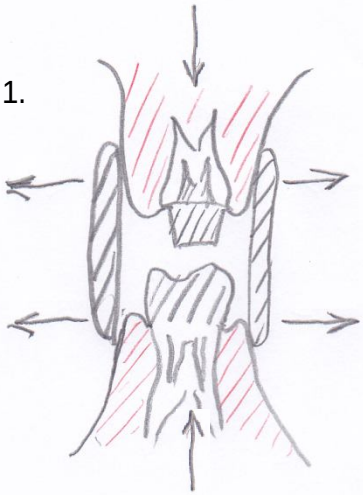
Our view of possible Triple Tray Distortion – Simply Crown and Bridge

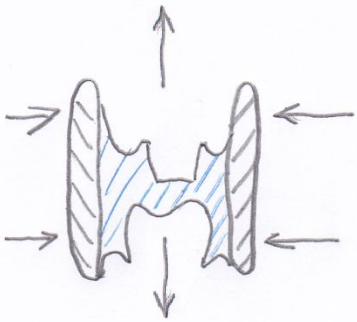
If the triple trays are not wide enough for the arch, the edge of the triple tray will touch the arch. When the patient closes to form the bite and impression, forces will be exerted on the sides of the triple tray. Fig. 1.
If you hold a triple tray and exert force outward on the edges you will see how little force is required to twist the edges.

1.



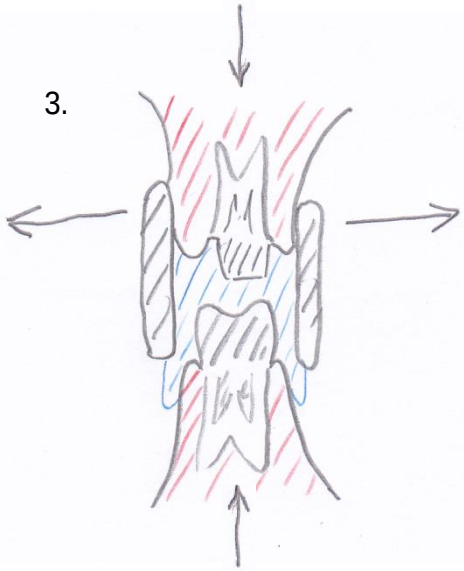
If we assume that the patient has opened the edges of the tray, and that the impregum has set with the tray edges in that position.
We know that the plastic used in the trays has a strong memory and will recover its shape once the forces applied by the arch are removed. Fig. 2.

2.



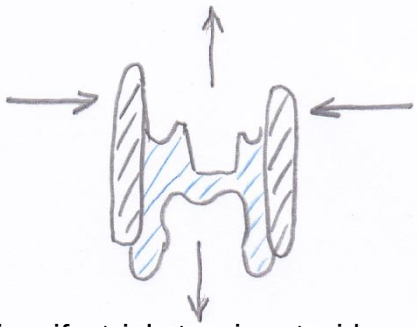
When the tray recovers its shape distortion forces will be applied to the now set impregum. In some cases the set impregum will have enough thickness to avoid major distortion. In other cases when forces exerted are very even 1. the distortion could result in an impression evenly distorted producing a smaller prep and therefore a very passive fit. However in most cases only one side of the arch exerts forece on the tray this will lead to a very uneven distortion and a complete mal fit. Figs. 1. 2.

3.



However in many cases only one side of the arch exerts a force on the tray, this will lead to a very uneven distortion and a complete mal fit. Figs. 3. 4.

4.



In conclusion, if a triple tray is not wide enough to accommodate the arch, there must inevitably be some distortion. In most cases this will not be enough to badly effect the fit, but in some cases this will have a catastrophic effect and will lead to a remake with potentially the same problem occurring if the same impression technique is used.