NAVAL TACTICS.

PART III.

AN

HISTORICAL SKETCH

OF

NAVAL TACTICS.

SINCE the study of NAVAL TACTICS is of the greatest importance to this Empire, and since the abilities and skill of British seamen, in the conduct and management of single ships, are so manifest, that nothing higher has existed in any one profession or department of life; it is therefore the more worthy of inquiry from what cause or accident it should have proceeded.
that so little progress has been made, in the most important part of the subject; I mean, the mode of arranging and conducting of ships, when assembled in great fleets, for the purpose of advancing to battle.

It is not, however, intended that the Naval Tactics of the ancients should be understood to be affected by what has been said; on the contrary, from history, we are made to believe that the conduct of their commanders, in most of their military operations at sea, was founded on principles equally applicable, and equally understood, with those which governed their military operations by land. Of this, the battles of Salamis, of Actium, &c. are examples.

That Naval History, in modern times, has not been so perfect in its information, may be admitted, if it is true, that, of all the numerous engagements at sea, with the Spaniards, with the Dutch, and with the French, spirited and successful as they sometimes were, not one satisfactory plan or description has been obtained, by which even the arrangement or movement of the different fleets could be discovered, more early than that of Admiral Maitlands, in 1744; nor one, from which an idea of any system, of either attack or defence, can be formed, more early than that of Admiral Byng in 1756.

From a distinction so remarkable as this, an idea has been suggested, of having Naval History divided into Periods, in which, by comprehending and distinguishing the particular changes of
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The weapons, in the shipping, or in the modes of practice, some cause, some essential error in principle, some defect in conduct, will be discovered, from whence should have originated this singular difference of information, between the Naval Tactics of ancient and modern times; for it never can be imputed to the historian alone.

The History of Naval Tactics may therefore be divided into the following Periods:

The First Period will comprehend the time in which the progressive motion of ships and fleets, advancing to battle, had continued to be dependent upon, and confined to, the propulsive power of the oar, and while the decision of the contest was entrusted to the sword, as in the sea battles of antiquity, Salamis, Aegium, &c. as before mentioned; with which also may be included the battle of Lepanto in 1571.

The Second Period includes the time that sails became the necessary, and almost the only means of the progression of ships, now of greater dimensions, more unwieldy, and no longer manageable by the exertion of the men within by oars. This Period begins with the Spanish Armada, comprehends the engagements between the English and the Dutch, together with the battles of Bantry Bay, Beachyhead, La Hogue in the seventeenth century, and of Malaga in 1719, of none of which have we been able to procure any particular plan or description, down to the year 1740.

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The Third Period, then, with propriety, will begin with those engagements of which we have been able to give a particular plan and description; that of Admiral Matthews in 1744, including Admiral Byng's engagement in 1756, Sir George Pocock's in 1758, together with those of the American War, from the year 1778 to 1782.

The year 1782, so much distinguished by extraordinary exertions of naval ability, at the same time that it will form the commencement of a Fourth Period in the History of Naval Tactics, will also give occasion to add a Fourth Part to this Work.
PERIOD I.

As long as the progressive motion of ships and fleets, advancing to battle, was dependent upon, perhaps confined to, the propelling power of the oar, and the decision of the contest was entrusted to the sword, so long the principles of arrangement and disposition of force, whether at sea, or at land, setting aside the more immediate influence of storms of wind, could not but be nearly alike. For, when it is considered that the men engaged in bothcales, at sea and on land, were often the same, actuated equally by courage or revenge, by fear or despair; that the means of advancing and retreating, and advancing again, were equally in their power, and the weapons, offensive and defensive, nearly the same; ships of war, with their complements of men on board, under such circumstances, not unaptly might be said to bear a near resemblance to cohorts, or battalions of infantry, or even to squadrons of cavalry, in the shock of battle.

