APPENDIX TO PART I

ADMIRAL SIR GEORGE POCOCK'S ENGAGEMENTS WITH THE FRENCH FLEET, COMMANDED BY MONSIEUR D'ACHE, IN THE EAST INDIES, anno 1758.*

Admiralty-Office, October 12th 1759.—Captain Latham, late of the Tyger, arrived at Portsmouth on the 19th instant, in the East India Company's ship the Admiral Watson, with letters from Vice-Admiral Pocock, giving the following account.

Admiral Pocock being joined by Commodore Stevens, in Madras road, with the reinforcements from England, and having put his ships in the best condition possible, April 17th 1758.

* The printing had advanced thus far, before the Author thought of including these engagements. They were in the same war; and about two years after that of Admiral Byng. A description thereof, giving an opportunity of introducing new matter, will the more elucidate the subject, and will at the same time complete the collection of those sea engagements, in which British Fleets, being to windward, by extending their line with the design to stop, take, destroy, or disable the whole of the enemy's line to leeward, have been disabled before they could reach a situation from whence they could annoy the enemy, &c. &c. Vide p. 43. Sec. 1.
1758, failed in order to get to windward of Fort St David's, to intercept the French squadron, which by intelligence he was made to expect was on their approach from the westward, from the Isle of France: The 29th, in the morning, saw seven ships in Fort St David's road, getting under sail; they joined two others in the offing; and, concluding them to be the enemy, immediately gave chase. These ships, nine in all, standing off shore under top-sails, formed the line of battle ahead: Admiral Pocock formed his line of battle too; and, as soon as his ships had got into their station, being nearly within random shot of the enemy, bore down upon the Zodiaque, on board which ship Monsieur D'Acque wore a corvette; but observing the Newcattle and Weymouth that they did not bear away at the same time, he made their signal. The enemy began to fire upon the English as they were going down; but the Admiral did not make the signal to engage, till he was within half musket-shot of the Zodiaque, which was about three o'clock. A few minutes after, perceiving the ships were not all got close enough to the enemy, he made the signal for a closer engagement; which was immediately complied with by the ships in the van. At half past four, observing the rear of the French line had drawn up pretty close to the Zodiaque, the Admiral made the Cumber-land, Newcastle, and Weymouth, signals to make sail up and engage close. Soon after, Monsieur D'Acque broke the line, and

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British Ships:
Elizabeth, 64  Yarmouth, the Admiral, 64
Tyger, 60  Weymouth, 60
Salisbury, 50  Cumber-land, 64
  Protector 500 tons ship
  Queenborough,
and put before the wind: his second after, who kept on the
Yarmouth's quarter most part of the action, then came up
alongside, gave his fire, and bore away. The other two ships
in the rear came up in like manner, and then bore away; and
a few minutes after observing the enemy's van to bear away
also, the Admiral hauled down the signal for the line, and
made the signal for the general chase. About six, observing
the enemy join two ships four miles to leeward, and at the
same time hauling their wind to the westward, and seeming to
form a line ahead, and the Yarmouth's masts, yards, sails, and
rigging, as well as the Elizabeth's, Tyger's, and Salisbury's,
being so much damaged as to prevent their keeping up with
the ships that were in the rear during action, who had receiv-
ed but little damage, and night approaching, the Admiral
followed the enemy as well as he could, standing to the
south-west, in order, if possible, to keep to windward of them,
in hopes of being able to engage them next morning. But as
they showed no lights, nor made any night-signals, that could
be observed, he did not see them through the night, nor
next morning; and therefore, concluding that they had weath-
ered him in the night, by being able to carry more sail, he
continued his endeavours to work up after them, until six in
the morning, May 1st, when finding he lost ground consider-
able, he came to an anchor about three leagues to the north-
ward of Sadras, where he was informed that the Bien Amie

U 2

French Squadron.
Le Bien Amie,
Le Compt de Provence,
Le Vengeance,
Le Conde,

Le Zodiaque,
Mons. d' Aché,

Le St Louis,
Le Duc de Orleans,
Le Duc de Bourgoyne,

Le Stiphide,
Le Delphie.

Le Moras joined after the battle.
APPENDIX TO PART I.

74 guns (a ship of the enemy) had received so much damage in the action, that they were obliged to run her athwart a little to the southward of Alemparve, where the French squadron was at an anchor.

