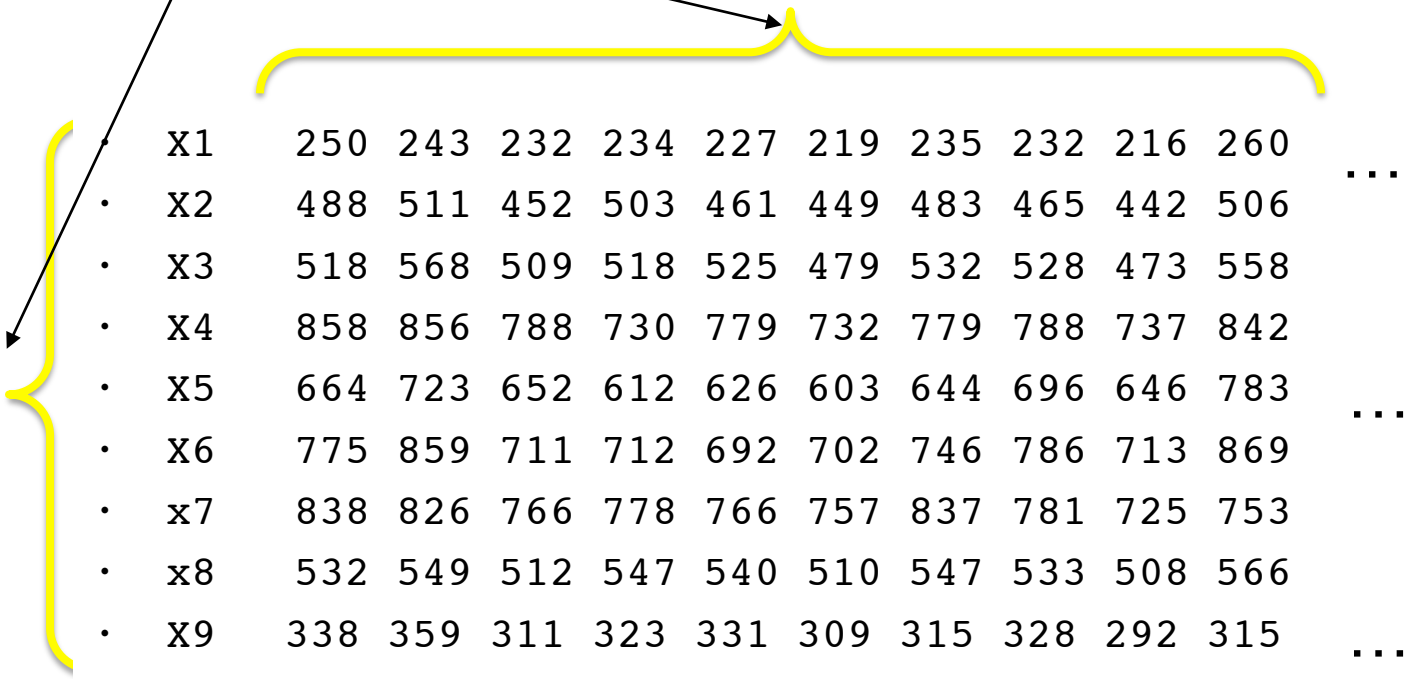
Ejemplo Motivador

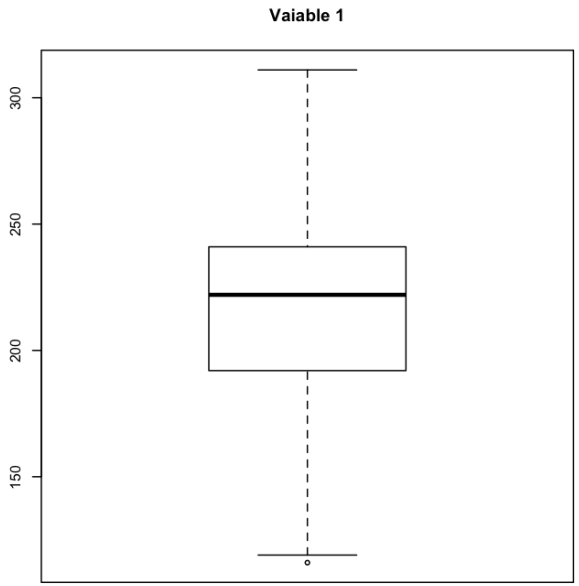
Características de la base

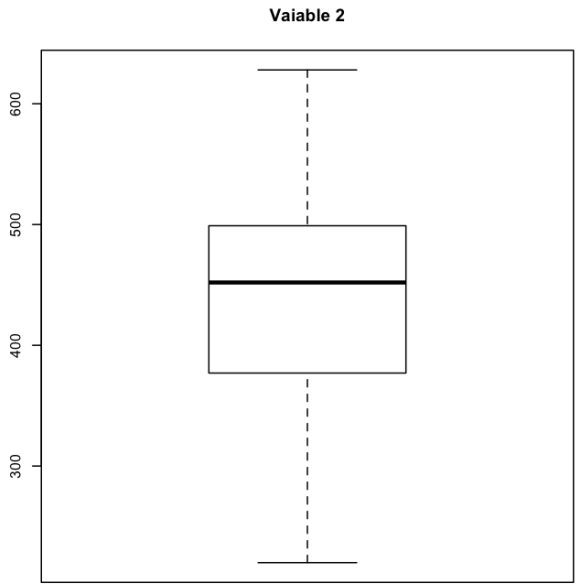
- Base de datos numérica
- 3265 individuos
- 9 variables
- 10 primeros casos:

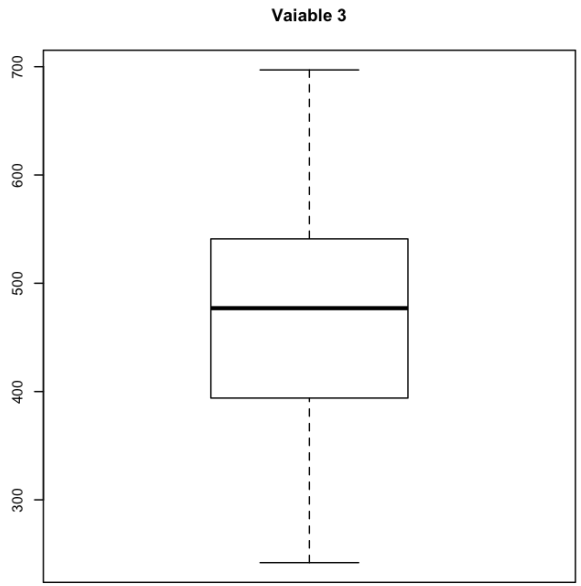


•	X1	250	243	232	234	227	219	235	232	216	260	...
•	X2	488	511	452	503	461	449	483	465	442	506	
•	X3	518	568	509	518	525	479	532	528	473	558	
•	X4	858	856	788	730	779	732	779	788	737	842	
•	X5	664	723	652	612	626	603	644	696	646	783	...
•	X6	775	859	711	712	692	702	746	786	713	869	
•	x7	838	826	766	778	766	757	837	781	725	753	
•	x8	532	549	512	547	540	510	547	533	508	566	
•	X9	338	359	311	323	331	309	315	328	292	315	...