Again, when we consider that ships, in those ancient days, were of small size, of little draught of water, and unembarrassed by the ebbing and flowing of tides, as in the Mediterranean; that, by keeping close by the shore at all times, they could be concealed or covered behind headlands or islands; fleets of
this description, composed of numbers of ships, in like manner might be considered as resembling numerous corps of troops assembled and acting as armies at land, not only because they could form ambuscades or stratagems, but also could, on similar principles, attack, secure, or defend a strength, or strait, choosing and occupying their ground at pleasure, as at Salamis, or Actium, and as in many other instances exhibited between the Romans and Carthaginians, which it is needless to mention. And, to extend the bounds of this period, the battle of Lepanto, in 1571, may be included; which differs only in this respect, that gunpowder was then known and used, but similar to, and even strictly connected with, ancient practice; in so far, that the contest, notwithstanding this knowledge of gunpowder, was decided by the sword alone. The vessels engaged, if not precisely of the same construction, were still about the same size, and were, in like manner, propelled in their motions with oars, by the manual exertion of the men on board.

That a fleet of this description, in these circumstances, when to windward, had advantages over the fleet to leeward, will not be denied. When advancing to make an attack, the effect of their impetus or shock must have been the greater from their having the wind in their favour; and, when desirous of declining an engagement, it was more in their power to retire, and more difficult for the leeward fleet to get up with them. But, in advancing to battle, both fleets were upon an equal footing, propelled by their oars, each galley having her prow opposed to that of her adversary. Whatever, therefore, were the weapons
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weapons in use, catapultas, balistas, or cannon shot, as at Lepanto, placed, as they were, as a battery, in the fore part of the vessel, whether in making or sustaining an attack, neither fleet, in this respect, had any particular advantage over the other, whichever of them was to windward or leeward.
PERIOD II.

The confluence of many things uniting, would seem to mark out the bounds by which a second period in naval history may be distinguished. The extension of commerce and naval power to America and to the East Indies, while it protracted the length of voyages, increased also the hazard of the sea. The size of great guns being introduced, while at the same time they were increasing in weight and dimensions, were also multiplied in number, sometimes to the amount of an hundred on board. Ships, for these reasons, requiring to be of stronger construction, large and unwieldy, and no longer manageable by the manual exertion of the oar, were obliged to have recourse to the sail, as dependent on the wind alone, for carrying the requisite manoeuvres into execution.

OF SAILS, CONSIDERING THEIR EFFECT ON THE MOTION OF A SHIP, COMPARED WITH OARS.

But sails, however necessary for the managing of the motions of ships of larger construction, compared with oars, were inadequate to the various operations and movements required in the ancient practice and mode of battle. In a calm, they were of
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no use; and with the wind, could command, in the direction of the motion of the ship, little more than one half of the plane of the horizon, and this only to leeward.

OF CANNON SHOT, CONSIDERING ITS EFFECT AS COMING FROM THE PROW OF A GALLEY, OR FROM A SHIP'S BROADCIDE.

When guns were planted as a battery in the forecastle, as they generally at first were in a galley, the application of their force, though inferior, at least with respect to number, was still in the same direction with the line of their course, and which course was perfectly under the command of the people within. But when planted on the sides of a ship, their force and effect, from the greater number, though irresistible compared with a galley, yet being at right angles with the line of her course, and this course depending upon a foreign agent, the wind, and not under an equal command of the people within, the effect and consequences of course became so completely changed and different, that every former idea of naval tactics was immediately overturned.

In the mean time, even during this extraordinary transition of circumstances, the naval exploits and enterprises were, many of them, spirited, and though not all of them decisive, were constantly marked with strong effect. But when the ship itself, the means of moving that ship, and the weapons, were undergoing transitions so very extraordinary, it is not easy to conceive,

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that conduct adapted to such novelties could not at once be established.

In the Introduction*, many of these exploits have already been enumerated; but how far the mode of conducting them was or was not the result of any particular system, remains yet a matter of inquiry.

OF THE SPANISH ARMADA.

