possession" of mining rights: Beatty v. Gregory, *supra*, note 71; Kirk v. Mattier, 140 Mo. 23, 41 S. W. 252 (1897); Karns v. Tanner, 66 Pa. 297 (1870). There can be no possession in a real sense of an incorporeal hereditament. If the rule was based on a possession of land under the incorporeal hereditament, it might be understandable; but the same courts refuse ejectment for an exclusive license, even when a right to a mineral or oil as a chattel is given if found: Union Pet. Co. v. Bliven Pet. Co., 72 Pa. 173 (1872). This modification of the usual requisite of the action of ejectment decreases its usefulness as a test of the ownership of space beneath the surface, as it is oftentimes difficult to discover just what the allowance of the action means. See, generally, note, *Right of owner of interest in mineral in situ to maintain ejectment*, (1925) 35 A. L. R. 234; and note, (1906) 116 Am. St. Rep. 568.

[73] Assuming for a moment that possession of the land-space, as distinct from either the soil matter or the geometric surface, is recognized by law, it may be asked what sort of an intrusion should be regarded as disturbing it. The instinctive answer would require space-occuping matter, either animate or inanimate. If so, gas, smoke, and bad odors (having, undoubtedly a material embodiment) would answer the description, and it is doubtful if the question has ever been raised in court, since the invocation of other remedies requiring less bizarre reasoning is generally possible. What logic requires material substance as the intruding agency? We find numerous remarks, both by textwriters and by the authors of decisions, which suggest that an intrusion by the projection of force answers the requirement. *Cf.*, for example: Forbell v. City of New York, 164 N. Y. 522, 58 N. E. 644 (1900); Watson v. Mississippi, etc., Co., 174 Iowa 23, 156 N. W. 188 (1916); Louden v. City of Cincinnati, 90 Ohio St. 144, 106 N. E. 970 (1914); Chapin, Torts § 75, p. 350 and note.

Several different types of *force* entirely dissociated from a material embodiment might be enumerated: vibrations, as those caused by blasting; which affect the material mass of the land; attraction, as that of a vacuum, as in the Forbell case, *supra;* electricity, which may be the passage of electrons; hertzian waves, as in the suggested trespass by radio. The question may have some implications for our theory of the identity of land; for instance, vibrations which affect the surface of the land may alone be treated as trespasses, suggesting the idea of land as a geometric surface. It is, however, practically

Acts to be performed above the surface which involve an invasion of the air-space are of several kinds.[74] Chief among them are:

1. The allowance of trees, shrubs, or other natural growths to overhang neighboring land.
2. The raising of projecting structures.
3. The stringing of wires across land.
4. Physical intrusion by man or his agents into the space.
5. Firing of projectiles through the space.
6. The passage of balloons, airplanes, and the like through the air-space.

It is assumed that in each of the above instances the act is to be performed without any contact with the material of the land the possession of which is invaded.

1. *Overhanging natural growths.* Apparently neither trespass [75] nor ejectment [76] lies for an invasion of the air-space over one's land by the trees, shrubs, or other natural growths belonging to a neighbor. Neither is any easement created in favor of him who owns the trees.[77]

On the other hand, overhanging trees or vegetation growing entirely from adjoining land, which actually cause damage, constitute a nuisance.[78] The landowner, however, is allowed reme-

irrelevant here, and the discussion will be confined to intrusions by space-occupying matter, outside of gas, smoke, and odors.

[74] For general discussion of cases on this subject, see the following notes: *Ejectment for Encroachments on Land above the Surface,* (1906) 19 HARV. L. REV. 369; *The Air Space as Corporeal Realty,* (1916) 29 HARV. L. REV. 525; *Trespass by Airplane,* (1919) 32 HARV. L. REV. 569; *Trespass by Acts above Surface,* (1926) 42 A. L. R. 945 (where it is stated that "the orthodox common law rule is that any intrusion into the air-space above the land of another amounts to a trespass"); (1906) 116 Am. St. Rep. 568. See also, 1 TIFFANY, REAL PROPERTY § 251, who remarks: "Whether the owner of land, in the ordinary sense, actually owns the air space above the land . . . is a question of difficulty".

[75] Lindley, L. J., in Lemmon v. Webb, [1894] 3 Ch. D. 1: "I can find no authority for the proposition that an action of trespass would lie in such a case".

[76] 1 R. C. L. 401; 9 *ibid.* 858.

[77] Lemmon v. Webb, [1895] A. C. 1.

[78] Crohurst v. The Burial Board of the Parish of Ambersham, 4 Ex. D. 5 (1878) (plaintiff's horse poisoned by eating from overhanging branches); Smith v. Giddy, [1904] 2 K. B. 448 (plaintiff's fruit trees damaged by defendant's overhanging trees); Grandona v. Lovdal, 70 Cal. 161, 11 Pac. 623 (1886).

dies more speedy and effective than case for damages. He may summarily abate the nuisance by trimming back the overhanging branches.[79] He has also the right to a mandatory injunction.[80]

The right to cut back is solely due to the existence of a nuisance, and not because the owner of the land overhung has any property right in the parts which overhang.[81] This is an illustration of where the maxim, *cuius est solum,* etc., does not apply strictly. It necessarily follows that the owner of the tree is entitled to all the fruit, and to the branches which have been cut off.[82]

The mere denial of trespass and ejectment in these instances throws little light on our problem. Trespass did not lie at common law for a non-feasance.[83] The act which is relied upon to breach a duty in this case, if the duty exists, is a negative one, a non-feasance—the non-prevention of the overhangs. Overhanging trees are multitudinous in number; to allow an action in every case would lead to endless litigation, with no purpose served. These cases are not therefore based upon a non-recognition of possession of the air-space; in fact, they avoid that problem, and are decided on other grounds.

We may safely conclude, therefore, that nothing in the rules

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[79] Lemmon v. Webb, *supra* note 77; Hickey v. Michigan Central Ry. Co., 96 Mich. 498, 55 N. W. 989 (1893); Grandona v. Lovdal, 70 Cal. 161, 11 Pac. 623 (1886); 1 R. C. L. 401. The situation is paralleled by intruding roots below the surface. Thus, in Buckingham v. Elliott, 62 Miss. 296, (1884), case for nuisance lay when roots intruded and polluted a well. Summary abatement if actual damage results was allowed in the Grandona case for roots as well as branches. *Accord,* Herndon v. Stultz, 124 Iowa 440, 100 N. W. 329 (1904). Actual damage must be proved both above and below the surface. The French law on this subject is similar: BAUDRY-LACONTINERIE, DES BIENS §§ 332, 337.

[80] Grandona v. Lovdal, *supra* note 79; Tanner v. Wallbrunn, 77 Mo. App. 262 (1898) (only in case of necessity).

[81] Lyman v. Hale, 11 Conn. 177 (1836).

[82] Hoffman v. Armstrong, 48 N. Y. 201 (1872); *cf.* 1 R. C. L. 401.

Justice Lott remarked: "The rule or maxim giving the right of ownership to everything above the surface to the owner of the soil has full effect without extending it to anything entirely disconnected with or detached from the soil itself". This can be accepted with the comment that to construe the maxim *usque ad coelum* to include in the ownership of land the ownership of all things above has never been the inflexible rule of the courts. That maxim, and *superficies solo cedit* as well, are mainly rules of construction and the source of certain presumptions, generally rebuttable. The existence of a tree as a thing distinct from the other legal thing, land, is clearly recognized by the rule which makes adjoining neighbors tenants in common in a tree on the boundary.

[83] 2 JAGGARD, LAW OF TORTS (1895) § 211, p. 661.

of our law with regard to overhanging trees furnishes an argument one way or another as to the extent of ownership in landspace.[84]

2. *Structures raised by man.* We come now to a subject which has been much discussed in the courts. The situation arises when a building or other structure is raised wholly on one side of a boundary line, some part of which projects across the line and overhangs the adjacent plot.[85]

As early as 1611, *Baten's Case*[86] had advanced the rule that where the defendant built a house which "did jut over" the plaintiff's messuage, case for nuisance was sustained.[87] In the celebrated case of *Pickering v. Rudd*,[88] Lord Ellenborough was moved to remark concerning the rights of aeronauts by the allegation that a board was projecting over another's land, as a basis for trespass *quare clausum fregit*. The proof did not materialize, and Lord Ellenborough's remarks were therefore relegated to the condemned classification of *dicta*.[89]

Thirty years later a cornice, aggravatingly throwing water on an adjoining lot which it overhung, was adjudged a nuisance,

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[84] See note, *Rights and remedies in case of encroachment of trees, shrubbery, or other vegetation across boundary line*, (1922) 18 A. L. R. 655. The German law in this field is discussed by SCHUSTER 388, 389; HUEBNER, HISTORY 264.

[85] "No man may erect any building or the like to overhang another's land": 2 BL. COMM. 18. The following passage from Baudry-Lacontinerie gives us a summary of the French law: "Le propriétaire du sol n'a pas seulement la liberté d'élever des constructions, de faire des plantations, mais le droit exclusif qu'il possède sur la colonne d'air située au-dessus de son fonds lui permet aussi d'arrêter les empiètements des tiers sur ce domaine aérien, d'exiger la démolition des constructions en saillie sur sa propriété, la suppression de la portion des bâtiments dont la projection verticale atteindrait le sol qui lui appartient": BAUDRY-LACONTINERIE, DES BIENS § 337.

[86] 9 Coke 53b (1611). Compare this case with one in the Digest which is considered a possible source of our old friend, the maxim: Dig. xliii, 24 fr. 22, § 4. An interdict *Quod vi aut clam* could be raised against one who interfered by a *projectum* with the free airspace above the burial ground of a neighbor (*sepulchrum*).

[87] Still earlier, in 1598, in Penruddock's Case, 5 Coke 100 (1598), the court had held that a *quod permittat* well lay against an overhanging house.

[88] 4 Camp. 219 (Eng. 1815).