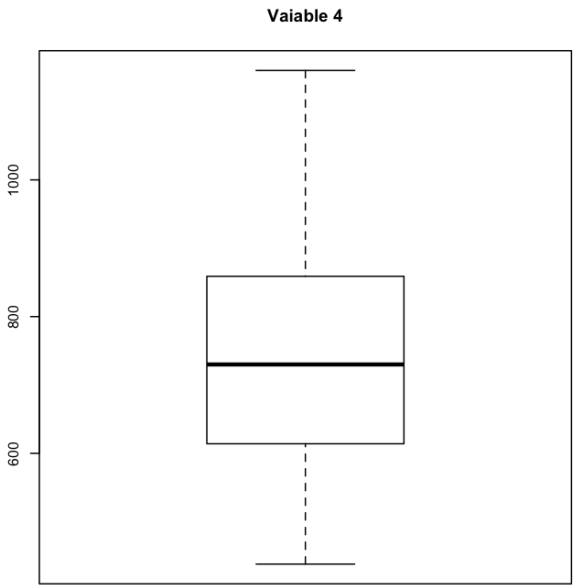
Variables X1, X2 y X3

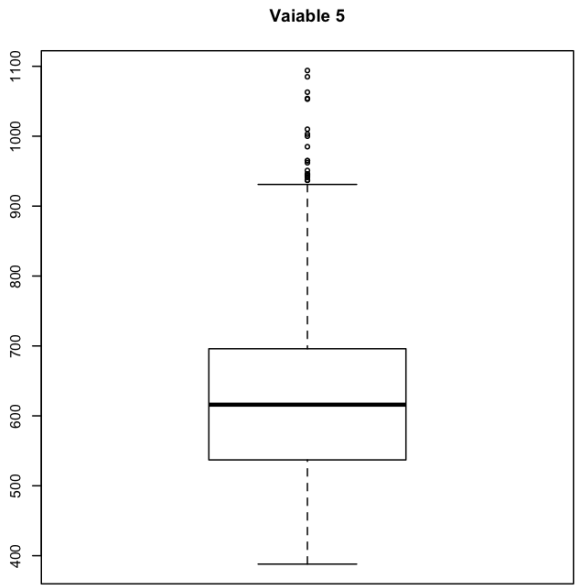


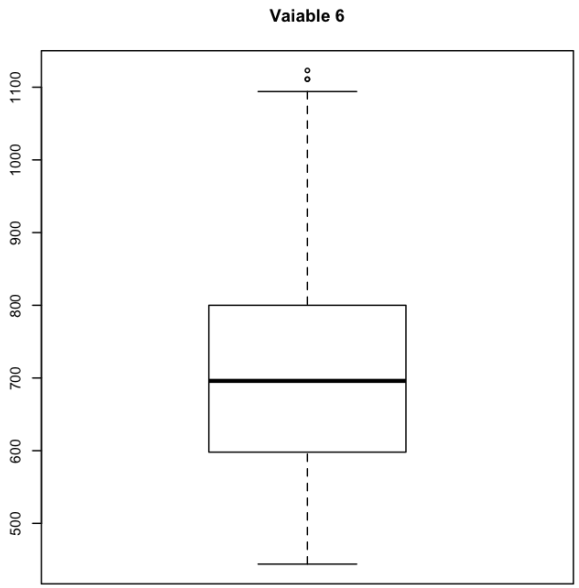




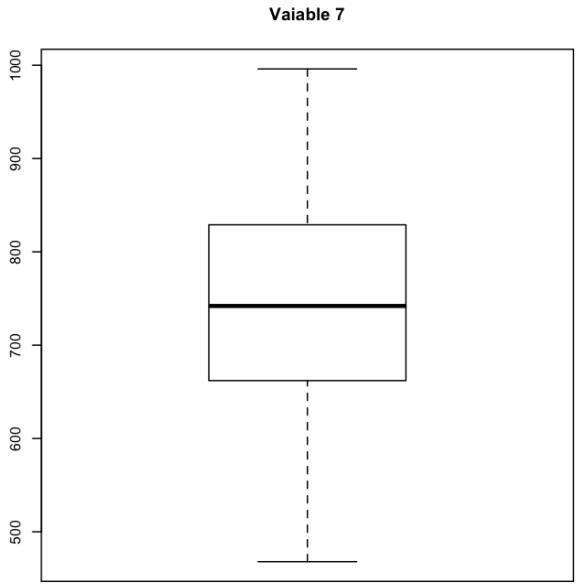
Variables X4, X5 y X6