The French arrived in St David's Road at nine in the morning, the day before the British Admiral fell in with them. They had not landed any troops before the engagement. The action was about 7 leagues W. b. N. of Alemparve. The Admiral observes, that Commodore Stevens, Captain Latham, and Captain Somerset, who were in the van, and Kemp-velt, the Commodore's Captain, behaved as became gallant officers; and that Captain Harrison's behaviour, as well as all the officers and men belonging to the Yarmouth, gave him sensible satisfaction; and that, had the Captains in the rear done their duty as well, he should have had a great pleasure in commending them; but, their manner of acting in the engagement appeared so faulty, that, on his return to Madras, he ordered a court-martial to assemble, and inquire into their conduct. In consequence of which, Captain Nicholas Vincent was sentenced to be dismissed from the command of the Weymouth, Captain Legg of the Newcastle to be cashiered from his Majesty's service, and Captain Brereton of the Cumberland to lose one year's rank as a post-captain.

Admiral Pocock having repaired the most material damages of his ships, put to sea May 10, with an intent to get up to Fort St David's, but was not able to effect it. He got sight of Pondicherry the 30th, and the next morning the French squadron, which had been there ever since the 5th, stood out of the road, and got away, notwithstanding the Admiral's utmost endeavours to come up with them. On the 6th of June, upon receiving
receiving an account that Fort St David's had surrendered to the French, he judged it prudent to return immediately to Madras, to refresh his squadron.

The Admiral sailed again, July 25th, in quest of the enemy; and on the 27th, in the evening, got within three leagues of Pondicherry road, where he perceived their squadron at anchor, consisting of 3 sail of the line, and a frigate. They got under sail the next morning, and fled to the southward. The Admiral made the signal to chase, and endeavoured to weather them, as the likelyest means of bringing them to action; which, however, he was not able to accomplish till August 3d, when, taking advantage of the sea-breeze, he got the weather-gage, and brought on the engagement about one o'clock. Monsieur D' Azur set his fore-tail, and bore away in about 10 minutes, his squadron following his example, and continuing a running fight, in a very irregular line, till 3 o'clock. The Admiral then made the signal for a general chase; upon which the French cut away their boats, and made all the sail they could. He pursued them till it was dark, when they escaped, by out-sailing him, and got into Pondicherry road. The Admiral anchored the same evening off Carrical, a French settlement.

British lost on this occasion 31 killed, 116 wounded. French lost, says the Admiral's account, 540 killed and wounded.
DESCRIPTION OF ADMIRAL SIR GEORGE POCOCK'S ENGAGEMENT WITH THE FRENCH FLEET COMMANDED BY MONSIEUR D'ACHE, EAST INDIES, OFF FORT ST DAVID'S, 29TH APRIL 1758.

From the foregoing letters, although we have not been informed either of the particular direction of the wind at the time, or even upon what tack the two fleets were during this engagement, yet, from these letters, circumstances are so far explained, that there can be no doubt of forming a description, which, in all other respects, will be sufficiently satisfactory.

(Plate XXVII. fig. 1.) F, The French squadron formed in line of battle to leeward, upon the starboard tack, as it is supposed; for it was standing off from the land, with the wind in the western quarter.

B, Admiral Sir George Pocock's squadron; each ship come to her station, and formed in line of battle, thought to be about random shot distance to windward.

(Plate XXVII. Fig. 2.) F, The Zodiaque, on board which ship Montieur D'Acue, the French Admiral, wore a cornette.

A, The British Admiral in the Yarmouth bearing down upon the Zodiaque, but making signals to the ships C C C a stern, the Cumberland, the Newcastle, and the Weymouth; the captains of these vessels, as it appeared, not having bore away together and at the same time with the Yarmouth, and the other ships
ships in the van B. The enemy all the while kept firing upon the British fleet during their course in coming down; nor did Sir George Pocock, the British Admiral, make the signal to engage till he was within half musket-shot of the Zodiaque, at F, about three o'clock in the afternoon.

Neither the ships D in the rear, nor the ships in the van M, were yet come to their stations, that is, at fighting distance.

Fig. 3. B, The Admiral, in the Yarmouth, arrived at a station, within half musket-shot of the Zodiaque F; but, perceiving that all his other ships had not even yet got sufficiently close in with the enemy, he made signal for a closer engagement, which was immediately complied with by the ships of the van, as at G.