[89] Hazeltine remarks: "We may well believe that Ellenborough inclined rather to the opinion that trespass could only be committed by some actual physical contact with something visible. . . . It seems clear that his legal reason for hesitation was that . . . in the case of the flight of the aeronaut, he could see no interference with the possession of the land itself": HAZELTINE, LAW OF THE AIR 65.

but one from which the law would infer injury, so that there was no need of proving rain had fallen.[90] The declaration was in case, and the court held that it was not to be construed as alleging a trespass. This was held because there was nothing in the allegation negativing the possibility that it was lawfully there, since the maxim *usque ad coelum* was a rebuttable presumption and not always applicable. The case was that of *Fay v. Prentice.*[91] In the course of the argument, Maule, J., indicated that unless there was evidence to rebut the maxim it would have been a trespass, saying: "I think there is no doubt but that trespass would lie here; but can the plaintiff maintain case without showing some consequential damage?" [92]

The courts of the United States have uniformly treated such projections at least as nuisances. Thus, in the early case of *Pierce v. Lemon,*[93] in an action of trespass on the case, Gilpin, C. J., charged the jury that if they found that a roof or cornice projected, "it would constitute an unlawful and wrongful encroachment upon his property and an injury to his possession of it and his legal rights to it." Case for nuisance for an overhanging wall was allowed in *Langveldt v. McGrath.*[94] It is to be noted that the action in that case was originally ejectment, but was changed to case by consent of the parties.

California seems to recognize no other form of redress than nuisance. In *Meyer v. Metzler,*[95] a leaning brick wall was abated as a nuisance on the ground that the plaintiff was thereby prevented from raising and repairing his own building. In *Kafko*

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[90] Discharging roof water by spouts on to plaintiff's land is a trespass: Conner v. Woodfill, 126 Ind. 85, 25 N. E. 876 (1890).

[91] 1 C. B. 828 (1845).

[92] One text book raises a question which does not seem to have occurred to any court or other text writer. "Even assuming from the particular facts of the case that there is a right of property in the overlying airspace, it must still be a matter of some doubt whether under a lease of the surface the possession of the air space will pass so as to render the lessee the proper person to sue for a trespass upon it. The question has never yet arisen, but probably the lessor would not be held to have assigned greater than was necessary:" CLERK AND LINDSELL, TORTS 334.

[93] 2 Houst. 519 (Del. 1862).

[94] 33 Ill. App. 158 (1889).

[95] 51 Cal. 142 (1875). *Accord,* Barnes v. Berendes, 139 Cal. 32, 72 Pac. 406 (1903).

v. Bozio,[96] such a situation was held to be a continuing nuisance for which successive actions will lie. The case here is especially interesting because of the remarks of Myers, J., as follows: "The wrong here complained of was an encroachment, not upon the plaintiff's land, but upon the space above the land, and therefore was not a trespass but a nuisance." This is due to the inescapable implication of the definition of land laid down in the California Civil Code, which has been already noted. We may conclude that ownership, in California, does not include the air-space above; and that encroachments into that air-space are violations of other than proprietary rights, or of proprietary rights to the surface by indirect disturbance of the enjoyment thereof.

Massachusetts expressly approved and applied the doctrine of *Baten's Case* and of *Fay v. Prentice* in *Codman v. Evans*.[97] Here the declaration was held to be a good count in an action of case in alleging the wrongful keeping or continuing of the projection. Bigelow, C. J., in the course of his opinion, remarked:

> "It may be that an action of trespass might have been brought for the erection and continuance of the structure described in the declaration. . . . We are not called on to decide that."

In *Harrington v. McCarthy*,[98] the Massachusetts court granted a mandatory injunction in the case of a projecting cornice, though it was over a private driveway and not actually harmful, because the encroachment was intentional. Making no distinction above and below the surface, the injunction was refused as to occasional stones in the foundation which projected, as they were unintentional encroachments, and for them the plaintiff was left to his remedy at law.[99]

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[96] 191 Cal. 746, 218 Pac. 753 (1923).

[97] 89 Mass. 431 (1863).

[98] 169 Mass. 492, 48 N. E. 278 (1897).

[99] See, generally, note: *Nuisance by encroachment of walls or other parts of building on another's land as permanent or continuing*, (1924) 29 A. L. R. 839. In accord with the principal case: Young v. Thedieck, 28 O. C. A. 239 (Ohio 1918) (mandatory injunction against cornice projecting over another building without causing injury); Mayer v. Flynn, 46 Utah 598, 150 Pac. 962 (1915) (projecting eaves ordered removed in equity); Lyle v. Little, 83 Hun 532, 33 N. Y. Supp. 8 (1895) (overhanging wall enjoined).

There is not so much uniformity as to whether trespass *quare clausum fregit* will lie. California, as we have seen, expressly refuses the remedy. However, in the Massachusetts case of *Smith v. Smith,*[100] trespass was allowed for projecting eaves, and *Codman v. Evans* was cited as authority. In New York mandatory injunctions were allowed in *Hall v. Sugo* [101] and *Crocker v. Manhattan Life Ins. Co.*[102] The first case was one of projecting eaves, and the second was one where the part of the building which projected was high in the air. The court based the injunction, not on the ground of nuisance, but on that of continuing trespass. In the case of *Puorto v. Chieppa,*[103] a projection of one inch was held a trespass for which at least nominal damages lay. Where the crossarms of telephone poles extended over adjoining land, the Kentucky court found a continuing trespass.[104] In the case of *Esty v. Baker,*[105] trespass was allowed for running a shaft under a bridge on a passageway, in the air, without touching a timber or the ground. The court considered this a "breaking of the close."

Whether or not ejectment will lie for protruding superstructures has been the occasion for much debate. An inferior New York court allowed ejectment for an overhanging wall in an early case, *Sherry v. Frecking.*[106] The appellate division of

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In Lawrence v. Hough, 35 N. J. Eq. 371 (1862), it was held that the defendant was entitled to cut off overhanging eaves, and an injunction against his doing so was refused. Summary abatement, without notice, upheld in case of overhaging eaves and spout: Copper v. Dolvin, 68 Iowa 757 (1886).

French courts have ordered the destruction of a wall projecting over a neighbor's land: Cass., 15 juill. 1901, S. 1902, 1. 217., and note by M. Naquet. *Cf.* PLANIOL, TRAITÉ ÉLÉMENTAIRE § 2329, p. 723.

[100] 110 Mass. 302 (1872).

[101] 46 App. Div. 632, 61 N. Y. Supp. 770 (1899).

[102] 61 App. Div. 226, 70 N. Y. Supp. 492 (1901) (in lower court, 31 N. Y. Misc. 687). See comment on this case, (1900) 14 HARV. L. REV. 300.

[103] 78 Conn. 401, 62 Atl. 664 (1905).

[104] Cumberland Telephone & Telegraph Co. v. Barnes, 30 Ky. L. Rep. 1290, 101 S. W. 301 (1907). In Harris v. Central Power Co., 109 Neb. 500, 191 N. W. 711 (1922), it was considered that a power company would have to secure permission from landowner abutting on highway to project its cross arms over his land.

[105] 48 Me. 495 (1860). In Gifford v. Dent, (1926) W. N. 336 (Eng.), an English court held a projecting sign a trespass. Projecting eaves were held not to trespass, *dictum* in Bureau v. Marshall, 55 Mich. 234, 21 N. W. 304 (1884).

[106] 4 Duer 452 (N. Y. 1855).

the Supreme Court, which had no power directly to overrule the case, disapproved of it in the case of *Aiken v. Benedict.*[107] The plaintiff in that case alleged projecting eaves and gutters, cited the maxim, and claimed dispossession. The court replied:

> "This was undoubtedly a violation of the rights of the plaintiffs, but we think ejectment, or an action to recover the possession of real estate, was not the appropriate remedy. Of what has the defendant taken possession which belongs to the plaintiffs? Clearly nothing but an open space of air over the material land of the plaintiffs. How could the sheriff put the plaintiffs in possession of that space? It is not perceived how it could be done. If it could be done in one case, it could be done in every case, without reference to the locality of the space, provided it be superincumbent to the plaintiff's soil." [108]

In logical development of this chain of thought, the court intimated that the proper remedy for the plaintiff was in case for nuisance. It was not until the *Butler* case,[109] which will be discussed later, that the Court of Appeals was called upon to pass directly upon the question.

In the meantime, several other jurisdictions had been called upon to decide the matter, and quite frequently the early New York cases were cited. Ejectment was allowed in Vermont for a projecting roof in the case of *Murphy v. Bolger.*[110] Here the court was very explicit in their reasoning, and the opinion of Tyler, J., shows an entirely different conception of the effect of the projection than that of the New York lower court:

> "Could the plaintiff maintain ejectment for the intrusion? If not, it would be because the intrusion was not upon the land itself, but the space above it. If he could not main-

[107] 39 Barb. 400 (N. Y. 1863) *Accord,* Vrooman v. Jackson, 6 Hun 326 (1876) (in same court).

[108] As has already been noted, ability of the sheriff to deliver possession under a writ of *habere facias possessionem* is a requisite to the allowance of ejectment, and the New York court was committed to the doctrine: Child v. Chappel, 9 N. Y. 246 (1853). In Jackson v. May, 16 Johns. 184 (N. Y. 1819), language of the court was to the effect that ejectment would only lie for something attached to the soil.

[109] Butler v. Frontier Telephone Co., 186 N. Y. 486, 79 N. E. 716 (1906).

[110] 60 Vt. 723, 15 Atl. 365 (1888).

> tain ejectment, he would be obliged to submit to the invasion, and only have his damages therefor. The law, however, says the land is his even to the sky, and therefore he has a right to it, and should not be compelled to part with any portion of it upon the mere payment of damages by the trespasser. . . ."

Especially significant is this remark:

> "The plaintiff was disseised of his land, and the defendants were in the wrongful possession by their projecting roof."

Here there can be no doubt that the court considered the airspace above the surface subject to possession.

Wisconsin has worked out an interesting doctrine in regard to ejectment for projections both below and above the surface. In *McCourt v. Eckstein,*[111] the court held that a six-inch projection of defendant's foundation wall was a disseisin sufficient to support ejectment. Dixon, C. J., doubted this, believing the remedy to be trespass, since this was a "casual and unintentional trespass upon the land of another without claim of title." The court apparently was not disturbed by the problem which troubled the New York court—the delivery of possession by the sheriff. It was several years before the problem was again presented by the second appeal in the case of *Zander v. Valentine Blatz Brewing Co.*[112] In this case an encroaching foundation wall was again involved, but a building of the plaintiff's occupied the surface over the projection. After citing previous cases for the doctrine that certain acts could be treated by the plaintiff at his election as an ouster, or otherwise as a trespass, the court said of the plaintiff before it:

> "He has not treated it as a disseisin. On the contrary, by allowing his building to remain upon the foundation, and by occupying that building up to his line continuously, he has undoubtedly elected to treat the defendant's act in building the wall as a mere trespass."