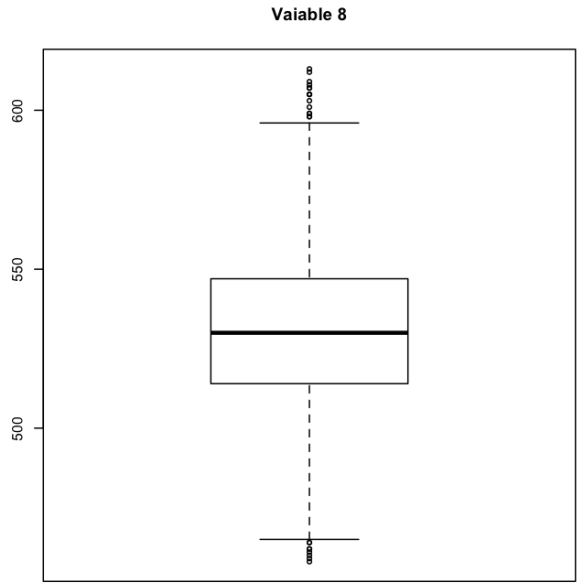


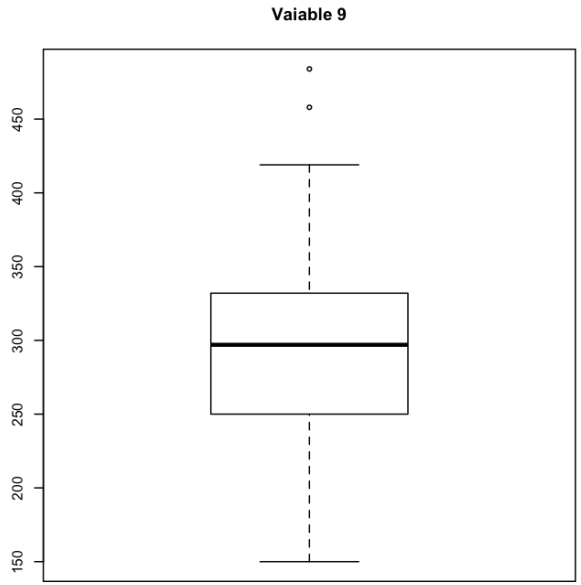




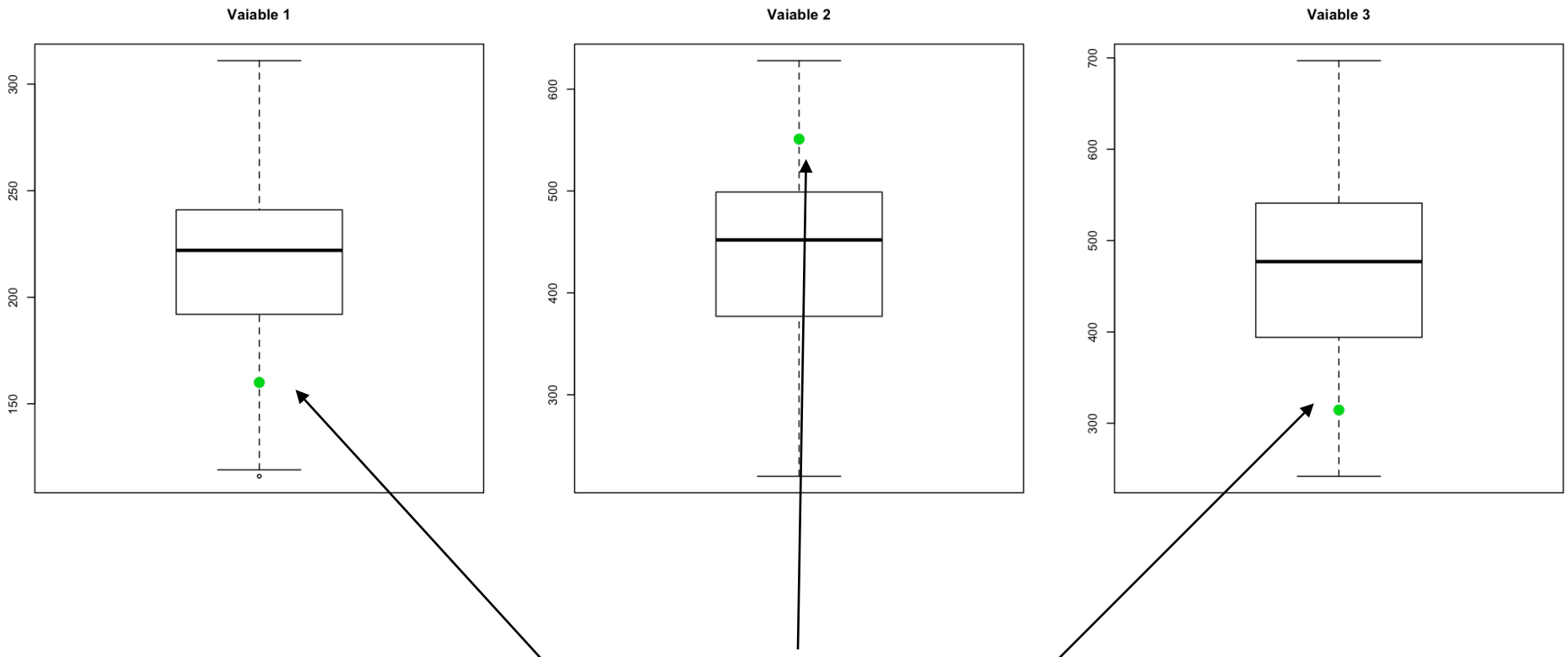
Variables X7, X8 y X9



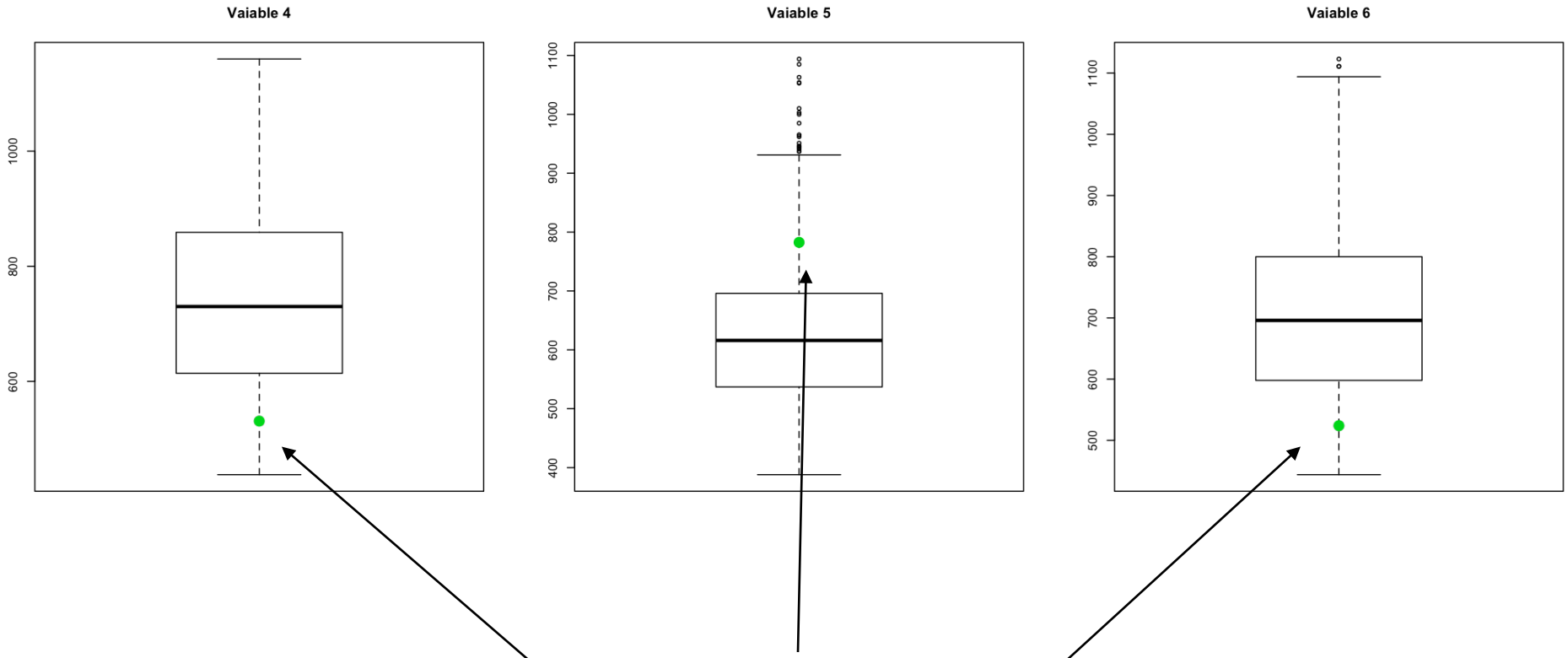