Plate XXVII. fig. 4. The Admiral, in the Yarmouth B, observing that the ships in the rear of the French line had drawn close up, as at G, with a view to support their Admiral in the Zodiaque F, he made the signals of the Cumberland, Newcastle, and Weymouth, D, to make sail up and engage, that is, to support him in his ship the Yarmouth.

Plate XXVII. fig. 5. B, the Yarmouth. Sir George does not say that the ships D in his rear complied with this last signal, but he says that Monsieur D'Aché, in the Zodiaque, immediately broke his line, and put before the wind, as at F F: That his second after, who had kept upon the Yarmouth’s quarter the whole of the fore part of the engagement, afterwards came up alongside,
gave his fire, and then bore away in like manner, as at G. Immediately after this last, the two remaining ships H in the rear made sail, came up, and poured in their fire, reserved for the purpose (of disabling the Yarmouth), and in succession bore away also. Last of all, the ships in the van I, taking example from the Zodiaque and the ships in the rear, quitted the line also, and put before the wind; and leaving the British van, which by this time were disabled from following them, they soon rejoined their centre and rear, when altogether forming a new line of battle four miles to leeward, as at K K, they were again prepared to give the British squadron a reception, should they have the least inclination to make a second attack.

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OBSERVATIONS ON ADMIRAL SIR GEORGE POCOCK’S ENGAGEMENT OF THE 29TH APRIL 1758.

Sir George has not been particular in giving us the positive situation of his ship the Yarmouth when he bore away to attack the Zodiaque. Supposing him to have been right to windward, and, in bearing down to attain a station at B, Plate XXVIII. fig. 6., abreast, and at half musket-shot from the Zodiaque, had he assumed the lasking course, so as to have formed the line of intersection A A, as in fig. 6., his ships, in going down, by suffering greatly, must have been crippled. Considering likewise, that the enemy, by running under topsails, must have been getting much ahead, he therefore would have had the greater difficulty in
in getting the ships in his rear up into action, as has already been explained by former examples, of Admiral Byng, Admiral Byron, &c.

Plate XXVIII. Fig. 7. Again, had he been astern of the enemy, as at 'A, Fig. 7., when he set out on this course, still the difficulty of getting the ships in the rear brought up would have been increased.

'The attack, it seems, was not made according to this lasting form. Sir George has said, he bore down upon the Zodiaque, by which expression, and by what followed, it must be understood that it was his intention not only to steer his own ship with her head steadily directed upon the Zodiaque, but that his other ships, in the same manner, should be steered each with her head steadily directed upon her particular opponent.

In the prosecution of which intention, and while the enemy had way ahead, at the rate, perhaps, of two miles and a half, per hour, the Yarmouth and every other ship of the squadron, of necessity, must have assumed a course forming each of them a curve, as represented in Plate XXVIII. Fig. 8.; which course, in mathematical disquisitions, has been termed the line or curve of pursuit.

The very specious and favourable aspect of this kind of attack, attempted to soon after that of the unfortunate Admiral Byng, and considering also the case of the officers who com-
manded the ships in the rear, who were disgraced on this occasion, will make the discussion thereof under a particular head by itself the more necessary.

OF THE CURVE OF PURSUIT.

By the curve or line of pursuit is understood that curve described in the water by one ship in pursuit of another, when the ship in pursuit from the windward, in bearing down, shall steer her head continually directed upon the ship pursued.

Plate XXVIII. Fig. 8. Let $F$ represent the ship pursued, to leeward, having motion ahead in the line $FG$, as required for good steering. Let $B$ be the ship in pursuit, two and a half miles right to windward; which distance being expressed by the perpendicular $BF$, let it be called the line of distance, or the line of common departure. And $F$’s motion through the line of course $FG$, suppose it at the rate of two and a half miles per hour, let it be expressed by the Figures 4, 8, 12, in the line $FG$; and the velocity of $B$ required to overtake $F$, must be greater than the velocity of $F$.

THEOREM.

