aversion to taking their "laws" for more than what they are, viz., shorthand summaries of experience; they are content to speak of greater and lesser degrees of probability. The facts of society are far more complex than those of physics, hence no laws have hitherto been discovered. However, the search for regularities is always legitimate, and we are certainly warranted in determining how our phenomena are interrelated.

This quest has not been fruitless, for certain cultural traits appear to be organically linked, so that one of them renders the presence of another more probable or, on the contrary, may tend to exclude it. In some instances the nature of the correlation is clear to us; in others we merely recognize its reality and suspect that some intermediate link eludes us. Thus we readily see why pigs do not go with pastoral nomadism (pp. 40 ff.) and why pottery accompanies a sedentary life (p. 128).

But if the association of apes with dairying (p. 196) is not due to sheer chance, the reason for the coupling remains obscure.

In culture one phenomenon is hardly ever determined by one particular cause; there is rather a functional relationship between them and, it may be, an indefinite number of other features. Unless this fact is realized we are likely to get a distorted picture. For example, off-hand it seems very reasonable that the avunculate (pp. 251, 257, 274) should be linked with matrilineal clans; but the real crux of the matter may be common realness of uncle and nephew, irrespective of rule of descent.

Of course, the determination of such correlations is not the sole concern of anthropology, but it is one of its important aims.

The Proper View of Cultural Elements

The general goal of anthropological study is to understand the whole of culture in all periods and ages, and
Sir Walter Raleigh and Virginia), but according to the specialists it must have been somewhere between 1566
and 1590. About twenty years before, the tuber had
reached the Italians, who had derived it, of course, from
the Spaniards, who, in turn, had noted its importance in
Peru.

Without going much further it is obvious that the
simple potato brings us face to face with the perennial
questions of invention and diffusion. The precise his-
tory of its spread is clearly a strangely tortuous one.
But besides the strictly historical aspects of the case
there are various psychological problems linked with
them at every point. How did the notion of raising this
tuber arise? Was it an extension of the idea of cultiva-
tion (p. 35) as already practised with some other species,
such as possibly the sweet potato? Or was it a literally
independent conception, which, on the contrary, may
have stimulated the growing of other tubers? The mat-
ter of racial achievement enters, for this trait is an
indisputable contribution of the American Indian; on the
other hand, geography has its bearings: the origin of
the potato was inevitably restricted to the area of its
wild ancestors, and its Andean home suggests that it is
likely to thrive in comparable climates.

Extending our survey, we find that generally this as-
sumption is borne out. The potato is of little economic
significance in the tropics except where the latitude is
compensated by the altitude, as in the Andes of south
western New Guinea. It is a striking fact in this con-
nection that the only Polynesians who have become vig-
orous potato-growers are the Maori of temperate New
Zealand.

More interesting because more puzzling is the neglect
of the tuber in regions to which it is admirably suited.
Notably the Chinese, except in certain highland dis-
tricts, have failed to be deeply affected by the potato,
which ranks as an inferior article of the poor. Since
these people have readily adopted the sweet potato and
make, their attitude toward the potato can not be due
to their inherent conservatism, as has sometimes been al-
leged. The real reason is similar to that for the failure
of the Pueblos to domesticate their wild tubers, viz., the
presence of a previous staple of great value. As the
Southwestern Indians already had maize and hence saw
no great object in experimenting with the cultivation of
an available Solanum species, so the Chinese, who had
long looked upon rice as an adequate staple, had no mo-
tive for an economic revolution when confronted with
the potato. They were the less inclined to favor it even as
a secondary crop because it had been preceded in their
country by the sweet potato and various kinds of yams
(Dioscorea).

This selective fastidiousness contrasts instructively
with the position of the Maori, who prized the potato
above all other introduced forms of food and substituted
it for their native kumara. When they migrated to New
Zealand, these Polynesians had been compelled to drop
the yam except in the northernmost part and to abandon
all farming in the south (p. 38); hence they eagerly cul-
tivated the potato even in the South Island. The reason
for the sharp difference between the Chinese and the
Maori is clear. In northern New Zealand the previous
crop—unlike the Chinese rice—was indisputably inferior
to the innovation; in the South Island there was no com-
petitor whatsoever.

