These ratios represent parts by weight, and are intended to apply to the food of persons who must economize in expenditure to the lowest limit at which health can be maintained.

It will be noted that the amount of fat is in each case about one-ninth of the amount of carbohydrate. This is acknowledged to be undesirably low; and is suggested with a view to the utmost economy, fat being the most costly food constituent. The lower classes of the German peasantry use a diet of the kind indicated. Among the wealthy classes of Germany however, the ratio of fat to carbohydrate was found to be 1 to 3 or 4 instead of 1 to 9. I have already stated that while fats and carbohydrates cannot replace proteids in the diet, they may to a large extent, replace each other. Where utmost economy is necessary, of course the fat component of the diet, as being the most costly, will be reduced to its lowest terms, and the carbohydrate correspondingly increased. There is a limit below which this cannot be done, if health is to be maintained, and the above quoted ratio fixes this limit. It is regrettable that food fat in palatable form, should be so costly. Wherever possible the fat should be increased, and the carbohydrate correspondingly decreased.

It is notoriously the case that the greater part of the fat in lamb and mutton Chops, sirloin steak, and the best cuts of all kinds of meat, is not eaten, and is too often wasted. The butcher leaves this fat on the chop or steak, partly as evidence that the meat is derived from a well fatted carcase, and partly because he gets a better price for it, when sold at the price of chops or steak, than he could secure by selling it simply as fat. The ordinary man has no appetite for the excess of beef or mutton fat supplied in the form of cooked steak or chop. Here is a distinct waste of valuable food material, a waste which amounts to millions of dollars every year. This excess of beef and mutton fat should be worked up into palatable form, a matter which could be easily accomplished by well known methods of manufacture.

This aspect of the matter is so very interesting that I am tempted to introduce some statistics, by way of illustration. The following represent actual dietaries upon which the individuals, representative of the classes to which they respectively belong, maintained a working vitality. They are quoted from Hammarsten's Physiological Chemistry, as translated by Mandel; and are not be to understood as other than selected instances of actually investigated cases, introduced for illustrative purposes. I have merely converted Hammarsten's statements, which are given in grammes, into ounces in order that they may be more intelligible to my readers.

Examples of the daily quantity of food in specific individuals and the calculated energy represented by this food.

Quantities in ounces Avoirdupois. *Energy* in calories.

	Description	Proteids	Fats	Carbohydrates	Calories
1	Soldier during peace	4.197	1.411	18.659	2784
2	Soldier in light service	4.127	1.235	15.768	2424
3	Soldier in the field	5.150	1.623	17.778	2852
4	Labourer at work	4.586	1.411	19.400	2903
5	Labourer at rest	4.832	2.540	12.416	2458
6	Cabinet maker (40 years)	4.621	2.398	17.425	2835
7	Young physician	4.480	3.171	10.143	2602
8	Young physician	4.727	3.598	10.300	2476
9	Labourer	4.691	3.351	14.885	2902
10	English smith	6.208	2.505	23.492	3780
11	English pugilist	10.159	3.104	3.280	2189
12	Bavarian woodman	4.762	7.337	30.900	5589
13	Silesian l abourer	2.822	0.564	19.471	2518
14	Seamstress in London	1.904	1.023	10.300	1688
15	Swedish labourer	4.727	2.787	17.108	3019
16	Japanese student	2.928	0.494	21.941	2779
17	Japanese shopman	1.940	0.212	13.898	1744
18	Eskimo (Krough)	9.947	1.443	1.792	2604
19	Bengali	1.834	0.907	16.649	2390