Variables X1, X2 y X3 con observación agregada

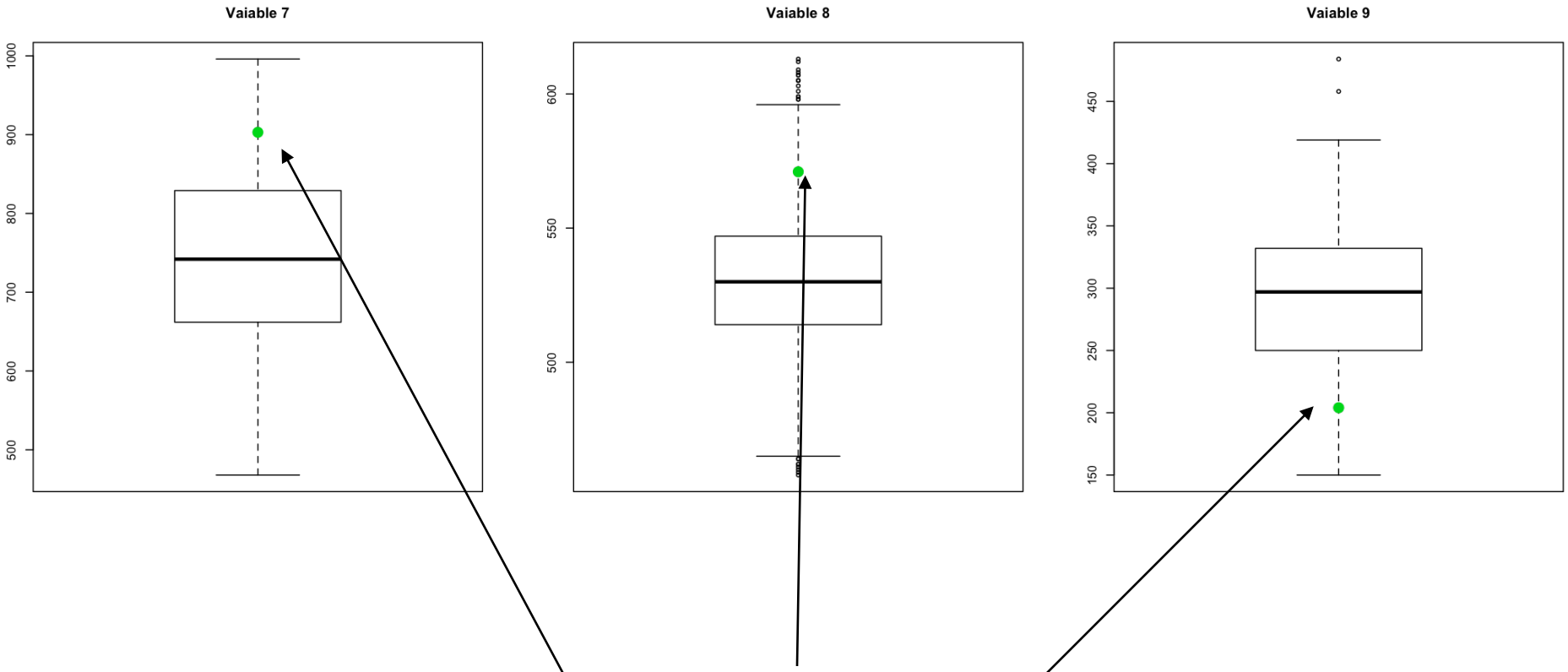


Variables X4, X5 y X6 con observación agregada



Observación agregada

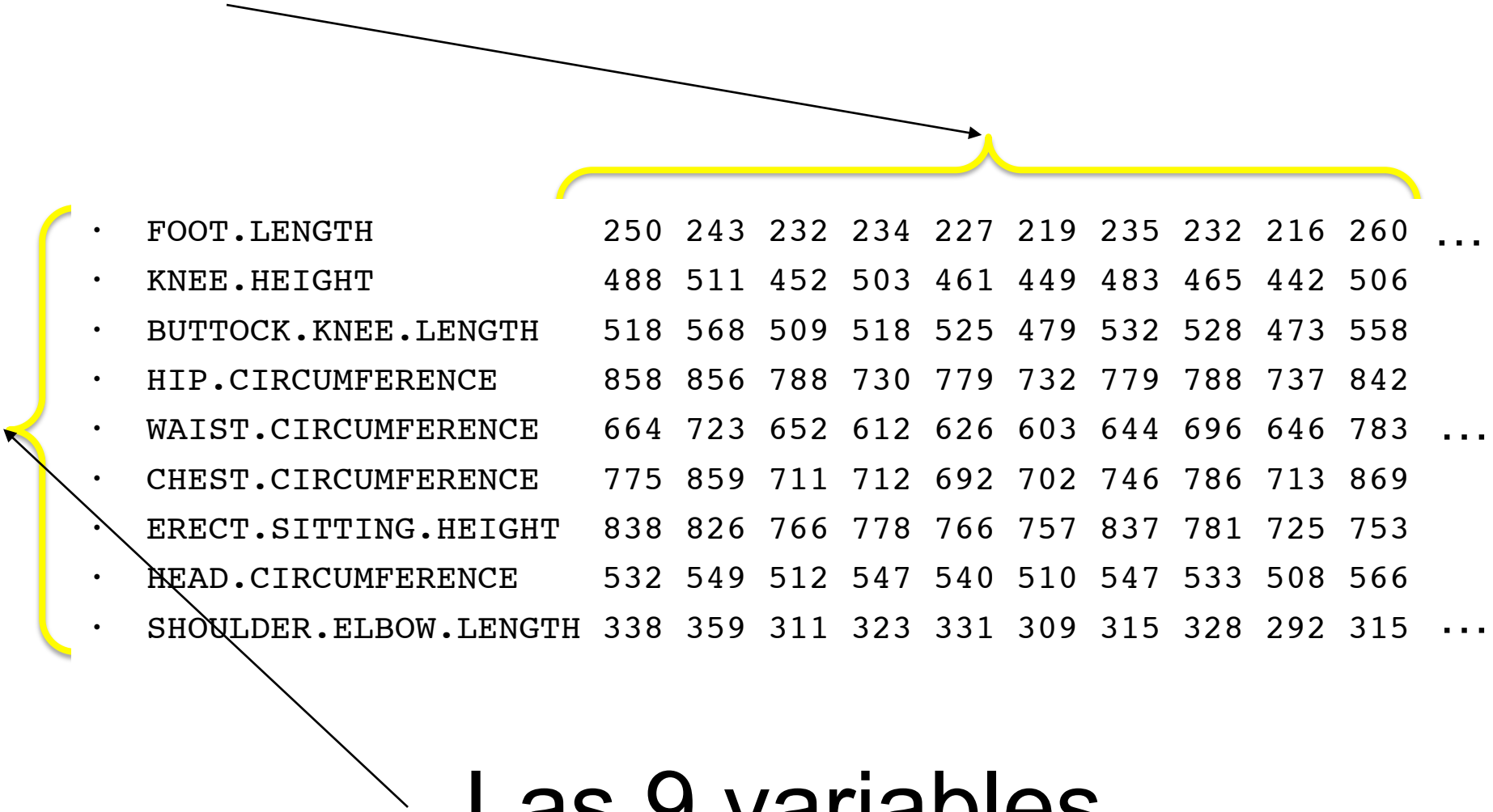