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[111] 22 Wis. 148 (1867).
[112] 95 Wis. 162, 70 N. W. 164 (1897).

Here the action of the plaintiff in occupying the surface gave him possession, so that he could not bring ejectment, but was constrained to seek damages in trespass. Apparently possession of the surface was the possession of the land.

The next year the case of projecting eaves came up in *Rasch v. Noth.*[113] The plaintiff's eaves also overhung the strip of land, being built under the defendant's in such a manner as to carry the water from defendant's roof onto the defendant's land, together with water from plaintiff's roof. Here again ejectment was refused, on the same ground as the *Zander* case, that the plaintiff had elected not to treat the projection as a disseisin. While nothing was said as to the possession of the surface, it is to be inferred that the plaintiff had not lost his possession, as was evidenced by the position of his own eaves. The court suggested trespass or the abatement of a nuisance as remedies for the plaintiff to seek.[114] The next case, *Rahn v. Milwaukee E. R. & L. Co.,*[115] was similar to the *Zander* case, and so the court noted in its opinion. Coming back to a case of eaves, the court, in *Huber v. Stark,*[116] stated: "This state is committed to the doctrine that if, notwithstanding the encroachment, the owner of the premises invaded really occupies up to his boundary line, the proper action and redress for the interference is one for damages, or to abate the aggression as a continuing nuisance." The court granted an injunction against the continuing trespass in order to prevent the acquisition of an easement of eavesdrip.

A final statement of the doctrine is to be found in *Beck v. Ashland Cigar and Tobacco Co.:*[117]

> "The doctrine is therefore firmly intrenched in this state that when there is an intrusion into the premises of another either below or above the ground, but he is undisturbed in his possession of the surface of his land up to the

[113] 99 Wis. 285, 74 N. W. 820 (1898).

[114] In Christensen v. Badger Improvement Co., 187 Wis. 598, 204 N. W. 510 (1925), a landowner was allowed summarily to remove an overhanging gutter, after he had given notice of his intention to do it.

[115] 103 Wis. 467, 79 N. W. 747 (1899).

[116] 124 Wis. 359, 102 N. W. 12 (1905).

[117] 146 Wis. 324, 130 N. W. 464 (1911).

true line, his remedy is trespass and not ejectment, and, if the trespass is a continuing one, equity has jurisdiction thereof."

The two most significant features of this doctrine are, first, that the rule is identical both above and below the surface, and, second, that there has to be dispossession or ouster at the surface to support ejectment.[118] All of the cases assume, however, that if there was no evidence of user at the surface, either sort of projection would be basis for ejectment. We have the choice of two explanations; ownership is only of the surface; or the column of land-space is juristically indivisible, and possession of the surface is possession of all. The first might seem the more natural, if it were not for the fact that trespass is allowed, which would seem to show fairly conclusively that the court recognized ownership in the column of land-space.

The Delaware case of *Haitsch v. Duffy*[119] did not decide the question for that jurisdiction, the Court noting that there was a difference of opinion, but that a mandatory injunction had never been refused, if not on the ground of trespass, then on that of nuisance. An injunction was therefore granted without specifying the ground. In a Minnesota case, *Johnson v. Minnesota Tribune Co.*,[120] the defendant had remodeled and inserted parts of his structure beyond the necessities of a party wall. The court speaks of the occupancy of "space," indicating a certain trend of thinking; but the case is hardly in point since the intrusion, although above the surface of the soil, was nevertheless into a structure affixed to the soil, and ejectment in such cases has been generally recognized. The only English case at all relevant, apparently, involves a projection placed on the top of a party wall, and so is subject to the same irrelevancy as the Minnesota case.[121] The Nebraska courts have followed the *Butler* case without question, and allow ejectment.[122]

[118] See remarks concerning this doctrine in note, (1906) 19 HARV. L. REV. 369. The belief is there expressed that it is based on a fallacy.

[119] 10 Del. Ch. 280, 92 Atl. 249 (1914).

[120] 91 Minn. 476, 96 N. W. 321 (1904).

[121] Stedman v. Smith, 8 El. & Bl. 1 (1857).

[122] McDivitt v. Bronson, 101 Neb. 437, 163 N. W. 761 (1917).

Two jurisdictions apparently deny the remedy entirely. In the Connecticut case of *Norwalk Heating and Lighting Company v. Vernam,*[123] a projecting cornice and eaves were held to be an "invasion of a right" but not "an ouster of possession." The question was not raised by the bringing of ejectment. There had been a conveyance to the plaintiff after the projection had been built, and in a suit brought against him the defendant contended that the conveyance was void since the grantor had been ousted at the time he conveyed. Quoting Baldwin, J., in reply:

> "The possession of the adjoining proprietor remains unaffected, except that it is rendered less beneficial. The possession and occupancy of the projecting structure has no effect on the ownership of the soil beneath, unless it be maintained under a claim of right for fifteen years, and so should ripen into a perpetual easement."

Though the implications of the decisions are not entirely evident, it is probable that the court held the view that the surface was all that was owned, and that the air-space was not subject to more than rights of the nature of easements. It is interesting to note that Justice Baldwin, in an article from which we have previously quoted, written in the following year, expressed his belief that no ownership such as would support trespass exists in the air-space.

A Michigan case involving a projecting cornice, *Wilmarth v. Woodcock,*[124] is generally considered to deny ejectment. A bill in equity to abate the nuisance was allowed specifically on the ground that the remedies at law, case and trespass (omitting ejectment) would give only inadequate damages.[125]

In a number of cases, the matter of ouster of possession by

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[123] 75 Conn. 662, 55 Atl. 168 (1903).

[124] 58 Mich. 482 (1885). In 1923, Michigan adopted the Uniform State Aviation Act, which expressly recognizes ownership in superjacent space, and it will be interesting to see if the doctrine of this case is changed thereby.

[125] The Scotch law on this subject is stated by Valentine to be: "It is of course settled that no one can build so as to overhang his neighbor's land (see *e. g.,* M'Intosh v. Scott & Co., 21 D. 363 (Scot. 1859), Hazle v. Turner, 2 D. 886 (Scot. 1840)), but it does not seem quite so clear whether this is prohibited as a trespass or on the broader ground that it is a nuisance": Valentine (1910) 22 JURID. REV. 85, 93. *Cf.* SCHUSTER, *op. cit.* § 326.

a projection has come up for consideration. In California, of course, we might expect that a projection would not give possession, and the case of *Gillespie v. Jones*[126] is consistent with such expectation. There a party claimed adverse possession of land, and had built a fence around the plot claimed. The owner built a house which projected over the fence into the lot enclosed. It was held that the projection was not such a disturbance of the possession of the builder of the fence as to prevent the running of the Statute of Limitations in his favor. The case, of course, is not decisive of the problem under discussion; but it is at least consistent with the reasoning of the California cases. However, it may be pointed out that this case arose before the adoption of the California Code, and would probably be a correct decision no matter what the view of the court as to the extent of land ownership. If there is ownership of the air-space, all that would result would be that a certain part was carved out of the land, the title to which was being acquired by adverse possession. If there is no ownership, there is no possibility of relating this act to the surface, since there was evidence of possession of the surface in the existence of the fence. So the case would be decided the same way no matter which of the two views is adopted, and is not important for our purposes.

In the Massachusetts case of *Smith v. Smith,* already discussed, Morton, J., remarked: "It is an adverse occupation (to project eaves) which, if continued for twenty years, will give a title to the soil by prescription." The evident thought in the mind of the court was that the possession of the air-space must be extended to take in possession of the soil beneath. There is, of course, no necessary implication in this that the air-space is different from the surface, since an occupation of the same amount of the surface might have given possession of the air-space. But in the case, later in the same year, of *Randall v. Sanderson,*[127] a situation was presented quite similar to that in the California case of *Gillespie v. Jones,* just discussed. The projecting eaves and gutter in this case were over a building erected

[126] 47 Cal. 259 (1874).
[127] 111 Mass. 114 (1872).

by an adverse occupier of an adjoining lot. To quote from the decision of Morton, J.:

> "The defendants and their grantors have occupied up to the line claimed by the defendants adversely and exclusively since 1824. This gave them a title to the soil by prescription after the lapse of twenty years. The fact that the plaintiff's eaves or gutter projected over the defendant's line, as stated in the report, would not prevent their acquiring a title by prescription. Their occupation of the soil was exclusive, adverse and uninterrupted. It was a question of fact whether the plaintiffs by the projection of their eaves gained an easement by prescription."

Here apparently all that the court would admit could be acquired by the continued projections was an easement, not a title to the space occupied. Of course, this result may be due not so much to the nature of rights in the air-space, but to an unwillingness to allow a horizontal division of the land by the operation of the Statute of Limitations. If a title had been retained by the original owner, it need not, under any view of what land is, have extended to the surface. The real issue, which is not necessarily decided by this case, is as to the nature of the possession evidenced by the projection. If the column is not the subject of true ownership, but is distinct from and appurtenant to land, then the one in possession of the surface is in possession of the principal thing, to which the air-space is subordinate; and the greatest right which can be acquired by a projection into it is an easement. This result accords with the case under discussion. But if ownership extends to the air-space column, then two views are possible:

(1) The column is incapable of horizontal division; it is an indivisible thing. In this case, in the event of a dispute as to the possession, either

  (a) Possession of the surface is to be considered as possession of all. This would be by application of the presumption drawn from the maxim; but it would be far from denying ownership of the air-space.

(b) The strongest possession (possibly the possession of the greatest quantum) gives possession of all.

(2) The column is a divisible thing, *i. e.*, divisible horizontally as well as vertically, since no one disputes the latter division. In this case adverse possession by a projection could give two results:

(a) The projection could be evidence only of possession of only so much space as the projection occupies. This would be by application again of a presumption derived from the maxim; in other words, it would give to the possessor of the surface what Terry would call constructive possession of all the space but that actually occupied by the projection.