To discover what space the ship $F$ must run through in the line $FG$, before $B$, in describing the curve of pursuit, can over-
APPENDIX TO PART I.

take F; say, as the difference of the squares of the velocities assumed is to the product of the velocities, so is B F, the line of common departure, to the space F G that the ship pursued must run through before she can be overtaken. Thus, when the velocities assumed shall be as 5 to 3;—Say, as 16, the difference of the squares of these numbers, is to 15, the product of these numbers, so is 16 (of any quantity, furlongs, for example,) the distance of B right to windward at the beginning of the course, to 15 furlongs, the space required for F to run before she can be overtaken.

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THE CURVE OF PURSUIT CONSTRUCTED MECHANICALLY.

Plate XXVIII. Fig. 9. ; The line of common departure, F B, supposing it perpendicular to the line of course F G: Let any proportion, 5 to 3, be assumed: That while the ship F moves in the line of course F G through the first space No. 1., suppose it three yards, the ship B from the windward, by steering a course continually directed upon him, shall in the same time move through the space No. 1. in the curve of pursuit, at the rate of 5 yards; and, while F shall move through the space 1 2, or second division in the line of course, that B in the same time shall have run through the corresponding space 1 2 in the curve, being other 5 yards, and so on continually, protracting each their separate courses, in the proportion as 5 to 3, until they shall come in contact, or close along-side of each other, that is, until the lines of

X 2
their several courses shall meet in a point, as at C. Draw the lines 1 1, 2 2, and 3 3, &c. and they will nearly represent the curve of pursuit.

OF THE APPLICATION OF THE CURVE OF PURSUIT IN SIR GEORGE POCOCK'S ENGAGEMENT.

That Sir GEORGE intended to make his attack in some such fashion, and that he attempted it with his own ship, the Yarmouth, there can be no doubt; but not having communicated his intention, or given it out in orders, or by instruction, to the commanders of his other ships, it is not surprising that this mode of attack, in the execution, did not come up to his expectation.

Plate XXIX, Fig. 10. After much previous practice of the manœuvre, had Sir GEORGE given instruction that each ship, in bearing down, should steer with her head continually directed upon her particular opponent in the enemy's line, then each of his ships, P, Q, R, with equal velocity assumed, would, along with B, the Yarmouth, have run down spaces, each in their several similar curves, equal to the divisions 1, 2, 3, 4, marked as velocities at the rate of 5, in the particular curve described by the Yarmouth, and in the same time in which the Zodiaque, with her associates, would have moved through the corresponding divisions 1, 2, 3, 4, marked as velocities at the rate of 3, in the line
of course FG; then B, the British Admiral, with his three ships after, when arrived at the line CD, a station of fighting distance * which cuts the curve in the point numbered 10, (if the enemy had not gone off), could also have continued his course until his ship the Yarmouth, as well as every other ship of his squadron, might have come into contact, or close alongside, each of her particular opponent; that is, the Yarmouth in contact with the Zodiaque at G, and the three ships in the rear of the Yarmouth, with the three corresponding ships in the rear and after of the Zodiaque.

It is to be observed, however, that the Admiral, B, when arrived at the point marked 10 in the curve, as formerly remarked, within fighting distance, far from having got abreast of the Zodiaque, by this time arrived at the correspondent point 10 in its line of course, has got little farther than abreast of H, the third ship after of the Zodiaque; and the three ships D, in Sir George's rear, at this time, are left after of the enemy's whole fleet.

The Yarmouth never was in this particular situation at any time of the engagement. For, however well Sir George's three ships after might have preserved their course, each in their proper curve, according to instructions, or according to the direction of their fireage with which they might set out in the beginning.

* Made parallel to FG, the enemy's line of course, about 400 yards distance, termed sometimes pistol-shot, or half musket-shot. By Mr Byng's engagement it does not appear that his van was within this distance, as musket-shot was not known, or thought, to have taken effect in any of the ships even in that distance.
beginning of the pursuit, it is evident that Sir George had not kept his intended curve: For, had he preserved his course in his proper curve, he would infallibly have been at the point number 10 in the curve of pursuit, when the Zodiaque was got to her correspondent point number 10 in the line of course FG.

From this situation at the point 10 in the curve of pursuit, he must have passed along, and sustained the fire of the whole ships in the enemy’s rear, before he could have attained a station at A, abreast, and at half musket-shot distance from the Zodiaque. That he never was in the situation at the point 10 in the curve of pursuit, as described, and did not pass along the enemy’s rear, and receive their fire, may be presumed, since he has not told us; but he has told us, that he did not give the signal to engage (that is, to begin firing) till he was within half musket-shot of the Zodiaque, by which must be understood a station somewhere at A nearly abreast of the Zodiaque.