Variables X7, X8 y X9 con observación agregada



Origen de los Datos: AnthroKids - Anthropometric Data of Children

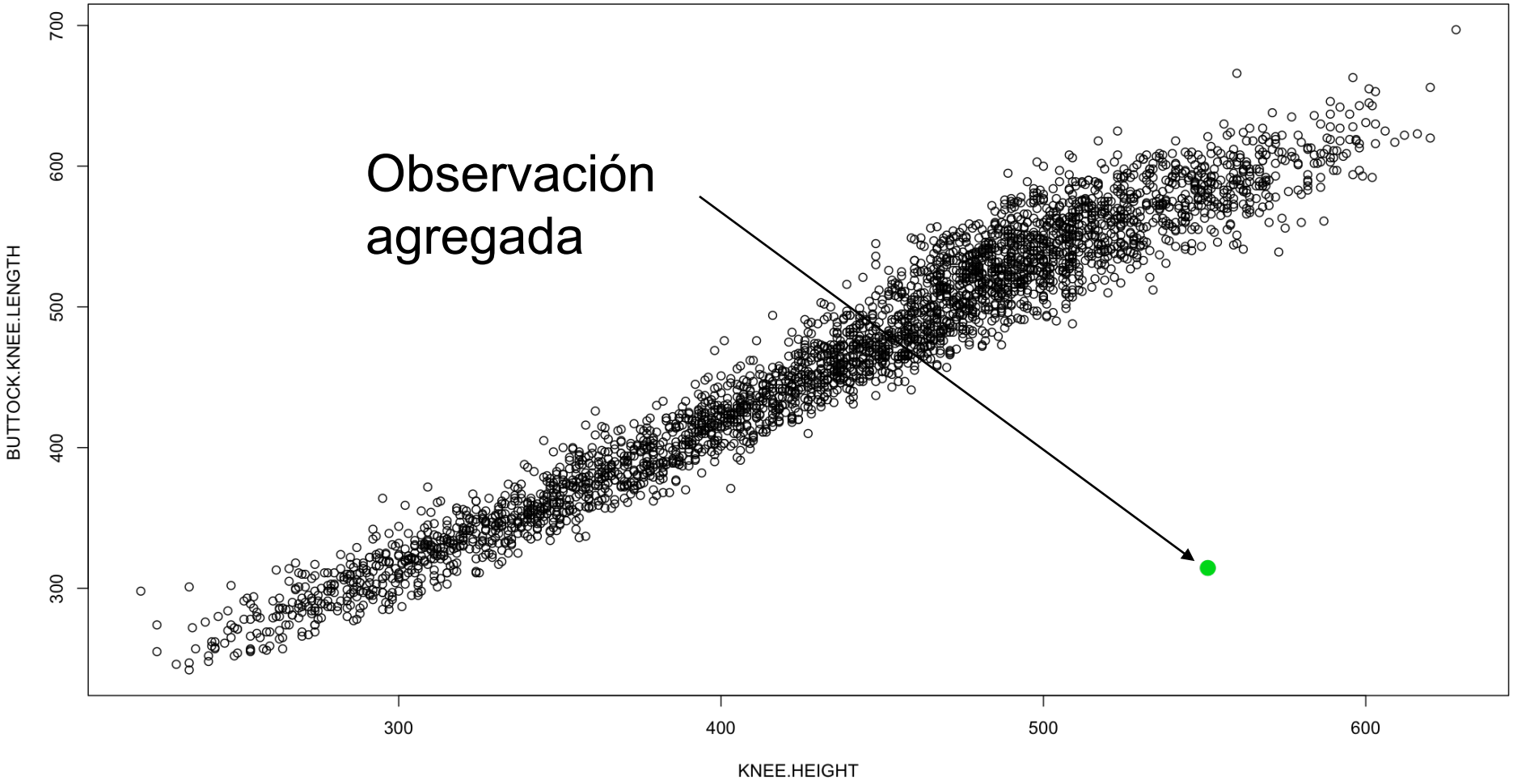
- Fuente: http://www.itl.nist.gov/iaui/ovrt/projects/anthrokids/ncontent.htm