(b) The possession evidenced by the projection would extend to all above, as the possession otherwise evidenced would extend to all below. This would be a convenient solution in the possible situation when there was no possession of the surface of a strip of land, but two possessions above, one below the other, in the form of projections.[128]

These possibilities indicate that the decision of the Massachusetts court is not conclusive of a belief that the ownership of air-space is not permitted by law. Thus, the Massachusetts court could have adopted the first of the two alternatives suggested, and treated the column of air-space as an indivisible thing, probably presuming that ownership of the surface or possession of the surface was possession of the whole.[129]

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[128] "Il ne faut retourner l'art. 552 pour établir une présomption inverse d'après laquelle le propriétaire du dessous serait présumé propriétaire due sol (7 mai 1838, S. 38. 1719, D. 38. 1. 223). De même le propriétaire du dessus, des bâtiments qui surplombent le terrain du voisin n'est pas présumé propriétaire de la portion du sol couverte par la projection verticale des bâtiments": BAUDRY-LACONTINERIE, DES BIENS § 331.

[129] In Carbrey v. Willis, 7 Allen 364 (Mass. 1863), and Keats v. Hugo, 115 Mass. 204 (1874) similar situations arise. In the first the question was left for the jury to determine whether land below was adversely possessed by projecting eaves. In the second, Gray, C. J., said: "The fact that the eaves and

In the case of *Metropolitan West Side Elevated Ry. Co. v. Springer,*[130] where an elevated structure projected over land, the Illinois court held that there was a taking of property which must be compensated, since the projection was an occupancy of land—apparently of the surface and all. This was true despite the undoubted physical power of the landowner to pass beneath the elevated structure, and otherwise make use of the surface. Here again we have a case explicable on two grounds: either that the projection is by some juristic legerdemain related to the soil; or the projection is evidence of the possession of an indivisible thing, the land-space. If the first view is adopted, we have difficulty in seeing how the projection is any stronger evidence of possession than the probable acts of the owner in using the surface beneath the structure, unless we consider that the elevated company has so interfered with the use of the landowner as to

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cornices thereof projected over that line gave them no title to the land and no right to prevent the defendant, owning the land, from erecting any building upon it, so long as he did not cut off or interfere with the eaves or cornices of their house".

In Weeks v. Upton, 99 Minn. 410, 109 N. W. 828 (1906), the court came to an apparently different conclusion. The opinion states: "The right which respondent acquired in the eighteen inch strip under the eaves was not by an easement. There are no facts to warrant such a conclusion. On the contrary, the finding . . . is that the entire strip . . . was in the possession of respondent and occupied by him for the very purpose of dripping water from the roof on that side of the barn. . . . The land was thus occupied adversely to appellant". *Accord, semble,* Erickson v. Murlin, 39 Wash. 48, 80 Pac. 853 (1905).

In Atkins v. Pfaffe, 130 Iowa 728, 114 N. W. 187 (1907), the court said: "As here the subject of inquiry, occupancy, cannot be understood as limited to the line of the foundation wall, in view of the facts here shown, it must be held to include the space covered by the roof cornice, as well as that occupied by the movement of her window shutters and drains". This is probably the most positive holding to this effect.

In Baxter v. Girard Trust Co., 288 Pa. 256, 135 Atl. 620 (1927), a wall leaned over neighboring land. Plaintiff claimed title to the land in a perpendicular line from the top of the wall up and down, describing it as an irregular piece of ground "seven-eighths of an inch to three and a half inches ground line, and three and three-sixteenth inches to six and a half inches at the top of the building." Plaintiff sought to compel removal of the wall of the neighbor's building which had been extended over and above the middle of his wall to the alleged correct lot line. Unfortunately the court did not pass directly on the interesting questions which arose in this manner, holding that the evidence was not conclusive that the building had leaned for the prescriptive period. The reasoning of the court, however, justifies the following statement in the annotation to the case in (1927) 49 A. L. R., at 1015: "The court . . . assumes that title to land by adverse possession may be based upon the fact that the wall of a building belongs to the one claiming . . . leans over the portion claimed by adverse possession".

[130] 171 Ill. 170, 49 N. E. 416 (1897).

be in a position where they cannot refuse the surface on the suit of the landowner. This view, of course, is entirely possible. So also is the view that the land, being an indivisible thing, is possessed and appropriated by the one who makes a permanent use of it no matter whether he touches the surface or not.[131]

3. *Wires strung over land.* We now come to a group of cases which deal with the stringing of wires across the soil without touching it or structures upon it.[132]

In the important case of *Butler v. Frontier Telephone Co.*,[133] the plaintiff was a private owner in fee simple over whose land wires were strung without contact with his land or structures thereon. He brought ejectment. When the case came before

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[131] In Chicago v. Norton Milling Co., 196 Ill. 580, 63 N. E. 1043 (1902), it was held that the city had to acquire the right to swing the end of a bridge over a portion of land.

[132] The British Telegraph Act of 1863, 26 & 27 Vict. c. 112, § 21, reads: "The company shall not place any work by the side of any land or building so as to stop, hinder, or interfere with ingress and egress . . . or place any work under, in, upon, over, along, and across any land or building except with the previous consent in each case of the owner, lessee, and occupier of such land or building". The writers of a well-known English textbook say of this: "The provisions . . . are based upon the assumption that there is a right of property in the airspace". CLERK AND LINDSELL, LAW OF TORTS 333.

In the United States the rule has been followed that the condemnation of a right of way for an electric line over private land was a taking of property only so far as the land occupied by the towers or poles was concerned, and that only an easement was taken as to the space between the wires. Thus, the Illinois Supreme Court said, in St. Louis & Cairo R. R. v. Postal Teleg. Co., 173 Ill. 508, 51 N. E. 382 (1898): "The spaces over which the wires are strung from pole to pole are not taken by the telegraph company". *Accord*, Illinois Teleg. News Co. v. Meine, 242 Ill. 568, 90 N. E. 230 (1909); Illinois Power & Light Corp. v. Talbott, 321 Ill. 538, 152 N. E. 486 (1926); Illinois Power & Light Corp. v. Peterson, 322 Ill. 342, 153 N. E. 577 (1926).

Some of the cases do not even distinguish between the two items of damage, and treat of the condemnation of a right of way, stating that the damages due the landowner are to be estimated on the basis of the value of the easement and the depreciation caused the entire property: Alabama Power Co. v. Keystone Lime Co., 191 Ala. 58, 67 So. 833 (1914); Cincinnati Gas Transp. Co. v. Wilson, 70 W. Va. 157, 73 S. E. 306 (1911); Lambeth v. So. Power Co., 152 N. C. 371, 67 S. E. 921 (1910); Caldwell Power Co. v. Russell, 188 N. C. 725, 125 S. E. 481 (1924). Other cases distinguish between property actually taken and other damage to a landowner, without specifying just what was considered to have been "actually taken": Central Ga. Power Co. v. Mays, 137 Ga. 120, 72 S. E. 900 (1911); Postal Teleg.-Cable Co. v. Peyton, 124 Ga. 746, 52 S. E. 803 (1906); Kentucky Hydro-Electric Co. v. Woodard, 216 Ky. 618, 287 S. W. 985 (1926).

See, generally, annotation: *Elements and measure of compensation for power lines or other wire lines over private property*, (1927) 49 A. L. R. 697.

[133] 186 N. Y. 486, 79 N. E. 716 (1906). See comment on this case, (1906) 16 YALE L. J. 275.

the appellate division of the Supreme Court,[134] the cases with reference to ejectment, which we have previously noted, were considered, and it was pointed out that, since the question had never been decisively passed on by the Court of Appeals, it was still an open one. Ejectment was allowed, and the Court of Appeals affirmed the decision.

The following excerpts from the opinion of Vann, J., are exceptionally important in their bearing on our problem:

> "So far as the case before us is concerned, the plaintiff is the owner of the soil owned upward to an indefinite extent. He owned the space occupied by the wire and had the right to the exclusive possession of that space which was not personal property, but a part of his land. According to fundamental principles and within the limitation mentioned space above land is real estate the same as the land itself. The law regards the empty space as if it were a solid, inseparable from the soil, and protects it from hostile occupation accordingly. . . ."
>
> "Unless the principle of *usque ad coelum* is abandoned any physical, exclusive and permanent occupation of space above land is an occupation of the land itself and a disseisin of the owner to that extent."

With reference to the problem which had vexed the Appellate Division in the two earlier cases,[135] the court said:

> "Where there is a visible and tangible structure by which possession is withheld to the extent of the space occupied thereby, ejectment will lie, because there is a disseisin measured by the size of the obstruction, and the sheriff can physically remove the structure and thereby restore the owner to possession." [136]

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[134] 109 App. Div. 217, 95 N. Y. Supp. 684 (1905).

[135] Aiken v. Benedict and Vrooman v. Jackson, *supra* note 107.

[136] The chief ground of dissent and of criticism of this case is to be found in an inability to conceive of the possession of space. Thus a learned commentator argues: "By possession is meant physical dealing; consequently there can be no actual possession of anything which is intangible. An owner of land cannot physically possess the space above it any more than he can physically possess an easement or a servitude. . . . A sheriff can no more deliver such possession of obstructed space by removing the obstruction as suggested by the present decision than he can give physical possession of an easement by removing a nuisance which interferes with its enjoyment". The

This case is an unequivocal commitment to the view that the land-space above the surface is subject to possession and ownership in the same complete sense that the surface is. Here is no question of relating the possession of space to the surface in order to reach the result obtained; here the occupancy of the space is the occupancy of the land, no matter what occurs on the surface; the space, for purposes of possession at least, is divisible horizontally as well as vertically. Only one thing does the court leave not expressly decided—the possession of the space above an intruding structure. It seems safe to assume that the court considers the intruding structure as ousting possession only of so much of the space as is actually occupied.[137]

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commentator would not dispute the doctrine "that land embraces the space above and the soil beneath the ground", but believes that the court has here "unwarrantably extended" it, and that it is "more in accord with reason and common sense that the owner of the land has a right in the nature of an incorporeal hereditament", or "incidental right": (1906) 16 YALE L. J. 275.

Oddly enough, Nash, J., in the appellate division, dissenting on the basis of Aiken v. Benedict, argued: "The act of the defendant was a trespass merely, of which a justice of the peace could take cognizance". If a trespass, it was an invasion of possession; if so, there was a possession of the space before the intrusion; if so, possession could be given by the sheriff and ejectment should lie.