Philip the Second, possessed of Spain, Portugal, and the riches of America, in planning the armament of the Spanish Armada, confident, and trusting in his great superiority, thought only of gratifying his resentment against Elizabeth and her subjects. His ships being constructed with lofty buildings at head and stern, which, like castles, might overtop and command the decks of the smaller ships of the English, neither himself nor his admirals were aware how unfit such unwieldy, ill-constructed, and, if possible, worse manned vessels, were for navigating seas that were narrow, and in a northern climate, and where, at the same time, there was not one friendly port to leeward sufficient to receive or afford them shelter in case of accidents. But this cumbrous fleet, (irreconcilable in his imagination), on approaching the Channel, while the ships of the English were everywhere to skulk or fly before it, was to proceed to the eastward to take on board the Prince of Parma with his troops, collected in the Low Countries, and, without interruption or difficulty

See the General Introduction prefixed to Part I.
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difficulty of any kind whatever, was to enter the Thames, and at one blow to overwhelm ELIZABETH.

On the part of the English, where can a more illustrious example of naval skill and foresight be met with, than in the conduct displayed in accomplishing the defeat and ruin of this Spanish Armada, in which the prudence of sustaining a defence, by suffering that immense armament to waste its force in an idle contention with the winds and waves, was no less conspicuous than the intrepidity and perseverance with which the repeated attacks were made? *

OF THE BRITISH CHANNEL.

That an estimate may be made of the probable success, or of the consequent hazard and risk, to which a numerous armament of great ships, engaged in an hostile enterprise of this kind, may be exposed, the British Channel should be carefully considered:

In the first place, as a barrier or boundary, defending and dividing us from all the rest of the world:

In the next place, as a sea, narrow, winding, and contracted by head-lands, in which the navigation, with all the skill and attention that can be given, is both difficult and dangerous to mariners, even the most familiar with it.

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As a barrier or boundary, it forms one continued canal, connecting the German and Northern Oceans with the Atlantic, and extends in length to above 1000 miles. The banks of this canal, on the British shore to the south, where washed by the Channel, and opposite to France, far from being open and easy of descent to every invasion, as we have been made to believe, like this of the Spanish Armada, or any other of them, with which, as bugbears, we have been so often and long threatened, the coast is bold and dangerous; and if it should be accessible in any one particular and more interesting spot, as at Portsmouth, the country behind and within is so strong, that from the south, or across the Channel, every attempt to approach the capital, or to overrun the kingdom, with common attention given, must always be defeated.

Considering the Channel as a sea, narrow, winding, contracted and broken by head-lands, it is affected by rapid tides, forming innumerable dangerous shelves and banks. By the climate, and by its form, it is subjected to tempestuous and sudden changes of wind, so that the boldest and most experienced mariners, from arriving in soundings in approaching the mouth of the Channel, even with a leading wind, and keeping in the fair way, till they get into port, seldom are at ease. This is meant in the case of a single ship. But let any one, ever so conversant in this navigation, with every advantage of ports in his favour, say what his feelings have been, when on board of a British fleet cruising in the Channel, and then we may judge with respect to a numerous fleet of large ships, strangers, with dark nights and blowing
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blowing weather, what the apprehensions and feelings may be as well of the officers on board, as of the statesman on shore, who wantonly commits and puts to hazard so great a part of the marine of his nation in one enterprise, and in such perils.

By an easterly wind (as often is the case with our own ships) an hostile fleet may be long detained from entering the mouth of the Channel; and by a wind at west, when once embayed, suppose within the head-lands of Portland on the one shore, and La Hogue on the other, it will not be easy for them to return. * If the wind from the west continues, and begins to blow with violence, which it often and suddenly does, this fleet must put before it (for there is not one port on the opposite shore sufficient to receive and afford shelter for large ships for above 1500 miles from Brext, round to the entrance of the Baltic); and, passing the straits between Dover and Calais, over sands and through shelves, they must get, without remedy, into great disorder. But all the while this fleet, by the supposition, has hitherto met with no interruption or annoyance of any kind from Britain, the greater part of her force being occupied at a distance. What then ought to be the consequences, if followed by numberless ships, of every size and denomination, which, in such a case, and for this occasion only, may be fitted out, and collected from the different ports, which, incessantly hanging on the rear, are

* No fleet of French men of war has been within these head-lands since the battle of Cape La Hogue, May 19, 1693."
are enabled to take advantage of every accident, many of them at all times, from the situation of the ports from whence they can be fitted out, being necessarily to windward, which way forever the wind shall blow? After considering these circumstances, is it to be imagined, that a fleet of ships from the southward, hostile to Britain, so large and so numerous, will ever, without great loss, be able to effect a return through the Channel? Will it not be expected, that they must be forced into the North Seas, where, if late in the season, in the high latitude of 60 degrees, they will have to encounter all the horrors of winter, long nights, and continual storms, not less formidable than any thing experienced by Lord Anson when doubling Cape Horn, as lately felt by the armament commanded by Mons. Thurot?