10 primeros casos de la base

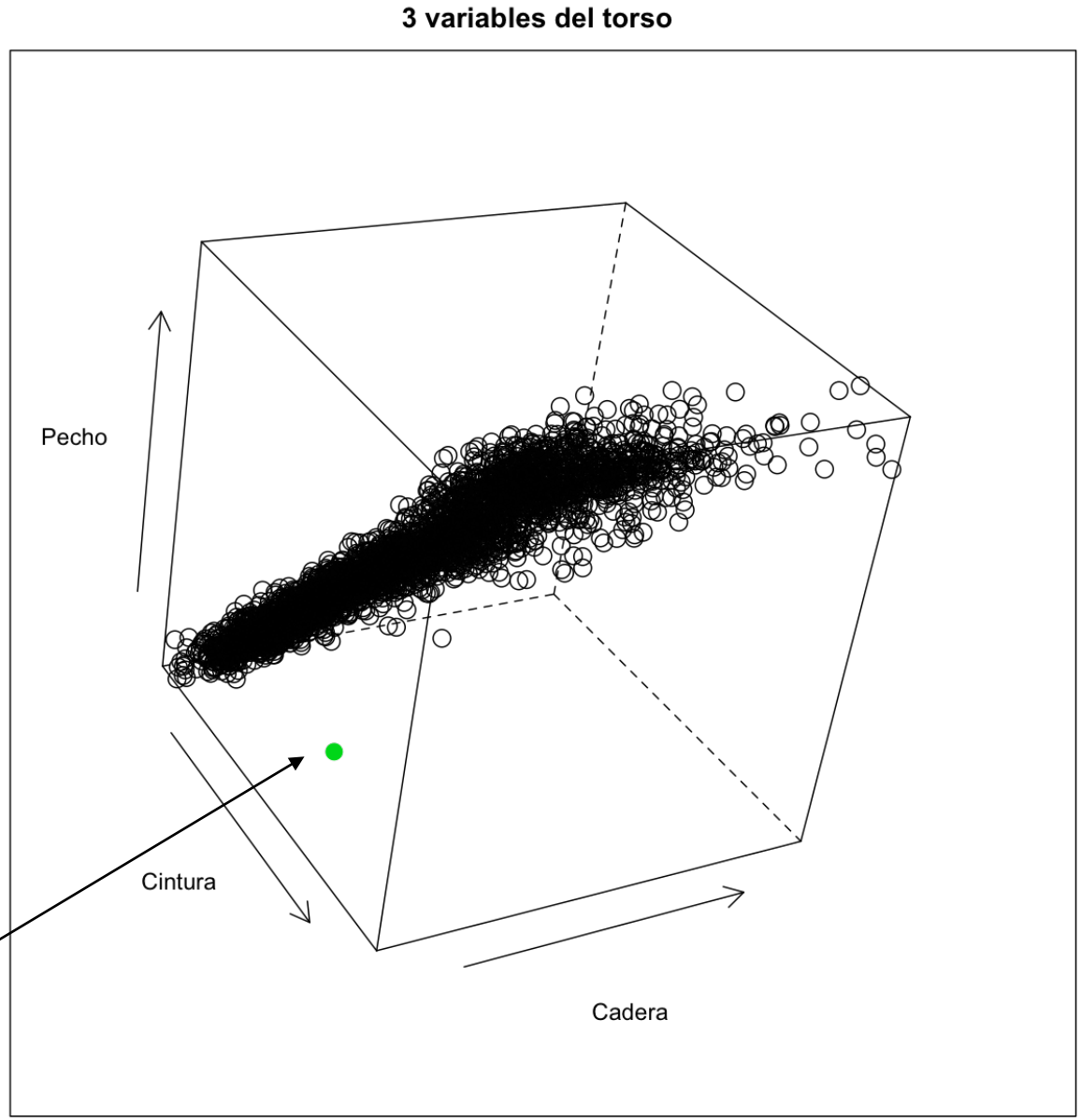


Las 9 variables

Relacion entre Muslo y Canilla



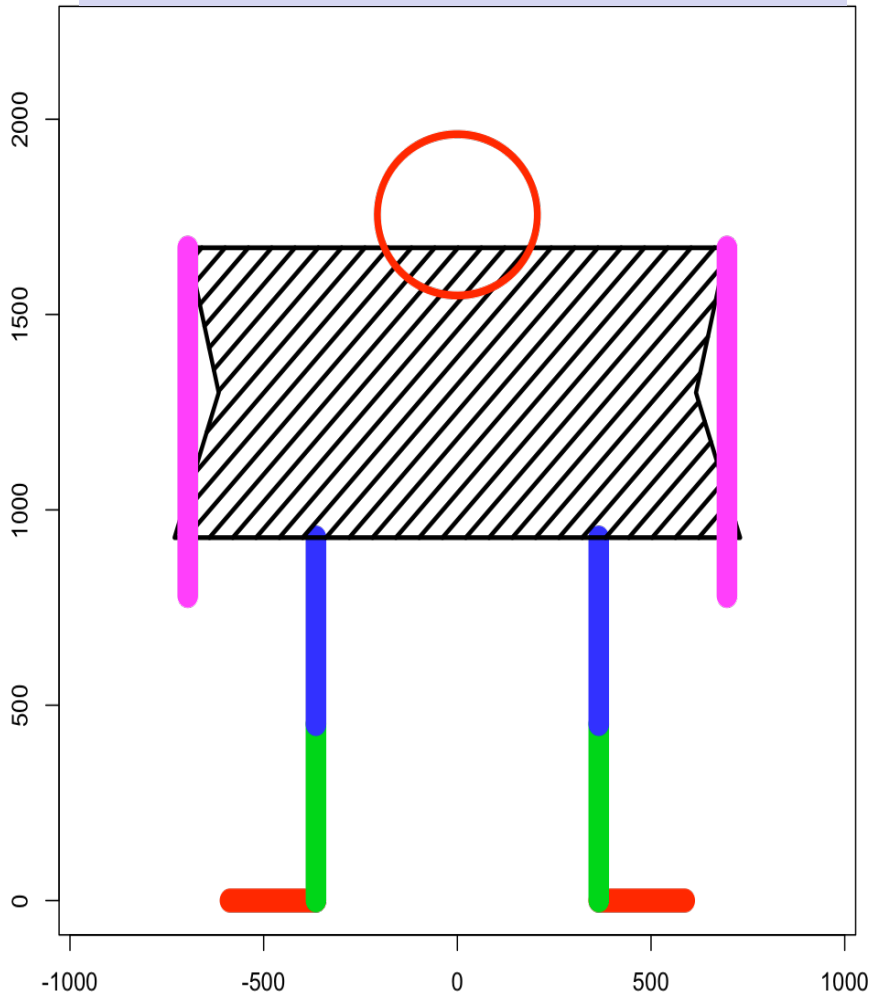
Relacion entre cintura, cadera y pecho



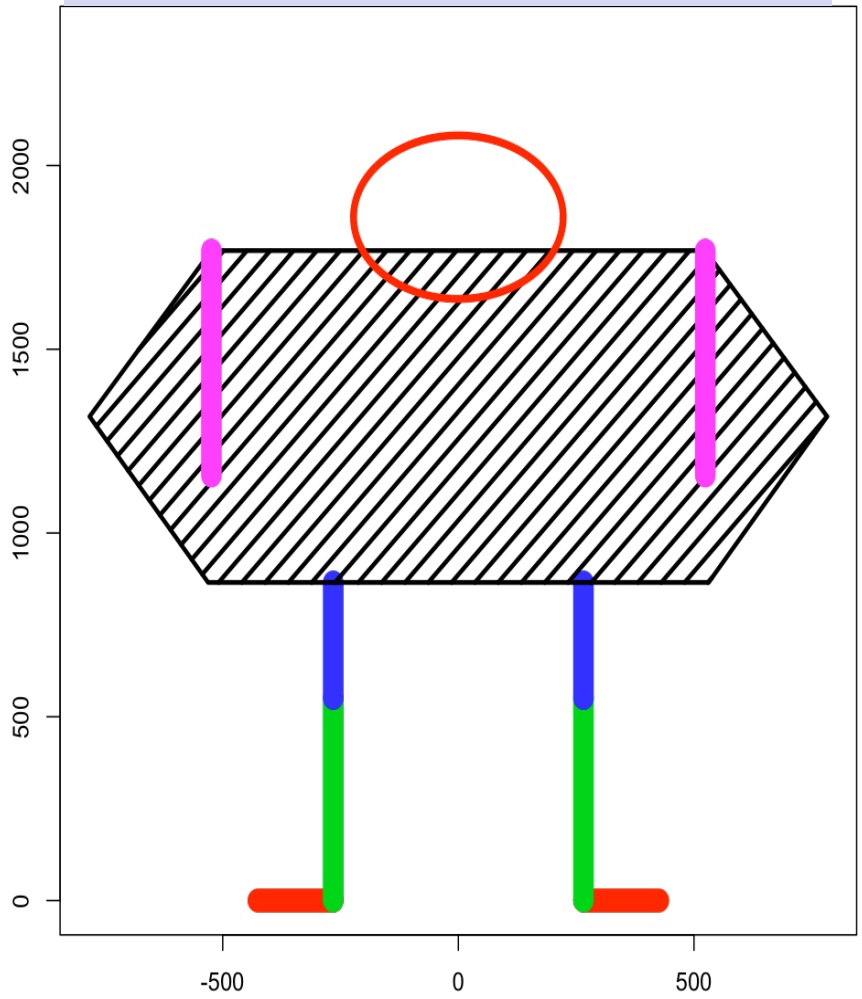
Observación agregada

Dos chicos

Chico promedio



Chico agregado



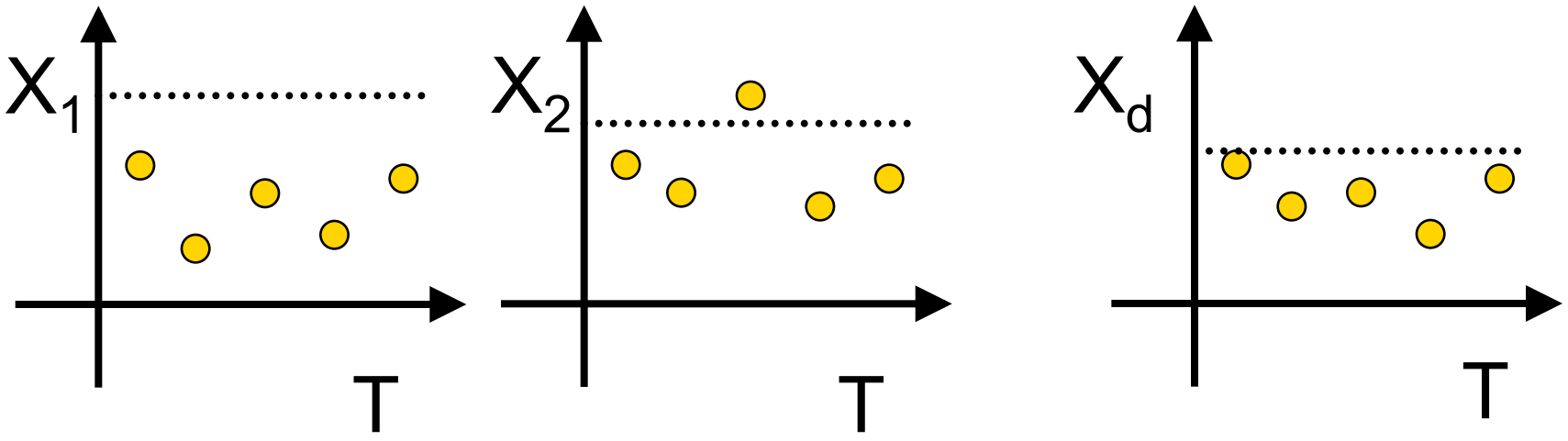