[137] The leading English case is Wandsworth District v. United Teleph. Co., 13 Q. B. D. 904 (1884). The plaintiff, by statute in control of the streets, sought a mandatory injunction against the stringing of wires across the street by the defendant company. The adjoining property owners, to whose chimneys they were attached, had given consent. In an earlier case, Coverdale v. Charlton, 4 Q. B. D. 104, (1879), the word "street" in the statute which gave authority had been construed to mean more than the surface and to include an "area of user" below the surface, and it was contended that the rule should be extended to give a "property" to the "area of ordinary user" above the surface, and the Court agreed. But the court limited such "property" to the "area of ordinary user" and held that the wires were above such area. The injunction was refused on the basis of no trespass. Indicative, however, of the attitude of the entire court, is this remark of Fry, J.: "As at present advised, I entertain no doubt that a proprietor of land can cut and remove a wire passed at any height above his freehold". The case was followed by Finchley Elec. Light Co. v. Finchley Urban District Council, [1903] 1 Ch. 437, and the same result reached even though the grant of the highway was in form the grant of a fee.

In Graves v. Interstate Power Co., 189 Iowa 227, 178 N. W. 376 (1920), owing to the curve of the highway one of defendant's wires extended a few inches over the fence and above the premises of a landowner. The court said: "It is not claimed that defendant had a right under its grant to place the wire upon or across said premises, or that it was placed there with the consent of the owner. To this extent, defendant was a trespasser." The same court remarked, in Town of Ackley v. Cent. States Elec. Co., 214 N. W. 879, (Iowa 1927), that: "However, from another angle, the city being the owner in fee simple of the streets, of necessity its rights extend above the surface thereof. How far we need not determine in this case; but, being entitled to the absolute control and occupancy of the space above these streets, an invasion thereof, by stretching wires thereon at this height of necessity is an infraction of the

4. *Intrusion by humans or animals.* Under this head, two interesting cases involving certain points of similarity now require attention. In *Ellis v. Loftus Iron Co.*,[138] the defendant's horse kicked and bit the plaintiff's mare through a fence separating the land of the defendant from the land of the plaintiff. Disregarding questions of negligence, it was held that the projection of either the nose or the leg of the defendant's horse into the space over the plaintiff's land was a trespass for which the defendant was liable.

In a quarrel between two Iowa ladies, one of them justified an assault by the trespass of the other. Quoting the court:

> "The mere fact that plaintiff did not step across the boundary line does not make her any less a trespasser if she reached her arm across the line, as she admits she did. It is one of the first rules of property known to the law that the title of the owner of the soil extends, not only downward, but upward *usque ad coelum,* although it is, perhaps, doubt-

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rights of the city and amounts to a trespass. Especially must this be true where the invasion is by wires charged with electrical energy that may be dangerous to the public". Held, city entitled to a mandatory injunction without showing of damage.

In Citizen's Teleph. Co. v. C., N. O. & I. P. R. Co., 192 Ky. 399, 233 S. W. 901 (1921), wires were strung across the railroad's right of way. We find this judicial comment: "If it (the railroad) owns the fee, it has the exclusive right of occupancy of the right of way indefinitely upward, and can enjoin the stringing of wires or the erection of any structure whatsoever over the same". It was held, however, that the railroad had only an easement, which was not actually obstructed and recovery was denied.

Comments of the Georgia Court of Appeal on a similar situation reveals a very definite commitment to the view that space above the surface is subject to ownership. "While it is true that a railway company may by deed from the owner acquire a fee simple title to the land transversed by its tracks, and such an absolute ownership of the soil will extend indefinitely upward so as to include the proprietorship of the air and space above such land, yet when it has acquired by condemnation . . . it gets only what is termed a 'right of way' ".

Planiol gives us a citation to a French case (Trib. de paix de Lille, 15 Nov. 1899, D. 1900 s. 361) where the court ordered an electric company to remove wires passing over private property: PLANIOL, TRAITÉ ÉLÉMENTAIRE § 2329, p. 723. Statutory authority was afterwards granted to electric companies (loi du 15 juin 1906). The German law appears to have the same rule: SCHUSTER, PRINCIPLES 386.

[138] L. R. (1874) 10 C. P. 19. Per Coleridge, C. J.: "I cannot say I entertain any doubt. . . . It seems to me sufficiently clear that some portion of the defendant's horse's body must have been over the boundary. That may be a very small trespass, but it is a trespass at law".

ful whether owners as quarrelsome as the parties in this case will ever enjoy the usufruct of their property in the latter direction." [139]

The rule is apparently as yet uncontradicted.

5. *Intrusion by projectiles.* The interference with the air-space by shooting across the land, none of the shots touching the surface or structures thereon, was one of the problems first stated by Lord Ellenborough in his celebrated *dictum* in *Pickering v. Rudd:* [140]

> "I do not think it is a trespass to interfere with the column of air superincumbent on the close. I once had occasion to rule upon the circuit that a man who, from the outside of a field, discharged a gun into it, so that the shot must have struck the soil, was guilty of breaking and entering it. . . . But I am by no means prepared to say that firing across a field *in vacuo,* no part of the contents touching it, amounts to a *clausum fregit.* Nay, if this board overhanging the plaintiff's garden be a trespass, it would follow that an aeronaut is liable to an action of trespass at the suit of the occupier of every field over which the balloon passes in the course of his voyage."

Fifty years later the case of *Kenyon v. Hart* [141] arose out of a statute governing a particular series of acts, trespass in search of game, and thus the case is not directly in point. But in the course of argument, the case of *Regina v. Pratt* [142] was cited, and Justice Blackburn remarked:

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[139] Hannibalson v. Sessions, 116 Iowa 457, 90 N. W. 93 (1902). The Virginia court, in Lynchburg Teleph. Co. v. Booker, 103 Va. 595, 50 S. E. 148 (1905), discussing a defense of contributory negligence set up by the telephone company, took a different attitude: "In legal contemplation it may be that any unauthorized entry upon the premises of another whose title extends to the center of the earth downward and without limit upward by putting one's hand through or over a boundary fence, is a trespass. It would, however, certainly seem that the trespass had reached its vanishing point when such a trespass was committed by a child eight years of age. The owner of the premises would find it difficult to maintain such a defense if he had knowingly permitted so grievous a danger to exist within reach of a public street, and thereby caused an injury to one incapable of contributory negligence".

[140] 4 Camp. 219 (1815).

[141] 6 B. & S. 247 (1865).

[142] 4 E. & B. 860 (1855). The case is not otherwise relevant.

> "That case raises the old query of Lord Ellenborough as to a man passing over the land of another in a balloon; he doubted whether an action of trespass would lie for it. I understand the good sense of that doubt, though not the legal reason for it." [143]

The implications of Lord Ellenborough's remarks are undoubtedly to deny ownership in the air-space. Remarks in the *Wandsworth* case, previously discussed, led to a belief that the view of Justice Blackburn rather than that of Lord Ellenborough prevailed in England. However, a case arose in the first part of the century which seemed rather to support *Pickering v. Rudd.* In *Clifton v. Bury,*[144] Hawkins, J., reasoned as follows:

> "As regards the complaint that when the thousand yards range was used the bullets traversed the land of the plaintiff, I do not look upon the ground of complaint as constituting a trespass in the strict technical sense of the term; but I do look upon such firing of bullets as a grievance which, under the circumstances, afforded the plaintiff a legal course of action."

Thus the recovery is placed upon the ground of nuisance.[145]

The few American cases seem to reach an opposite result. In *Whittaker v. Stangvick* [146] a perpetual injunction was granted against shooting across land, despite no appreciable damage being proved, since, according to Justice Jaggard, "in trespass *quare clausum fregit* it is immaterial whether the quantum of harm suffered be great, little, or unappreciable." In the comparatively re-

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[143] Nevertheless we find a *dictum* in an Indian case a few years later, as follows: "No man has any absolute property in the open space above his land. To interfere with the column of air superincumbent upon such land is not a trespass. Lord Ellenborough justly ridiculed the notion that travellers in a balloon could be deemed trespassers on the property of those over whose land the balloon might pass": per Norman, J., in Bagram v. Karformak, (1869) 3 Bengal L. Rep. 18.

[144] 4 Times L. R. 8 (1887).

[145] Kuhn says: "A careful reading of the opinion will show that the gravamen of the action was the actual interference with the enjoyment of the soil": Kuhn, *The Beginnings of an Aerial Law,* (1910) 4 AM. J. INT. LAW 109, at 125.

[146] 100 Minn. 386, 111 N. W. 295 (1907). There was possibly an actual contact with the soil here, because of falling birds.

cent case of *Herrin v. Sutherland*[147] trespass was allowed, and the case is unequivocable. It is interesting to note that the *Butler* case is cited with approval.

The United States Supreme Court expressed an attitude on the matter in the case of *Portsmouth Harbor Land & Hotel Company v. United States.*[148] A suit had been instituted in the Court of Claims on the implied contract alleged to have been made by the taking of property of the plaintiff, which taking of property was by the establishment of a battery which had fired and would fire over the plaintiff's land. While the court was divided on the matter of the recovery, the dissenting justices did not question Mr. Justice Holmes' characterization of the shooting as a "trespass."

6. *Trespass by airplane.* The discussion over the liability of the aeronaut in trespass, which, beginning with the century, has been carried on vigorously until the last few years, is rapidly becoming more and more academic, apparently without ever having been passed on by a court in the Anglo-American system of law. Two cases in lower courts have disposed of situations in which the problem was pretty clearly presented, and both of them apparently have denied that the flight of aircraft over land violates the owner's possession.[149] The cases are interesting chiefly as indicating the probable judicial attitude toward the matter.

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[147] 74 Mont. 587, 241 Pac. 328 (1925). See note in (1926) 42 A. L. R. 945.

[148] 260 U. S. 327 (1922). See note to this case, (1923) 23 COL. L. REV. 402, entitled: *Trespass—Entry Above Surface.*

[149] In Commonwealth v. Nevin, 2 D. & C. 241 (Pa. 1922), an appeal was taken from a summary conviction of an aeronaut under a penal statute covering trespasses to unoccupied lands. The lower court was reversed because the requirements of the statute were not met by the facts of the case. The court, in passing, unburdened itself as follows:

"'Wilfully to enter upon land', as used in the act, indicates an encroachment on or interference with the owner's occupation of his soil; but is not synonymous with the flight through the air over it, which has yet, so far as we are aware, to be held an entry upon it, and a meaning of the term not heretofore attributed to it." See comment (1922) 71 U. OF PA. L. REV. 88; (1923) 3 DOCKET 20.