Of such a nature was the route planned for the Spanish Armada by Philip the Second, and by following which route was this mighty enterprise defeated.

OF THE BATTLES WITH THE DUTCH.

The engagements with the Dutch, still later, by almost one hundred years, than the Spanish Armada, glorious as they were to both nations, as exhibitions of courage and perseverance, give little information with regard to a progress or improvement in Naval Tactics. The only idea which I have been able to form of them, is that of numerous squadrons assembled, to the amount of 250 or 300 ships, jambed together in narrow seas,
(the Channel), where they have been confined by the shores on each side, and deprived, in a great measure, of every chance of manoeuvring.——Here, in one place, ships in clusters entangled with one another, and, independent of all order, getting foul, each of their antagonists; there, again, in another part of the scene, one ship, single and alone, unsupported, and beset with many enemies, left to make the most gallant resistance she could. Of course, on both sides, much bloodshed and loss of shipping must have been sustained. But, in these engagements, they differed in this from the case of the Spanish Armada, that each of the parties had their ports under their lee, to which they could retire, and from whence they could safely forth at pleasure, so soon as refitted.

OF SIGNALS, THE INVENTION OF WHICH, ABOUT THIS TIME, IS ASCRIBED TO THE DUKE OF YORK.

The invention of signals is generally ascribed to the Duke of York about this time. This, however, is absolutely incredible. He might, indeed, have improved them, but the invention must have been of older date. How could any military operation at sea or on land be conducted without signals? It cannot be believed that, in reducing the subject of signals to any kind of system, he had made much progress; if it is necessary that Admirals, to this day, when entering upon the command of an expedition, have to compose a particular system for themselves; an attempt which must be attended with much inconvenience; for it is not conceivable of any new code of signals, however simplified it
may be, that it can be made familiar to every officer in a numerous fleet in the course of a few days, or even weeks; and therefore is the more absurd if an enemy is to be encountered with immediately, which has sometimes been the case after a few hours departure from port.

OF NAVAL INSTRUCTIONS.

The Naval Instructions about this time formed, for having ships extended in line of battle, and which were founded upon the occasion of the above mentioned battles with the Dutch, in order to serve the immediate purpose of fighting in narrow seas, if ill qualified (as said in another place *) for bringing on an action with a fleet of ships unwilling to come to a shock, and having sea-room to range in at pleasure, they have been no less unfortunate in promoting the means of information; since, of all those numerous engagements, so little of system, so little of the disposition or movement of fleets has been comprehended, that the historian Mr David Hume, accurate and intelligent as he was in every other subject of inquiry, giving up the point, as it would seem, has the following passage: 'There is a natural confusion attending sea-fights, even beyond other military transactions, derived from the precarious operations of winds and tides, as well as from the smoke and darkness in which every thing is there involved; no wonder, therefore, that relations of these battles are apt to contain uncertainties and contradictions, especially when compared by writers of the hostile nations, 

* See Introduction prefixed to Part I. p. 18.
nations, who take a pleasure in exalting their own advantages, and suppressing those of the enemy *.

The part of Mr Hume's history from which this passage is quoted, was not finished till almost an hundred years after the battles in question, and not till after he might have consulted the description of these others, Bantry Bay, Beachy-Head, and La Hogue. He had likewise the assistance which might be procured from the battles fought in his own time; that of Malaga in 1719, that of Admiral Matthews in 1744, and that of Admiral Byng in 1756; together with every degree of information which could be acquired from the trials which took place in consequence of the two last, both long and circumstantial †. Mr Hume, at the same time, nothing at a loss when a battle at land is to be described, but, like other historians, with infinite pains, is sure to preface the same with a detail of every circumstance of situation, advantage or disadvantage of ground, by which the reader is made to foresee whichever of the parties shall obtain the victory.