La Independencia estocástica

$X_1, \ldots, X_n$ son independientes, si y solo si

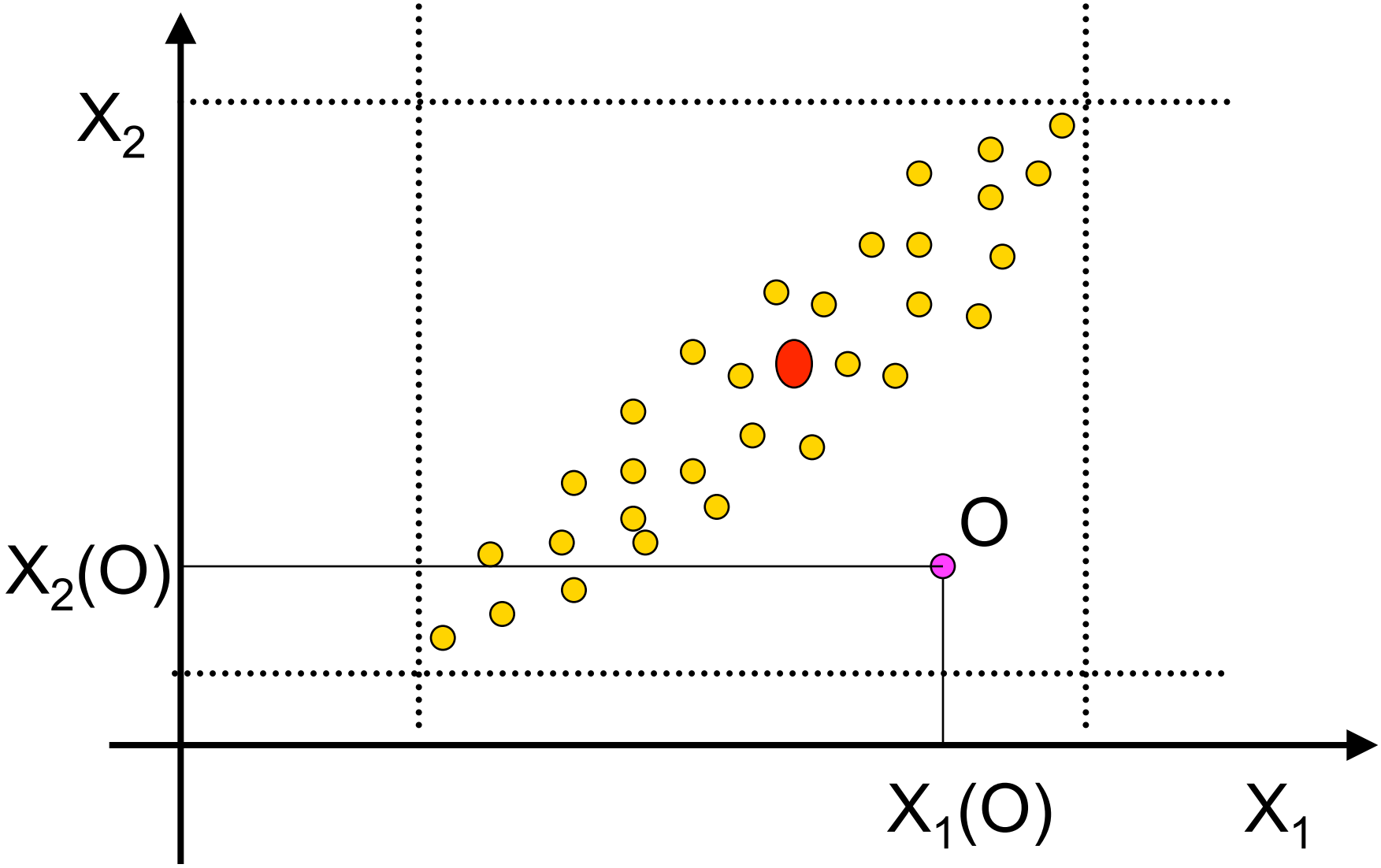
$$f_{X_1,\ldots,X_n}(x_1, \ldots, x_n) = f_{X_1}(x_1) \cdots f_{X_n}(x_n).$$

Motivación del Análisis Multivariado en Control de Calidad

Control Univariado



Control Multivariado



Distancia de Mahalanobis