The Docket, (1923) v. 3, p. 23, prints an opinion of Michael, J., in a Minnesota district court denying an injunction against any flying over certain premises in a city, flight over which at less than 2000 feet was prohibited by statute. The court, denying relief, argued:

"Common law rules are sufficiently flexible to adapt themselves to new conditions arising out of modern progress. . . . The air, so far as it has any direct relation to the comfort and enjoyment of the land, is appurtenant to the land and no less the subject of protection than the land itself; but when,

The question has been rendered entirely academic in England by the *British Air Navigation Act of 1920*,[150] which became effective on December 23d of that year. Section 9, paragraph 1 of the *Act* provides:

> "No action shall lie in respect of trespass or in respect of nuisance, by reason only of the flight of aircraft over any property at a height above the ground, which, having regard to wind, weather, and all the circumstances of the case, is reasonable, or the ordinary incidents of such flight, so long as the provisions of this Act and any Order made thereunder . . . are duly complied with; but where material damage or loss is caused by an aircraft . . . to any person or property on land or water, damages shall be recoverable from the owner of such aircraft . . . without proof of negligence or intention or other cause of action."

The effect of this act is to take away the remedy of trespass, if it existed before, and to require proof of actual damage, the normal rule in trespass on the case. Proof of negligence is not required, however, and absolute liability for actual damage is imposed. Presumably not even the defense of an *act of God* would be allowed; this resembles, and in some ways is stricter, than the old common law requirements for trespass. This abso-

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as here, the air is to be considered at an altitude of two thousand feet or more, to contend that it is a part of the realty as affecting the right of air navigation instantaneous constructive trespasses. Modern progress and great public interest is only a legal fiction devoid of substantial merit. Under the most technical application of the rule, flight at such an altitude can amount to no more than should not be blocked by unnecessary legal refinements. . . . Failure to sustaint the plaintiff's contention relative to upper air trespasses does not deprive him of any substantial rights or militate against his appropriate and adequate remedies for recovery of damages and injunctive relief in cases of actual trespasses or the commission of a nusance; hence the scope of the temporary injunction has been limited to enforced compliance with the Minnesota law already mentioned".

It has been held that neither an aeroplane nor a hydro-aeroplane is within the admiralty jurisdiction of the Federal Courts: The Crawford Bros. No. 2, 215 Fed. 269 (W. D. Wash. 1914); New York v. Smith, 119 Misc. 294 (1922). See note, (1914) 28 HARV. L. REV. 200. But a hydro-aeroplane while in the water is within admiralty jurisdiction: Reinhardt v. Newport Flying Service Corp., 232 N. Y. 115, 133 N. E. 371 (1921), noted in (1922) 18 A. L. R. 1324.

A moot court decision, reported in (1912) 19 CASE & COMMENT 681, held an airship a trespasser.

[150] (1920) 10 & 11 Geo. V., c. 80.

lute liability prevents us from terming the right of passage an *easement.*[151]

This *Act* is clearly dictated by common sense and the necessities of modern life; but it does not in any way decide our question. As has been frequently suggested, the Common Law would probably have worked out a solution on the basis of easement, servitude, or license, without other derogation of the rights of ownership in the air-space.

Section 3 of the *Uniform State Aviation Act,* entitled "Ownership of Space," reads as follows:

> "The ownership of the space above the lands and waters of the state is declared to be vested in the several owners of the surface beneath, subject to the right of flight described in Section 4."

Section 4 provides:

> "Flight in aircraft over the lands and waters of this state is lawful unless at such a low altitude as to interfere with the existing use to which the land or water or the space over the land or water is put by the owner, or unless so conducted as to be imminently dangerous to persons or property lawfully on the land or water beneath."

Professor Bogert writes of these provisions as follows:

> "These sections are believed to state the Common Law as expressed in the Latin maxim *cuius est solum* . . . etc. The land owner is believed to own the space above his surface as real property insofar as he can and does make effectual use of it."[152]

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[151] A comment on the first case arising under this act, Roedean School v. Cornwall Aviation Co., may be found in (1926) 99 CENT. L. J. 311, quoting from (1926) 70 SOLICITOR'S JOURNAL 785.

[152] Bogert, *Recent Developments in the Law of Aeronautics,* (1922) 8 CORN. L. Q. 26. Speaking of § 4, he continues: "This section declares an easement of harmless flight which is believed to have an analogy in the easement of navigation which the Common Law gives over navigable streams, the beds of which are privately owned. If this easement does not exist, the development of aeronautics is impossible and flight over the lands of another is a trespass—two conclusions which seem neither reasonable nor desirable".

It should be recognized frankly that such a result as this doctrine of a *natural easement* is at best a more or less awkward concession to necessity. As a commentator in the Harvard Law Review remarks: "Although the flight of an

This *Uniform Aviation Act* has been adopted by the Territory of Hawaii and the following eleven states: Delaware, Idaho, Indiana, Maryland, Michigan, Nevada, North Dakota, South Dakota, Tennessee, Utah and Vermont.[153] Earlier statutes of Connecticut and Massachusetts, passed in 1911 and 1913 respectively, arrive at a similar result by implication.[154]

Section 10 of the *Air Commerce Act of 1926* [155] provides as follows:

> "As used in this Act, the term 'navigable airspace' means airspace above the minimum safe altitudes of flight prescribed by the Secretary of Commerce under Section 3, and such navigable airspace shall be subject to a public right of freedom of interstate and foreign air navigation in conformity with the requirements of this Act."

Under the regulatory powers given the Secretary of Commerce by Section 3, the Department of Commerce has issued the Air Commerce Regulations, effective December 31, 1926. Section 81 of these regulations establishes five hundred feet as the minimum height, except over cities, towns, or congested areas, where it is raised to one thousand feet.

This *Act* applies to a large bulk of the regular commercial aviation of the country, although it does not, of course, reach

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airplane will very likely not be held a tort, the common law seems to afford no basis for holding the aviator liable only for negligence": note, *Trespass by Airplane*, (1919) 32 HARV. L. REV. 569.

[153] 9 UNIFORM LAWS ANNOTATED. Supplement (1927) 26. All but South Dakota adopted it in 1923.

[154] CONN. LAWS (1911) c. 86, § 11: "Every aeronaut shall be responsible for all damages suffered in this state by any person from injuries caused by any voyage in an airship directed by such aeronaut . . . ". MASS. STAT. (1913) c. 666, § 6: "When flying over buildings, persons, or animals, an aviator shall fly at such altitude as will best conduce to the safety of those below him as well as to the safety of himself and his passengers. . . . He shall be held liable for injuries resulting from his flying unless he can demonstrate that he had taken every reasonable precaution to prevent such injury". Both of these provisions by implication authorize flight, and establish a rule similar to nuisance, although the Connecticut statute may impose an absolute liability. Connecticut is one of the states which seem to refuse to recognize a proprietary right above the surface and thus it would not need to bother with easements or other explanations.

A number of other states have passed laws partially covering the field of aviation. *Cf.* Bogert, *Problems of Aviation Law* (1921) 6 CORN. L. Q. 271, for a discussion of some of these to the date of the Uniform State Aviation Law.

[155] 44 STAT. 568 (1926), U. S. C. (Supp. 1927) TIT. 49, §§ 171-184.

the stunt flyer in his local exhibitions, who is still subject to the local State law. There is no rule as to liability expressly dictated, and the matter is apparently left to the courts. This *Act*, taken in conjunction with the legislation in the States, indicates the inevitable trend of the law on this subject.[156]

Two French cases, in 1912 and 1914, interpreted the Code Civil provisions to produce a result analogous to the English nuisance rule.[157] The difference in forms of action, and the different significance attached to recovery, renders it impossible to draw any conclusions from these cases as to the extent of ownership really allowed by the French courts.[158]

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[156] See note 160, *post*.

[157] Bertrand, Brinquant, Mauge, c. Ste. Farman, Gazette du Palais du 6 Juillet 1912; also reported in (1912) 3 *Revue Juridique Internationale de la Locomotion Aérrienne*, 282; Huertebrise v. Esnault Pelterie, Farman, et Borel (Tribunal Civil de Paris), noted in (1914) 48 AM. L. REV. 914, and HOLLAND, JURISPRUDENCE 191n. See note of cases, LYCKLAMA, pp. 41-42.

From the syllabus in the first case: "Il en est ainsi, par exemple, lorsque plusieurs propriétaires prétendent qu'en évoluant au-dessus de leurs terres des aéroplanes troublent la libre jouissance de leurs biens, soit, d'une part, par la frayeur causée aux animaux, les atterrissages fréquents qui endommagent les récoltes, l'affluence des curieux qui envahissent les cultures ou le dérangement causé aux travailleurs des champs qui sont à leur service, soit, d'autre part, par le dépeuplement du gibier qu'effraient les apparitions bruyantes des appareils.

"La menace d'un préjudice éventual n'est une cause légitime d'action qu'autant qu'elle constitue par elle-même un trouble actuel dans la possession ou dans la jouissance.

"Il n'appartient donc pas aux tribunaux de préjuger des faits qui ne leur sont pas soumis, de fixer la hauteur à laquelle des aviateurs dépront s'élever, ou les appareils silencieux, dont les aéroplanes doivent être munis".

The "affluence des curieux qui envahissent les cultures" suggests the case of Guille v. Swan, 19 Johns. 381 (N. Y. 1822). The case really amounts to a refusal of an injunction against future trespasses, and the requirement of proof of actual damage. This is the case noted in (1913) 24 JURID. REV. 321, and (1912) 18 VA. L. REG. 384.

The second case limited the right of the proprietor to the height usable by him, for building or their accessories or the products of cultivated land, granting freedom for *circulation aérrienne* above that height; but it allowed recovery in the case before it because of the insufficient altitude at which the flights complained of were taking place.