Other writers, equally successful in their detail of military transactions at land, but not a whit more fortunate in their conceptions of operations at sea, talk of agility of shipping, of their heroes


† A later writer still, Mr McPherson, when speaking of the battle of La Hogue, has these words: 'The confusion and want of plan which prevails in all naval engagements, ought to have saved the victors from the confuse which writers have thrown on their conduct.'
heroes rushing furious through the squadrons of the enemy, of rushing to battle, of presenting themselves to every danger, of plunging into the middle of the foe, &c.; phrases applicable only to military operations at land, and consistent, and perhaps in use, in speaking even of transactions at sea, when galleys, as in ancient times, were propelled in every direction with the oar, and actuated upon, and influenced by, the passions of men within the vessel; but altogether inconsistent with the motions of unwieldy shipping, manageable only with the sails, confined, as they must always be, to particular movements, as mere machines, dependent on the immediate effect of the wind alone, as they are in these days.

Is it to the historian, then, that we are to impute this confusion of ideas, the continuation of the use of such phrases, and this to particular defect of information? No; for historians must have adhered to the spirit of the descriptions which have been put into their hands. Is it to the vanity of commanders, detirous of extolling and magnifying their own exploits? No; it can only be attributed to the particular state of things at the time, that the intellects of men, deranged by to complete a transition of so many circumstances combined, as before enumerated, have not as yet recovered any proper idea of system, or principles of conduct, adapted to such novelties.
PERIOD III.

Supposing Period III to commence about anno 1740, and to conclude with the end of the year 1781, it will be distinguished by those sea engagements of which we have been able to procure such an authentic and substantial information of circumstances, as could authorise a particular plan and description. But, before proceeding farther with this investigation, it will be necessary to premise a few General Principles.

GENERAL PRINCIPLES.

Case I. A commander who shall have so disposed of his force, that no one division or part can be attacked, without a possibility of being immediately supported by the whole, or at least by some other part, has taken not only the first precaution to prevent a defeat, but also, has taken the first step to obtain a victory.

Case II. The commander who, in leading on his force, shall make his attack with great superiority, upon any one division or part of his enemy, and while this division shall be posted so as it cannot be supported, has, in like manner, not only taken the
first step to obtain a victory, but also has laid hold of the first precaution to secure a retreat, should it ever be necessary.

Case III. Hence, on the other hand, and in opposition to Case I., should ever a commander have so disposed of his force, that any one division or part may be attacked, by a great superiority, without a possibility of having it supported by the whole, or by any one part of his remaining force, that commander must be defeated.

Case IV. Hence also, in reverse of Case II., a commander who, by the mode of his attack, shall so dispose of his force, that any one division or part, difficult to be supported, shall be exposed to his enemy when greatly superior, suppose it a cannonade greater, by many degrees, than he can bring up to oppose it, such commander undoubtedly will be worsted.

That rules, such as these, are applicable to, and should have influence upon, military operations at sea as well as at land, every one will allow. By them, the following strictures upon modern naval practice, and the mode of attack which have been proposed, must be judged; and to some error or neglect of them it is, that the defect of information, which has distinguished the former period, must be imputed.
OF THE MOVEMENTS OF SHIPS AND FLEETS IN RELATION TO EACH OTHER.

Ships, or fleets, managed as they are in these days with sails only, though not, as animals, self-moving bodies, that is, under the perfect command of the men within, to be carried with oars against wind and tide, at pleasure, in every direction, yet, considered as machines, governed by, and confined to, the laws of mechanics; their paths in the sea, and their military evolutions, may be traced and delineated upon proper principles. Now, the moving power or agent being the wind, and this affecting any number of them mutually, at one and the same time, and in the same direction, as in the case of fleets when in opposition, the movement of the several ships or fleets, in relation to each other, will be reciprocal, consonant, and regular.

Not only ships, but whole fleets, in hostile opposition, when in the same stream of wind, must equally, and, at the same time, both of them in their motions relatively, be so affected, that, supposing the face of the sea to be conceived as a plane, on paper, and the wind as a point A (Plate XII. fig. 13.), from which both fleets B and F are operated upon; we also may carry the supposition so far as to conceive that both might be affected in some way, as suspended from the same point, as at the pendulum D, D, D.

