

17th April, 1974

NOTE TO P. SHEEHY, ESQ.

† Smoke Deliveries, Puff by Puff

R. & D.'s report (1095-R) gives a systematic account of how deliveries of certain smoke constituents are found to change when measured on a puff-by-puff basis. The possibility of designing cigarettes give "controlled" (e. g., level) deliveries on such a basis is one factor which has prompted the work described, and it could be useful to restate its main conclusions as a Product Development Information Note. These are sent to all Associated Companies, but it is not implied of course that all of them could or should find a use for the information as I when received.

Those with their own R. & D. facilities could apply the techniques described, and we could also show those with "testing" laboratories (MTC, NTC for example) how their less sophisticated equipment might be adapted to give the same information. We could equally suggest they send some of their brands to PDL for a "puff-by-puff" brand analysis".

I personally don't believe we should do either, for the following reasons.

- (1) Brand analyses per se, whether conducted in situ or imported from PDL, are not yet properly exploited in many of the Companies I have seen.
- (2) Costs per analysis are already something of a deterrent. Puff-by-puff, they would cost 4 - 6 times as much (and take 2 - 4 times as long), so there would be a net loss of product data.
- (3) Though the techniques are not terribly exacting, they are sufficiently so to dissuade me from suggesting that, for example, the Boden Laboratory should adopt them. The lower level of skill at which they might be considered is exemplified by, at a guess, Petone or Johannesburg.

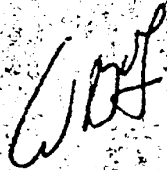
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Current brand analysis reports indicate the number of puffs given by each brand, and a first (small) step towards looking at puff-by-puff measurements can be taken by examining deliveries on a per puff basis. This obviously averages all the puffs, but nonetheless does extend the data for the price of a little simple arithmetic. This is something we encourage people to do, through product Seminars, Chewton Glen Courses, and the like, but we are still pretty much involved in preaching the uses of the simple unconverted data.

There are also uncertainties in assessing how much importance to attach to puff-by-puff data. Consumers smoke by the puff, and a priori that alone suggests they should mean something. Some believe that the first couple of puffs instil the perception of taste, others say that the last few puffs are the ones that give you the bronchitis. Whether either view is sufficiently established to justify making the early puffs bigger, and the later ones smaller, is still an R. & D. question (though B. & W. with HALLMARK, and PM with MARK VII, have gone much further than that).

I rather doubt therefore if many of our Associates are yet in a position to exploit either the techniques, or the data they produce, but I think they should know of them through a Product Development Information Note, (which I will arrange).



W. B. FORDYCE,

c.c. Dr. S.J. Green.