But the Maori case illustrates additional points. For
one thing, the natives did not take over potato culture
mechanically, but devised new techniques unknown to the
European settlers. For example, they succeeded in
preventing exposure to frosts while still obtaining very
early crops. Again, the potato became so dominant a
feature of their life that without historic records one
would never guess its recent introduction: as early as
1839 a European traveler found "wild" potatoes growing
everywhere and the Maori themselves evolved the tra-
dition that the plant had been known to them before the coming of the whites.

Turning back to Europe, we find still other principles exemplified. In a way the history of the potato there is as emblematical of the advance of all agriculture. As explained (p. 32), cultivation in general was not particularly significant in its immediate results, but in its ultimate possibilities. So the potato was at first merely an oddity of no economic importance whatsoever. The great French botanist Chastuj, who in 1601 first described it in scientific terms, had obtained two samples in 1588 brought into Belgium by the papal legate, who "ate these tubers, prepared like chestnuts or carrots, in order to gain strength, as he was of delicate health." At that time the Italian peasants boiled potatoes with mutton and fed them to pigs, but in Spain (where the Italians must have acquired their original supply) the tubers were not grown before 1800.

As a matter of fact, no one at first had the intuition to detect in the newsworn a plant of revolutionary value. In 1825 its consumption on the Continent was still small in comparison with that of the United Kingdom, where it had overcome violent prejudice. The Scotch deprecated its use because it was not mentioned in the Bible; elsewhere it was denounced as unwholesome or even as positively poisonous because it belonged to the nightshade family. As late as 1860 it was still associated in British minds mainly with Ireland and the north of England. It was in Ireland, where natural and social conditions were peculiarly favorable to its reception, that the potato was first recognized as a field crop of importance for human beings—prior to the starvation year of 1663.

Periods of dearth, indeed, affected the cultivation of the potato as it previously had influenced the adoption of rye as a staple (p. 35). It was used as a famine antidote in England in 1622 and in France at various times during the Eighteenth Century. During the ter-

Rible death of 1770 the Academy of Besançon offered a prize for the demonstration of plants that might supply food to famine sufferers. It was awarded to the farmer-chemist Parmentier, whose experiments proved that the potato furnished even in unpromising soil and that its chemical analysis revealed no poisonous substances. Thus he destroyed the prejudices of his countrymen. In Germany, as already explained, the misery of the Thirty Years' War fostered the extension of potato-growing. In all these developments the strictly psychological element is never in abeyance. We find popular resentment of novelty, however useful, and even unexpectedly religious irrationalism. On the other hand, apart from the initial steps in Chile or Peru, there are the bolder spirits who were ready to test the tuber, to adapt it to new conditions (Muéñes), to use it for forage and even as a staple for human food. Yet we do not anywhere discover a creation out of nothing by one outstanding genius. Parmentier stands forth prominently, but closer study shows that his ideas were stimulated by the potato diet he became familiar with during his captivity in Germany as a prisoner of war, and that, however sporadically and unintensively, the potato had been grown in France before him. Indeed, about 1755 another Frenchman, Dubanmel du Moussel, had also insisted on the value of potatoes in times of scarcity. This does not minimize the rigorous scientific contribution of Parmentier but exhibits it in proper perspective, as the culminating point in the line of development.

Thus the potato instructively shows how any element of culture should be approached. It is not an isolated atom apart from the rest of the social inventory but is vitally interwoven with every other fact of human civilization. If we knew literally everything about the potato—how it came to be deliberately raised in South America, what were the initial responses of the community to its introduction, how it evolved to its position in the Andean highlands, what phases of supernaturalism were inter-
woven with its cultivation, and all the subsequent steps of diffusion of which we literally know only the bare outline—we should know a great deal about man and culture.

PART II

ILLUSTRATIVE CULTURES