Hence, when considering the connexion between two fleets, supposing the one to be to windward of the other, whatever way the
the wind shall veer about, both being dependent on the same wind, the motion and manoeuvring of each, in relation to each other, can still be of the same nature.

OF THE FACE OF THE OCEAN, CONSIDERING IT AS A FIELD FOR THE MILITARY OPERATIONS OF HOSTILE FLEETS.

That the face of the ocean, considering it as a field for military operations, but more particularly as a field for immediate engagement, the hostile fleets opposed, having neither rivers, ravines, banks, woods, or mountains, to stop progress, or interrupt the fight, so that ambushes or stratagems can be formed, and while each are extended in line of battle, where every individual ship, and the line into which she belongs, is operated upon by the same wind, at the same time, and, by the laws of mechanics, confined to movements in every respect consonant in relation to each other; Should not every occurrence, every transaction, for their reasons, and in such circumstances, be the more easily conceived, understood, and explained, than even in military operations on land?

A fleet on the face of the ocean, on the defensive, extended in line of battle, and prepared to receive an enemy coming down to make an attack, as has been the late practice, from the windward, may be compared to an army posted to great advantage, and provided with numerous batteries of cannon, impenetrable if attacked in front; and should any such attack be made, that each ship,
land on the bearer of the mail.

PLATE XII, p. 418.
ship, comparing it with a single battalion, or party of cavalry, may retire, suppose to leeward, under cover of seconds on either side (ahead and astern), and choosing a new position, from whence the enemy could be annoyed again and again, this may be repeated with equal advantage as at first, while the fleet, and each ship that makes such an attack must be ruined, crippled, and rendered incapable of pursuing, or following.

OF THE APPLICATION OF THE FOREGOING PRINCIPLES AND IDEAS, WITH SOME OF THE SEA ENGAGEMENTS OF THIS PERIOD OF NAVAL HISTORY.

Admiral Matthews's engagement in 1744 is the first of this Third Period of Naval History; it is also the first in the list of those of which we have been able to procure authentic and substantial information of circumstances; it is also the first to be considered, with respect to the application of the foregoing principles, &c.

APPLICATION OF THESE PRINCIPLES TO THE CONDUCT OF ADMIRAL MATTHEWS, AS MAKING THE ATTACK.

According to Case II., for example, the commander who, in leading on his force, shall make his attack with great superiority, upon any one division or part of his enemy, and this division so posted that it cannot be supported, has taken the first step to obtain a victory.

By
By the position of Admiral Matthews's fleet before the engagement, his force was so disposed, that, had that force been led on, or had the force which was led on been supported as it should have been, the attack might have been made with such a superiority, that the Spanish Admiral, with the ships in his rear after him, separated as they were from the van and centre of the combined fleet, there is not a doubt that the whole might have been cut off.

But, considering this attack in another view, and according to principles, Case IV., that Mr Matthews, by carrying down his ship, the Namur, and her seconds, the Norfolk and Marlborough, in the manner he did, had them exposed to a cannonade, unfortunately greater, by many degrees, than he could at the time bring to oppose against it, and by which these ships were so disabled, that, had the Spaniards thought fit to retire, (a manœuvre which the French, their allies, have many times since, on the like occasion, put in practice), Mr Matthews neither could have stopped them, nor could he have followed them*.

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APPLICATION OF THE SAME PRINCIPLES TO THE CONDUCT OF THE SPANISH ADMIRAL.

Considering that the fleet of the Spanish Admiral was extended to a great length, that he was separated at a great distance from

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* Vide Admiral Matthews's Engagement, Part I. p. 110., and Plate XVI. fig. 2.
from both his van and centre, and that his own division was left unsupported; according to principles, Case III., he should have been defeated.