In which case, however much Sir George, in the beginning, might have wished to keep his course according to the curve of pursuit, yet, from farther consideration afterward, and while running down, foreseeing the consequences, he for certain made a change, and had given his course the lasking form, as M N, in order that he might attain this station at A, abreast of the Zodiaque, at half musket-shot distance, which he said he did.

This change from the first intention in the Yarmouth’s course was not a thing of that kind which could, in one instant, be comprehended by a signal; and, if it was not in one instant comprehended, and put in execution by the ships in the rear, of necessity they were to be left considerably astern.

But
But this reasoning, all the while, is founded upon the supposition, that each ship of the squadron, by her course and her velocity assumed, had or could, without previous practice, have preserved her station in the curve of pursuit, should it even have been allotted to her by the Admiral, which will not be admitted. For in such case, each ship in succession, of necessity taking the rule for her velocity from the ship immediately ahead, would imperceptibly and unavoidably get into her wake as a leader, and by that means the ships in the rear, one after another, would fall more and more astern, from the very beginning of the course, in form as at E.

Plate XXIX. fig. 11. The curve of pursuit begun from a distance astern, with the velocities 5 to 3 assumed as before; and if this distance F I shall be equal to the distance to windward I B, the Resolution will stand thus—As the difference of the squares of the velocities is to double the product of the velocities, so is the distance to windward I B, 16 furlongs to 30 furlongs, the space which the ship pursued must run through, before she can be overtaken; in which case, the ships in the rear making the attack, when arrived at a station of fighting distance, the line L M, parallel to F G, the course of the enemy's line of battle, will be left at a double distance astern, as appears from the figure.

Plate XXX. fig. 12. Again, suppose the course of B to be begun from right to windward, and that the velocities shall be as 4 to 2 (a double proportion); say, as the difference of the squares of the velocities 12, is to the product of the velocities 8, so is the dis-
distance to windward B F, 12-4ths of a mile to 8-4ths of a mile, the space which the ship pursued has to run before he can be overtaken; and supposing L M, the parallel line of fighting-distance, to be 440 yards as before, the ships in the rear, in approaching this station, will still be left astern about 400 or 500 yards.

From all which it may be concluded, that, whatever shall be the proportion and rate of the velocities assumed, or how much soever shall be the previous practice, the mode of attack, by this curve of pursuit, will in no way be found preferable to the mode in the lashing form; but will be found so much the worst of the two, as it will be more difficult in the execution, and the ships in the rear will be left the farther astern; and in general it is evident, that the curve of pursuit, though a curve well adapted to bring one ship into the wake of another, is not at all suited for bringing one ship abreast of another, and within a given distance.

With respect to general observations, they are the same as have formerly been introduced. By the nature of the attack, equally as in the engagements of Mr Byng and Mr Byron, the headmost ships must have approached the enemy, before it was possible for the ships in the rear to get into fighting distance. By the nature of this approach, the van and centre were disabled, before they could get into a position from whence, by retaliation, they could annoy the enemy. By the address of the enemy, as in Admiral Byron’s engagement, the rears of neither squadron had got into action. Though the Admiral, like Sir George Rodney, in his engagement off the Pearl Rock, had the
the merit of great personal courage, yet the attack, as put in execution by his ship the Yarmouth, being nearly the same as that of the Sandwich, of course was attended with the like want of effect.

On the part of the enemy in this engagement, and similar to every one of the other five of this class described, the Admiral, Mons. D' Açhe in the Zodiaque, so soon as he felt himself exposed to the British fire, quitted the line, and withdrew from battle, leaving his second and other ships astern, not only as a cover to keep up a good countenance, and to amuse Sir George Pocock, but, each ship after another, throwing in their fire upon the Yarmouth in passing, by particular instruction, bore away in succession, to form a new line to leeward.

Admiral Sir George Pocock's second engagement, of the 3d of August 1758, being so much alike with that of the 29th of April, no new description will be necessary.

END OF PART I.
Engagement April 1738.

Plate XXX. Appen. p. 100. Part I.

Fig. 10.

Curv of Pursuit.

Fig. 11.