[158] The natural interpretation of the majority of foreign codes or enactments would lead to a belief in their recognition of ownership of the air-space:

Art. 552 of the *Code Civil* of France (*Code Napoléon*): "La propriété du sol emporte la propriété du dessus et du dessous . . ." (Riviere, *Codes Francais*). The same provision, verbatim, constitutes § 552 of the Belgian Code (DE LE COURT CODES BELGES, 20e. ed.); art. 626 of the Code of the Netherlands (TRIPELS, LES CODES NEERLANDAIS); and § 1446 of the (*Code Civil Monaco*). In discussing this provision, as inferring the ownership of the air-space, Bonnefoy remarks: "Jusqu'ici la grande majorité des auteurs et la Jurisprudence presque unanime des Cours et Tribunaux estimaient que ce droit était sans limite et absolu": BONNEFOY, LE CODE DE L'AIR 121.

Roughly to summarize:

(a) California, owing to statutory commitment, apparently does not recognize ownership above the surface.

(b) Michigan and Connecticut, by their refusal to allow ejectment, apparently also deny ownership of the air-space.

(c) The remainder of the cases in the courts of the United States seem to recognize ownership in the air-space;[159] but are influenced by the presumptions which arise from

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Art. 905 of the German Civil Code (B. G. B.): "The right of the owner of a piece of land extends to the space above the surface and to the earth under the surface. However, the owner cannot prohibit interferences which take place at such height or depth that he has no interest in their exclusion" (Loewy's tr.). This has been likened by some to Pollock's *effective possession* doctrine.

Art. 667 of the Swiss Civil Code provides as follows: "The ownership of the soil implies the ownership of all that is above and below the surface to such a height and depth respectively as the owner may require. It extends, subject to certain legal restrictions, to all buildings on the ground as well as plants and springs in it" (Williams's tr.).

Art. 526 of the Civil Code of Brazil "The ownership of the soil embraces whatever is above and below it to whatever height or depth and which is useful to its exercise; the owner cannot, however, prevent works which may be undertaken at such a height or depth that he has no interest in preventing them" (Wheeless's tr.).

Art. 440 of the Italian Code: "Chi ha la pur quella dello spazio sourastante edi tutto cio che si trova sopra e sotto la superficie": (TREVES, CODICI D'ITALIA).

Art. 207 of the Civil Code of Japan: "The ownership of land, within the restrictions of laws and ordinances, extends above and under the surface" (J. E. DE BECKER, ANNOTATED CIVIL CODE 1909).

Art. 350 of the Spanish Civil Code: "The owner of a parcel of ground is owner of its surface and everything under it, and he can make thereon any works, plantations, and excavations which may be convenient for him, without injury to the easements and subject to what is prescribed by the laws about mines and waters and by Police Regulations" WALTON, CIVIL LAW IN SPAIN AND SPANISH AMERICA (1900). This provision, it will be noted, says nothing of superjacent space.

Professor Bogert remarks generally concerning foreign codes: "None . . . require the condemnation of an aerial right of way, and none provide that the mere flight through the space above shall constitute a trespass": Bogert, *Problems in Aviation Law* (1921) 6 CORN. L. Q. 271, at 298.

For those countries which have signed the International Flying Convention adopted by the Peace Conference, a right of innocent passage seems to have been granted to foreign aircraft, unobstructed by rights of private landowners. It is highly improbable that the right would be recognized by treaty and given to foreign ships, and denied to the citizens of the treaty state.

[159] Kuhn apparently would not deduce ownership from our decisions: "Later decisions in England and in this country found no difficulty in justifying the action of trespass in all cases of encroaching signs, buildings, trees overhanging, wires, and the like where the attachment to the soil was upon defendant's land, though not entirely clear of the complainant's. . . . But this is wholly independent of any recognition of property rights in the airspace": Kuhn, *The Beginnings of an Aerial Law,* (1910) 4 AM. J. INT. LAW 109, at 124. The reason for this conclusion does not appear.

the application of the maxim *usque ad coelum*, sometimes to attach most importance to possession of the surface in cases where there is a conflict of possession. It would seem especially clear that ownership in the airspace is recognized in New York since the *Butler* case.

(d) In England the tendency is apparently toward recognition of such ownership, with the one exception of the case of *Clifton v. Bury*.

(e) The tendency of opinion in the profession, and the tendency of legislation, is toward the recognition of an easement or other right of passage for the aeronaut, basing his liability either on actual damage (absolute liability), or on damage caused by negligence.[160]

Zollman also draws a distinction between projections which are themselves appurtenant or attached to neighboring land, and other intrusions: Zollman, *Air Space Rights*, (1915) 53 AM. L. REV. 711, at 724. There seems no logical basis for the distinction, since that into which the intrusion projects remains the same, and an airplane might trespass at a lower height than a tall building.

Bogert, when writing before the formulation of the Uniform State Aviation Act, remarked: "All the decisions are regarding intrusions into the space very near the surface, where the actual use of the soil by the surface occupant was disturbed": Bogert, *Problems in Aviation Law*, (1921) 6 CORN. L. Q. 271. It is probably true that we do not have definite disproof of the "zone theories".

[160] "The tendency of discussion is towards a modification of the common law doctrine of the landowner's exclusive right and control of the air space above, by the recognition of a right of passage at such a distance above the land as to involve no interference with the fullest utilization of the land itself": TIFFANY, REAL PROPERTY § 251, p. 864.

A partial list of the more important of the numerous law review and periodical articles on this subject which have not previously been cited follows: Baldwin, *The Law of the Airship* (1904) 4 AM. J. INT. LAW 95; Biggar, *The Law Relating to the Air*, (1921) 41 CAN. LAW TIMES 667 (would recognize only interference with user); Bogert, *Problems of Aviation Law* (1921) 6 CORN. L. Q. 271; Davis, *Putting Laws over Wings*, (1925) 11 A. B. A. J. 529; Hackett, *Rights in Air Space and Lord Ellenborough's Dictum*, (1924) 10 VA. L. REV. 312; Hazeltine, *The Law of Civil Aerial Transport*, (1919) JOUR. COM. LEG. & INT. LAW 3rd series, v. 1, pt. 1, p. 76; Mackenzie, *Aerial Navigation and the Law which should govern it* (1911) 47 CAN. L. J. 206; Marshall, *Some Legal Problems of the Aeronaut*, (1923) 6 ILL. L. Q. 50; McCracken, *Air Law* (1923) 57 AM. L. REV. 97; Meyer, *Trespass by Aeroplane*, (1910) 36 LAW MAG. & REV. 17; Meyer, *Aviation and Future Legislation*, (1911) 36 LAW MAG. & REV. 176; Moore, *Aerial Navigation*, (1908) 12 LAW NOTES 108 (Suggests giving admiralty jurisdiction); Myers, *The Air and the Earth Beneath*, (1914) 26 GREEN BAG 363 (also believes that eminent domain proceedings would be advisable); Myers, *The Sovereignty of the Air*, (1912) 24 *ibid.* 229 (points out fallacy of high seas analogy); Myers, *The Freedom of the Air*, *ibid.* 430; Myers, *The practical Solution of the Problem of Sovereignty in Aerial Law*, (1914) 26 *ibid.* 57 (favors complete sovereignty); Platt, *The Airship—A Trespasser*, (1910) 7 OH. L. REP. 402 (suggests eminent domain solution); Rich, *Federal Control over Air Navigation*, (1910) 17 CASE

V. Extent of Ownership in Subjacent Space

Looking at the other side of the surface, we have greater difficulty in understanding just what is meant by the cases. Here we find three possible views of the extent of ownership:

1. Ownership is of the solid matter below the surface.
2. Ownership is of the surface, to which are added certain appurtenant rights respecting the solid matter or space beneath.
3. Ownership extends to the column of space beneath the surface which is occupied by solid matter, but which is distinct from that solid matter, as well as to the solid matter.

The presumption *usque ad inferos* is nearly universally applied as far as the solid matter under the surface is affected.[161]

& Com. 258; Sperl, *The Legal Side of Aviation* (tr., Weatherford) (1911) 23 Green Bag 398 (advocates absolute national sovereignty); Spurr, *Let the Air Remain Free,* (1911) 18 Case & Com. 119 (makes distinction between air and space; criticizes the Butler case); Swift, *Present and Proposed Aerial Legislation,* (1911) 18 Case & Com. 134, 14 Can. L. J. 502; Valentine, *The Air—A Realm of Law,* (1910) 22 Jurid. Rev. 85; Zollman, *Governmental Control of Aircraft,* (1919) 53 Am. L. Rev. 897; Zollman, *Air Space Rights, ibid.* 711; Webb, *Can I Fly Over Your Land?,* (1920) 48 Wash. L. Rep. 673; Williams, *The Law of the Air,* (1911) 18 Case & Com. 131; Wilson, *Aerial Jurisdiction,* 5 Am. Pol. Sci. Rev. 171 (favors complete state sovereignty); *Aviation and Wireless Telegraphy as Respects the Maxims and Principles of the Common Law,* (1910) 46 Can. L. J. 480 (advocates "preferential use" doctrine).

In addition to Hazeltine's book and the chapter in Davids *supra* note 18, *cf.* Spaight, Aircraft in Peace and the Law (1919), which contains an exhaustive bibliography to its date; and Fixel, The Law of Aviation (1927). The last named book is a somewhat hastily compiled reference work, citing a considerable mass of statutes and authors. Although it speaks of both the air and the air-space, it makes no distinction between them. The chief criticism to be directed toward it, however, is a somewhat astonishing belief that the national Air Commerce Act of 1926 was an attempt to regulate all air navigation, superseding the legislation of the individual states. Thus, on p. 67, it speaks of an ordinance of the city of Chicago being voided by the passage of the act. The assumption that the federal government had the power to legislate on all aerial navigation is based, apparently, on the argument implicit from the following passage: "Since it has been well established that sovereignty in air-space is vested in the state or in the nation, the question whether a trespass is committed by flying over another's land is to a certain extent obsolete"!

On the particular problem of the liability of aeronauts for injuries resulting from the operation of their planes, see: Zollman, *Liability of an Aircraft,* (1919) 53 Am. L. Rev. 576; Baldwin, *Liability for Accidents in Aerial Navigation,* (1910) 9 Mich. L. Rev. 20 (advocates absolute liability).

[161] "The owner of the surface of the land is *prima facie* the owner of the soil or mineral objects to the center of the earth, and any underground en-

It is universally conceded that trespass lies for entering below the surface.[162] This, of course, is usually because such a trespass involves disturbance of the solid matter of the soil, which is often mentioned as part of the basis for such action.[163] On the Continent, regalian rights in minerals sometimes interfere with the presumption, but England never recognized them except in mines of gold and silver.[164] For our purpose, cases are re-

croachment by an adjoining owner is a trespass or nuisance": TIFFANY, REAL PROPERTY, § 252, p. 865.