Again, in another view, had the principles, as laid down, been thought applicable by the Spanish commander, or had he been instructed, or aware of what has since been the practice of French commanders; neither would he have neglected to avail himself of disabling Mr Matthews, while coming down to attack him, that is, while he had the superiority of fire in his favour; nor would he, by patiently lying still, have given time sufficient for Mr Matthews to retaliate, by disabling him in his turn, but, unhurt, would have withdrawn his ships from battle for the present; and, by bearing away, would have attained a new situation, where he might be out of the reach of cannon-shot, and where he might be in preparation to form a new line of battle to leeward, No. 17.

which has been proved in another place; * yet, considering the mode in which the attack was made upon them, seems to be the best which could be imagined in their situation and circumstances. In great strength, arranged in line of battle themselves, they not only disabled their enemy while coming on to attack them, but, unhurt, they retreated, and accomplished, in the most complete manner, the full purpose of their destination, by making prize of the castle and island of Minorca.

That the French were in noways beholden to chance for such defence, but that it was studied and intended, must be evident from this, that, in every one of the many engagements which they have had with our fleets since that time, when to leeward, as on this occasion, it has been the mode they have put in practice, and it has been justified by an equal degree of success, in every instance.

If, then, this state of the subject shall be admitted to be just, Admiral Byng's engagement off Minorca, May 20. 1756, will be the first in modern times from which any degree of system can be formed.

Again, with respect to the mode of attack, the part which Mr Byng had in the action, how applicable ever it is with principles Cate IV., his van, by this mode of attack, was so disposed, that it could not be supported. It was exposed, while coming down, to a cannonade greater by many degrees than could be brought at

* The mode of attack proposed, p. 123. Part I.
at the time against it; and being thereby disabled, and rendered incapable of following or pursuing his enemy, and the purpose of his destination left unaccomplished, Mr Byng must be allowed to have been worsted. This attack appears to have been founded upon an idea of taking, destroying, or disabling, the whole of an enemy's fleet, and, upon this idea, to have assumed a line of approach improper, as having given the enemy the greatest possible advantage.

In the mode of attack according to this idea, of taking, destroying, or disabling the whole of an enemy's fleet, extended in line of battle, two lines of approach have been distinguished; the first, the line of intersection, the line of nearest approach, or lasking line, as put in practice, and so named by Mr Byng; the other, that line put in practice by Sir George Pocock in his engagement, April 29. 1758, two years after, in the East Indies, and which, for distinction taken, has been termed the line of pursuit, or curve of pursuit.

Of the first of these lines, (the lasking line), five examples have been collected; and, upon these examples, as classed in Section I. p. 43. Part I. the observations and demonstrations, pointing out the defects in the accustomed mode of attack from the windward, are founded.

Of the second of these lines, the line of pursuit, it has also been defined in the description given of Sir George Pocock's engagement in the East Indies. It is not, however, wished to be understood that some one, or all of these five examples given, do not, in some degree, partake of the properties of both of these lines.
line, or that Sir George Pocock's engagement, because of this
distinction, should not be included in the same class with these
five examples, but because, on no other occasion, has any thing
been said that could give rise to have this line of pursuit defined
so accurately as in this engagement of Sir George Pocock.

Other Observations, but applicable to period third
only.

1. That, in the many engagements with which this third
period has been distinguished, the enemy, whether they were to
windward or to leeward, have never once attempted to make or
begin the attack.

2. That not only through the whole, has this period been dis-
tinguished by a fashion of exalting the character of the ships of the
enemy, in point of failing, compared with our own; but, for
the greater part, it has been distinguished by a fashion, as perni-
cious as unjust, viz. that of depreciating the character of British
seamen.

A gentleman *, but not of the profession, after reading the
foregoing naval inquiry as it was first printed, communicated to
me the following observation: 'The only thing which tempts
one to entertain a doubt with respect to your system is, that the
beneficial effects are so manifest, that one wonders they should
not have occurred to professional men."

To

* Dr Adam Smith, author of the Wealth of Nations.
OF NAVAL TACTICS.

To which observation, after what has been said, it is sufficient to reply, that some defect has existed somewhere; for if the many examples given during this last period shall be considered, the uniformity of effect, shown by them to have taken place, authorises us to conclude, that chance of war had not been concerned; for otherwise some one unlucky ship might have been taken or sunk, or might have been blown up in the air, accidents frequent, nay infallibly attendant on such other occasions, during the course of the former period of naval history.

END OF PART III.