[162] Trespass by interference with minerals has been frequently upheld: Maye v. Yappen, 23 Cal. 306 (1863); United States v. Magoon, 3 McLean 171, Fed. Cas. No. 15707 (1848); Morgan v. Powell, 2 G. & D. 721 (1842). On the general proposition of trespass for entry below the surface: POLLOCK, TORTS p. 35; SALMOND, TORTS § 52, p. 176 (who adds, without citing authority: "Where the possession of the surface has been separated from that of the subsoil . . . any infringement of the horizontal boundary thus created is a trespass"). JAGGARD, TORTS, p. 661. A life tenant has an estate in "all the land", and so the owner of the inheritance cannot trespass by a tunnel: Koen v. Bartlett, 41 W. Va. 559, 23 S. E. 664 (1895).

[163] *Cf.* Ashton v. Stock, 6 Ch. D. 726 (1877) (working of mines under another's land from mines under trespasser's land); Lewis v. Branthwaite, 2 B. & Ad. 186 (1831) (the tenant in possession of copyhold lands may maintain trespass against the owner of an adjoining colliery for taking coal, although no trespass committed on the surface). In the latter case Lord Tenterden remarked: "He who has the surface has the subsoil, and it seems to me that the copyholder has possession of the subsoil although he may have no property in it".

[164] *Cf.* Snyder, *Severence of Estates in Mines and Some of the Consequences,* (1909) 68 CENT. L. J. 283. A discussion of the implications of the presumption is to be found in MIRAGLIA, *op. cit.* § 290, p. 472, *et seq.* Among the points there discussed is the postulate of possession of minerals by the surface owner who is not aware of them.

PLANIOL, TRAITÉ ÉLÉMENTAIRE § 2391, p. 745: "Théoriquement son droit s'étend indefiniment en profondeur. Tous les gisements métalliques ou autres, situées au-dessous de la parcelle, lui appartiennent également, à quelque profondeur qu'ils se trouvent. Tel est le principe traditionnel du droit français". However, French mining law, especially since the legislation of 1810, attempts in a fashion to separate the soil from the minerals, allowing parties not owners of the surface to exploit the mines, upon payment of compensation to the surface owner. See, generally, on this phase of French law, BAUDRY-LACONTINERIE, DES BIENS §§ 333, 334; DEMOLOMBE, DISTINCTION DES BIENS 567-573.

In another passage Planiol remarks: "Si la lettre du Code a été respectée, son esprit a été méconnu, car le résultat réel de la loi de 1810 a été de faire de la mine une propriété distincte de la surface et qui n'est plus à la disposition des propriétaires foncières": PLANIOL, TRAITÉ ÉLÉMENTAIRE § 2394, p. 746. This exception to the usual presumption extends only to the exploitation of the mineral substances alone, and the payment of the compensation to the surface owner (*redevance*) is in itself a recognition of the surface owner's interest. Demolombe considers that, "il faut donc, en effet, déclarer aujourd'hui avec notre art. 552, que la propriété du sol emporte la propriété du dessous sans restriction et sans limite, du dessous à toute profondeur, du dessous usque ad infera": DEMOLOMBE, DISTINCTION DES BIENS 564.

German law gives the right to strangers to win the minerals, under certain restrictions: SCHUSTER, *op. cit.,* § 350, pp. 413, 414.

quired dealing with the space occupied by the solid matter. We may expect to find few in which the space has had sufficient importance apart from the matter occupying it to receive separate consideration.

The Wisconsin ejectment cases, beginning with *McCourt v. Eckstein,* have already been discussed, and we saw that no distinction was there made between projections above and below the surface, and that apparently ownership of the superjacent and subjacent space was allowed, subject to a presumption as to possession in favor of the surface, and apparently a juristic quality of indivisibility.

Another case of a projecting foundation wall is that of *Wachstein v. Christopher,*[165] where Cobb, P. J., remarked: "The mere fact that the thing sought to be recovered is below the surface is no reason why ejectment is not the appropriate remedy."

Contrary in result, and apparently in accord with the other Michigan case of *Wilmarth v. Woodcock,* previously discussed, is the case of *Harrington v. City of Port Huron.*[166] Here there was ejectment brought against the city for maintaining a sewer under the plaintiff's land, and the judgment of the court below on the verdict of the jury for the plaintiff described the land by the surface measurements only. The upper court apparently considered that the sewer constituted only an easement, and so could not be delivered by the sheriff under the writ of possession. A statement of the court to the effect that ejectment will not lie for "a mere trespass" indicates that perhaps the court considered the operation of the sewer a violation of an ownership right.

In the interesting case of *City of Chicago v. Troy Laundry,*[167] the defendant city constructed a tunnel fifty-five feet below the surface without the knowledge of the plaintiff. Sixteen years later the plaintiff erected a building, and then discovered the tunnel, which caused a sinking of the building then constructed. It was held, not only that the construction of the tun-

[165] 128 Ga. 229, 57 S. E. 511 (1907), 11 L. R. A. (N. S.) 917, and note.

[166] 86 Mich. 46, 48 N. W. 641 (1891). We have already noted the difficulties of ejectment when applied to projections beneath the surface.

[167] 162 Fed. 678 (C. C. A. 7th, 1908).

nel was a trespass, but that the forcing of water through it constituted a continuing trespass.

In *Smith v. City of Atlanta,*[168] the building of a sewer through a private lot was held to be a taking of the property of the plaintiff, although the defendant city proved that the market value of the surface was unaffected. As illustrating the reasoning of the court, the following excerpt from the opinion of Justice Lumpkin has significance here:

> "All the earth removed belonged to the plaintiffs and unquestionably by the location of the sewer they were deprived of the possession of the space it occupied, and could no longer use that space for any other purpose."

The court here distinguished two things which were owned by the plaintiff: the earth, which had been removed; and the space which it occupied. Although the emphasis is on the use of the space, that is to illustrate that the property in it had been taken. The probable meaning of the court is that the space was the subject of possessory and proprietary rights, for which compensation must be given without reference to the value of the surface.

In an English case, *Phillips v. Homfray,*[169] it was held that a party who took coals from another's land without the landowner knowing must not only pay for the coals, but must also give compensation for the use of the wayleave made by the removal of the coals. Of course, in both this case and the *Troy Laundry* case, a physical contact with the soil was involved in the use of the space; nevertheless, it was the space which was primarily used.

The case of *Costigan v. Pennsylvania Ry.,*[170] presents a

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[168] 92 Ga. 119, 17 S. E. 981 (1893).

[169] L. R. Ch. App. 770 (1871).

[170] 54 N. J. L. 233, 23 Atl. 810 (1892). Note to this case, (1892) 6 HARV. L. REV. 100: "To say that a man cannot put a building of the size he chooses on his own land is at first a startling doctrine; but if the plaintiff can prove actual transfer of particles of earth from his neighbor's lot to his, however far below the surface, it seems to follow necessarily that there is a trespass. . . . It is needless to add that the unmetaphysical sympathies of juries as well as the infrequency of violent subterranean displacements, will keep this scientific principle within due limits".

somewhat unusual situation. The plaintiff in that case was the owner of a lot, with dwellings thereon, contiguous to a strip of land owned by the defendant railroad company. The defendant company constructed a high embankment for a roadbed, the weight of which, according to the declaration in the case, "forced a large quantity of earth into and upon plaintiff's lot below the surface" and thus caused injury to the foundation and walls of the dwelling houses on the lot. The declaration was held to set out a good cause of action in trespass. This case is explicable on two grounds; first, that the trespass was the forcing of the earth or solid matter into the plaintiff's lot; or, secondly, that it was the disturbance of the surface. The latter is the explanation which would be given by those who, like Dean Wigmore, hold that the surface is the sole subject of ownership.

The Master of the Rolls, in *Mitchell v. Mosely,*[171] discussed a conveyance which followed a mining lease, but in which no exception or reservation was expressed, in the following manner:

> "The grant of the land includes the surface and all that is *supra,* houses, trees, and the like . . . (citing the maxim); and all that is *infra, i. e.,* mines, earth, clay, etc. It is, however, within the right of the lessees to get the coal and cannel during the term. Subject to that right, so far as it can be and is exercised by the lessees under the lease, it is to my mind quite clear as a matter of construction of the conveyances that not merely the surface rights but the whole substratum to the centre of the earth, *even including the vacant spaces* from which during the term the coal may have been worked out by the lessees—all that passed. . . ." [172]

An analogous case is that of Roushlange v. Chicago & Alton Ry., 115 Ind. 106, 17 N. E. 198 (1888). Here there was an upheaval of the surface of the adjoining land caused by a fill in a marshy place; but the following part of the opinion would indicate that the court considered the injury to be the use of the adjoining land under the surface: "The fact remains that appellant granted to the railway company a strip of land upon which to construct and operate its road, and it has so constructed it as to make it rest, not only upon the strip thus granted, but also upon his adjoining land not granted. The railway company is thus occupying land which was not granted to it, and which neither party intended should be either granted to it or occupied by its road. The road is no less an encroachment upon appellant's land because its foundation is beneath the surface".

[171] [1914] 1 Ch. 438.

[172] Per Cozens-Hardy, M. R.

The effect or significance of these remarks cannot be made apparent without a discussion of a group of cases quite involved in nature—where the surface has been separated in ownership from either the mines or the minerals beneath. It is believed that several of these cases, as for example *Bowser v. Maclean*,[173] can be explained on no other ground than that the law recognizes ownership of the space below the surface.[174]

Disregarding these cases at this time, it nevertheless appears consistent with this preliminary examination to consider the space lying beneath the surface as something which can be owned, and is owned, subject, of course, to the limitations imposed by our modes of life, and, perhaps, as is suggested by the Wisconsin cases, subject to certain presumptions arising out of acts at the surface. At least, we may accept this as a working hypothesis.

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[173] 2 De G. F. & J. 415 (Eng. 1860).

[174] Division of land ownership horizontally, both above and beneath the surface, has been accomplished or suggested in a number of cases. While throwing considerable light on the present discussion, the evidence they offer requires too extensive examination to be more than mentioned at this time.